UNDERGRADUATE COLLEGES
2016-2017

MARQUETTE UNIVERSITY
BE THE DIFFERENCE.
Table of Contents

About Marquette University ........................................................................................................ 6
Undergraduate Bulletin ............................................................................................................... 18
Admission and Readmission to the Undergraduate Colleges .................................................. 19
Academic Programs .................................................................................................................. 28
  Accelerated Degree Programs ............................................................................................. 29
  CommUNITY ..................................................................................................................... 30
  Educational Opportunity Program ..................................................................................... 31
  English as a Second Language Program .......................................................................... 32
  Freshman Frontier Program ............................................................................................... 33
  Les Aspin Center for Government .................................................................................... 34
  Pre-Dental Scholars ......................................................................................................... 35
  Pre-Law Scholars .............................................................................................................. 37
  Reserve Officers’ Training Corps Programs ..................................................................... 40
  Study Abroad Program ..................................................................................................... 44
  Summer Studies ................................................................................................................ 46
  University Honors Program ............................................................................................... 47
  Academic Regulations ....................................................................................................... 50
University Core of Common Studies ..................................................................................... 77
University Sponsored Courses (MARQ) ............................................................................... 81
Student Resources and Facilities ............................................................................................ 83
Student Financial Aid ........................................................................................................... 88
Tuition Fees and Housing ....................................................................................................... 90
College of Arts and Sciences ................................................................................................. 93
  Degrees Offered ................................................................................................................ 95
  Majors and Minors Overview .......................................................................................... 96
  Graduation Requirements ............................................................................................... 100
  Academic Regulations ..................................................................................................... 101
  Degree Requirements ...................................................................................................... 105
Pre-Professional Studies ..................................................................................................... 110
College Resources ................................................................................................................. 113
Biological Sciences ............................................................................................................... 115
Chemistry ................................................................................................................................ 138
Economics ............................................................................................................................ 147
English ................................................................................................................................... 152
Foreign Languages and Literatures ..................................................................................... 173
  Classics ............................................................................................................................. 174
  French ............................................................................................................................... 178
  German ............................................................................................................................. 184
  Spanish ............................................................................................................................. 188
Other Language Courses Offered .............................................................................................................. 200

History .................................................................................................................................................. 203

Interdisciplinary ...................................................................................................................................... 212

Africana Studies ..................................................................................................................................... 213

Applied Mathematical Economics ...................................................................................................... 216

Arabic Language Studies and Culture Minor .................................................................................... 218

Asian Studies Minor ........................................................................................................................... 219

Bioinformatics ....................................................................................................................................... 220

Broad Field Science .............................................................................................................................. 222

Broad Field Social Science Minor ..................................................................................................... 225

Culture, Health and Illness Minor ....................................................................................................... 227

Environmental Ethics Minor ............................................................................................................... 229

Environmental Studies ....................................................................................................................... 230

Ethics Minor .......................................................................................................................................... 233

Family Studies Minor ......................................................................................................................... 234

International Affairs ............................................................................................................................ 236

Latin American Studies ....................................................................................................................... 245

Law and Society Minor ....................................................................................................................... 248

Leadership and Organizations ........................................................................................................... 249

Medieval Studies Minor ...................................................................................................................... 258

Peace Studies ......................................................................................................................................... 259

Public History Minor ........................................................................................................................... 264

Urban Affairs Minor ............................................................................................................................ 265

Women’s and Gender Studies ............................................................................................................. 266

Mathematics, Statistics and Computer Science .................................................................................... 271

Philosophy ............................................................................................................................................. 288

Physics ................................................................................................................................................. 293

Political Science .................................................................................................................................... 309

Psychology .......................................................................................................................................... 318

Reserve Officers’ Training Corps ........................................................................................................ 324

Air Force ................................................................................................................................................ 325

Army ...................................................................................................................................................... 327

Navy ...................................................................................................................................................... 331

Social and Cultural Sciences ................................................................................................................ 334

Anthropology ....................................................................................................................................... 335

Criminology and Law Studies ............................................................................................................. 339

Sociology ............................................................................................................................................. 343

Social Welfare and Justice ................................................................................................................... 349

Theology .............................................................................................................................................. 353

Other Arts and Sciences Courses ........................................................................................................ 361

College of Business Administration ................................................................................................... 362

Degrees Offered .................................................................................................................................... 364
Graduation Requirements ................................................................. 473
Degree Requirements ...................................................................... 474
Academic Regulations .................................................................... 475
College Resources .......................................................................... 477
Middle Childhood (Grades 1-8) ...................................................... 478
Early Adolescence (Grades 6-12) .................................................... 482
Bilingual Bicultural Minor .............................................................. 488
Education Courses ........................................................................ 489
College of Engineering ..................................................................... 492
Degrees Offered ............................................................................ 493
Majors and Minors Overview ......................................................... 494
Admissions .................................................................................... 495
Graduation Requirements ............................................................... 496
Degree Requirements .................................................................... 497
Academic Regulations ................................................................... 499
Special Programs ........................................................................... 507
Student Organizations .................................................................... 509
Biomedical Engineering ................................................................. 510
Civil, Construction and Environmental Engineering ..................... 522
Electrical and Computer Engineering ............................................. 536
Mechanical Engineering ................................................................ 550
Concentrations and Minors ........................................................... 558
General Engineering Courses ......................................................... 562
College of Health Sciences ............................................................. 564
Degrees Offered ............................................................................ 565
Majors and Minors Overview ......................................................... 566
Graduation Requirements ............................................................... 567
Degree Requirements .................................................................... 568
Academic Regulations ................................................................... 569
Special Academic Programs ........................................................... 572
Student Organizations .................................................................... 573
Biomedical Sciences ...................................................................... 574
Clinical Laboratory Science ............................................................ 592
Exercise Science ............................................................................. 600
  Athletic Training ........................................................................ 601
  Exercise Physiology .................................................................. 610
Speech Pathology and Audiology ................................................ 619
  Neuroscience Minor ................................................................. 627
College of Nursing ......................................................................... 628
Degrees Offered ............................................................................ 629
Major and Minor Overview ............................................................ 630
Admission Requirements ............................................................... 631
Graduation Requirements ................................................................. 632
Degree Requirements ........................................................................ 633
Academic Regulations ....................................................................... 634
Special Academic Programs ............................................................. 640
Student Organizations ....................................................................... 641
Major in Nursing ............................................................................... 642
Minor in Health Studies ..................................................................... 652
Legal Disclosure ................................................................................ 654
Faculty and Administrators .............................................................. 655
University Directory ......................................................................... 655
Campus Maps .................................................................................. 823
Academic Calendar ........................................................................... 824
Index .................................................................................................. 825
About Marquette University

From the President

At Marquette University, the entire community is dedicated to the academic success and personal growth of our students. The university’s commitment to academic excellence is complemented by a grounding in the centuries-old Jesuit concept, cura personalis, which calls us to appreciate and respect the individual hopes, desires, aspirations, and concerns of all members of the Marquette community.

In this spirit, this Bulletin has been created to guide you in planning your academic career and professional development. With its descriptions of academic majors and required courses, study abroad opportunities, services for students and policies, it is a resource to help you choose the path at Marquette that best suits you, fosters your growth, and prepares you for the challenges, rewards, leadership and service that await you when you complete your work here. Use it in the spirit of Father Jacques Marquette, the 17th century Jesuit explorer for whom our university is named. Let his embrace of the unfamiliar, his openness to new opportunities, and his strong sense of purpose inspire you as you explore the offerings of this outstanding university.

You have my prayers that our loving and gracious God will bless you in your academic work at Marquette.

Michael R. Lovell, Ph.D.
President

From the Provost

A Marquette education goes beyond the educational foundation your courses provide. Your time at Marquette will be more than an education. You will receive the guidance of faculty who are experts in their field and who truly believe in the teacher-scholar model, as well as leadership opportunities in service learning and student organizations. It will be an experience that we hope transforms you into men and women who seek answers to life’s deepest questions and contribute to solving the world’s most pressing problems.

This bulletin can serve as a roadmap for your time here at Marquette. It describes the range of majors and courses Marquette offers, graduation requirements, academic policies and procedures, and experiential learning opportunities that exist both inside and outside of the classroom. I hope you will find it a helpful resource as you register for classes and plan ahead for future semesters.

Our faculty and staff are here to help guide your growth intellectually, emotionally and spiritually during your time at Marquette. They are a valuable resource, and I encourage you to seek their advice and listen to their perspectives gleaned from years in their respective fields. Your time on campus offers you the opportunity to engage in meaningful dialogue and learn from this engagement and through the spirit of Ignatian reflection.

The Marquette community is truly a family – one that extends beyond our campus community to the 100,000 alumni who lead and serve in the fields of law, engineering, business, medicine, education, dentistry, the humanities, social sciences and communication in all corners of the world. Our hope is that through your experiences here you will leave Marquette better than you found it. We know that you will contribute your unique gifts to enrich the diversity of our campus community and will go out into the world and be men and women for others.

Daniel J. Myers, Ph.D.
Provost

History

Marquette began as a dream of the Most Rev. John Martin Henni the first Catholic bishop of Milwaukee, but it took a trip overseas to find an investor to make it a reality. Belgian businessman Guillaume Joseph DeBuey promised $16,000 for the proposed “academy of learning.” It was hardly enough to fund the establishment of a college but just enough to keep Bishop Henni’s dream alive for the next eight years until he could purchase a parcel of land on a hill topping today’s North 10th and West State streets.

Nearly three decades passed before the doors of Marquette College, a small liberal arts school for men named after Rev. Jacques Marquette, S.J., opened on Aug. 28, 1881. Bishop Henni died just two days later, one might guess satisfied that his work was finished.

Throughout the years, thousands of students have passed through Marquette’s halls and classrooms, aspiring to achieve academic success and a spiritual foundation to last a lifetime.

Marquette was founded in the rich tradition of the Society of Jesus, a Catholic religious order established in 1540 by St. Ignatius Loyola. The university is named after Rev. Jacques Marquette, S.J. (1637-75), a French missionary and explorer in North America.

For more information please visit Our History (http://www.marquette.edu/about/history.php).

Mission Statement

Marquette University is a Catholic, Jesuit university dedicated to serving God by serving our students and contributing to the advancement of knowledge. Our mission, therefore, is the search for truth, the discovery and sharing of knowledge, the fostering of personal and professional
excellence, the promotion of a life of faith, and the development of leadership expressed in service to others. All this we pursue for the greater glory of God and the common benefit of the human community.

**Excellence**

Our students, whether traditional or non-traditional, undergraduate, graduate or professional, come to Marquette University to share our commitment to the pursuit of excellence in all things as a lifelong endeavor. They come to join a community whose members — faculty, staff, students, trustees, alumni and friends alike — believe that education must encompass the whole person: spiritual and moral as well as intellectual, the heart as well as the mind. And they come seeking the educational, professional and cultural advantages of a university located in the heart of the city. We, in turn, take seriously our responsibility to foster and support excellence in teaching and research, to keep a Marquette education accessible to a diverse population of students, and to offer personal attention and care to each member of the Marquette community.

**Faith**

As a Catholic university, we are committed to the unfettered pursuit of truth under the mutually illuminating powers of human intelligence and Christian faith. Our Catholic identity is expressed in our choices of curricula, our sponsorship of programs and activities devoted to the cultivation of our religious character, our ecumenical outlook, and our support of Catholic beliefs and values. Precisely because Catholicism at its best seeks to be inclusive, we are open to all who share our mission and seek the truth about God and the world, and we are firmly committed to academic freedom as the necessary precondition for that search. We welcome and benefit enormously from the diversity of seekers within our ranks, even as we freely choose and celebrate our own Catholic identity.

**Leadership**

As a Jesuit university, Marquette embodies the intellectual and religious traditions of the Society of Jesus. Through an academically rigorous, values-centered curriculum, our students receive a firm grounding in the liberal arts, preparation for work in a world of increasing complexity and diversity, and formation for life as ethical and informed leaders in their religious, cultural, professional and civic communities. They work with and learn from faculty who are true teacher-scholars, whose research not only advances the sum of human knowledge, but also informs their teaching, and whose commitment to students is fundamental to their intellectual and professional lives.

**Service**

Through both our academic and co-curricular programs, Marquette strives to develop men and women who will dedicate their lives to the service of others, actively entering into the struggle for a more just society. We expect all members of the Marquette community, whatever their faith traditions, to give concrete expression to their beliefs by giving of themselves in service to those in need.

**Marquette University Guiding Values**

*Endorsed Dec. 8, 2014*

In accordance with the Catholic, Jesuit mission and vision of Marquette University, we hold that all people and things are created to praise, reverence and serve God in our community and throughout the world, and thus every aspect of the university’s lifeblood and work holds this principle and foundation as its beginning and end. Therefore, we will enact the following values and behaviors in our lives and our work to serve the greater glory of God:

- Pledge personal and holistic development of students as our primary institutional vocation
- Pursue academic excellence and educate students who are men and women for and with others throughout the world
- Embody a spirit of interdisciplinary curiosity, research, innovation, entrepreneurship and application to change and improve ourselves, our community and our world
- Nurture an inclusive, diverse community that fosters new opportunities, partnerships, collaboration and vigorous yet respectful debate
- Live as servant leaders with a commitment to the Jesuit tradition and Catholic social teaching for all people, beliefs and faith traditions
- Create bold, ambitious plans enacted with agility, authentic accountability and a commitment to the greater good

**Vision Statement**

Marquette University aspires to be, and to be recognized, among the most innovative and accomplished Catholic and Jesuit universities in the world, promoting the greater glory of God and the well-being of humankind.

We must reach beyond traditional academic boundaries and embrace new and collaborative methods of teaching, learning, research and service in an inclusive environment that supports all of our members in reaching their fullest potential.

Marquette graduates will be problem-solvers and agents for change in a complex world so in the spirit of St. Ignatius and Jacques Marquette, they are ready in every way "to go and set the world on fire."

**Statement on Human Dignity and Diversity**

As a Catholic, Jesuit university, Marquette recognizes and cherishes the dignity of each individual regardless of age, culture, faith, ethnicity, race, gender, sexual orientation, language, disability or social class. Precisely because Catholicism at its best seeks to be inclusive, we are open to all who share our mission and seek the truth about God and the world. Through our admissions and employment policies and practices, our curricular and co-
curricular offerings, and our welcoming and caring campus environment, Marquette seeks to become a more diverse and inclusive academic community dedicated to the promotion of justice.

Our commitment to a diverse university community helps us to achieve excellence by promoting a culture of learning, appreciation and understanding. Each member of the Marquette community is charged to treat everyone with care and respect and to value and treasure differences. This call to action is integral to the tradition which we share.

For more information please visit the Office of Diversity and Inclusion. (http://www.marquette.edu/diversity)

### Accreditation

An educational institution is only as strong as the level of excellence that it demands of itself as well as of its faculty and students. Marquette University is accredited by the Higher Learning Commission, a commission of the North Central Association of Colleges and Schools. Marquette University has set consistently high standards for itself that have resulted in accreditation and/or certification of its academic programs from these additional organizations and associations.

These accreditations assure a student that Marquette is recognized and approved by select national and regional educational associations, societies and councils. In addition, a student has the security of knowing that credits earned at Marquette have transfer value to comparable institutions of learning, just as an incoming transfer student learns by checking this list that Marquette can be expected to honor most credits earned at a similarly accredited college or university.

### Accrediting Agencies

<table>
<thead>
<tr>
<th>College/School</th>
<th>Name of Agency</th>
<th>Academic Programs</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>Klingler College of Arts and Sciences</td>
<td>American Psychological Association</td>
<td>Graduate Psychology – PhD in Clinical Psychology</td>
<td><a href="http://www.apa.org/">http://www.apa.org/</a></td>
</tr>
<tr>
<td>Diederich College of Communication</td>
<td>National Association of Schools of Theatre</td>
<td>BA degree with major in Theatre Arts</td>
<td><a href="http://nast.arts-accredit.org/">http://nast.arts-accredit.org/</a></td>
</tr>
<tr>
<td>School of Dentistry</td>
<td>Commission on Dental Accreditation (CODA) of the American Dental Association</td>
<td>DDS, certificate and master’s in advanced specialty education programs in endodontology, orthodontics and dentofacial orthopedics, and prostodontics, certificate in advanced education in general dentistry.</td>
<td><a href="http://www.ada.org/117.aspx">http://www.ada.org/117.aspx</a></td>
</tr>
<tr>
<td>College of Education</td>
<td>American Psychological Association</td>
<td>Graduate Education – PhD in Counseling Psychology</td>
<td><a href="http://www.apa.org/">http://www.apa.org/</a></td>
</tr>
<tr>
<td>College of Education</td>
<td>Council for Accreditation of Counseling and Related Educational Programs</td>
<td>MS-Clinical Mental Health Counseling MA-School Counseling</td>
<td><a href="http://www.cacrep.org/">http://www.cacrep.org/</a></td>
</tr>
<tr>
<td>College of Engineering</td>
<td></td>
<td>The Biomedical Engineering, BSBE program is accredited by the Engineering Accreditation Commission of ABET</td>
<td><a href="http://www.abet.org/">http://www.abet.org/</a></td>
</tr>
<tr>
<td>College of Engineering</td>
<td></td>
<td>The Civil Engineering, BSCE program is accredited by the Engineering Accreditation Commission of ABET</td>
<td><a href="http://www.abet.org/">http://www.abet.org/</a></td>
</tr>
<tr>
<td>College of Engineering</td>
<td></td>
<td>The Computer Engineering, BSCO program is accredited by the Engineering Accreditation Commission of ABET</td>
<td><a href="http://www.abet.org/">http://www.abet.org/</a></td>
</tr>
<tr>
<td>College of Engineering</td>
<td></td>
<td>The Electrical Engineering, BSEE program is accredited by the Engineering Accreditation Commission of ABET</td>
<td><a href="http://www.abet.org/">http://www.abet.org/</a></td>
</tr>
<tr>
<td>College of Engineering</td>
<td></td>
<td>The Mechanical Engineering, BSME program is accredited by the Engineering Accreditation Commission of ABET</td>
<td><a href="http://www.abet.org/">http://www.abet.org/</a></td>
</tr>
<tr>
<td>College/School</td>
<td>Name of Agency</td>
<td>Academic Programs</td>
<td>Website</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>-----------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>College of Engineering</td>
<td>The Construction Engineering and Management, BS CEAM program has applied for accreditation by the Engineering Accreditation Commission of ABET</td>
<td><a href="http://www.abet.org/">http://www.abet.org/</a></td>
<td></td>
</tr>
<tr>
<td>College of Health Sciences</td>
<td>Accreditation Review Commission on Education for the Physician Assistant, Inc. (ARC-PA)</td>
<td>Master of Physician Assistant</td>
<td><a href="http://www.arc-pa.org/index.html">http://www.arc-pa.org/index.html</a></td>
</tr>
<tr>
<td>College of Health Sciences</td>
<td>American Society of Exercise Physiologists</td>
<td>BS degree with major in Exercise Physiology</td>
<td><a href="http://www.asep.org/">http://www.asep.org/</a></td>
</tr>
<tr>
<td>College of Health Sciences</td>
<td>Commission on Accreditation of Athletic Training Education (CAATE)</td>
<td>Baccalaureate in Athletic Training</td>
<td><a href="http://www.caate.net/imis15/caate/">http://www.caate.net/imis15/caate/</a></td>
</tr>
<tr>
<td>College of Health Sciences</td>
<td>Council on Academic Accreditation in Audiology and Speech-Language Pathology (CAA) of the American Speech-Language-Hearing Association</td>
<td>MS in Speech-Language Pathology</td>
<td><a href="http://www.asha.org/academic/accreditation/CAA_overview.htm">http://www.asha.org/academic/accreditation/CAA_overview.htm</a></td>
</tr>
<tr>
<td>College of Health Sciences</td>
<td>National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)</td>
<td>BS degree with major in Clinical Laboratory Sciences</td>
<td><a href="http://www.naacls.org/">http://www.naacls.org/</a></td>
</tr>
<tr>
<td>Law School</td>
<td>Section of Legal Education and Admissions to the Bar of the American Bar Association</td>
<td>JD</td>
<td><a href="http://www.americanbar.org/groups/legal_education.html">http://www.americanbar.org/groups/legal_education.html</a></td>
</tr>
</tbody>
</table>
| Nursing                                | Commission on Collegiate Nursing Education          | - Bachelor of Science in Nursing  
- Master of Science in Nursing  
- Doctor in Nursing Practice | http://www.aacn.nche.edu/ccne-accreditation                                                              |
| Nursing                                | Accreditation Commission for Midwifery Education (ACME) | - Certificate in Nurse Midwifery  
- MS in Nursing with a specialization in Nurse Midwifery                                                  | http://www.midwife.org/                                               |

**Certification, Licensure, Credentialing and Other Recognitions**

<table>
<thead>
<tr>
<th>College/School</th>
<th>Name of Agency</th>
<th>Academic Programs</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>Klingler College of Arts and Sciences</td>
<td>American Chemical Society</td>
<td>BS in Chemistry, Molecular Biology/biochemistry, Chemistry for the Professions</td>
<td><a href="http://portal.acs.org/portal/PublicWebSite/about/governance/committees/training/acsapproved/index.htm">http://portal.acs.org/portal/PublicWebSite/about/governance/committees/training/acsapproved/index.htm</a></td>
</tr>
<tr>
<td>College of Business Administration</td>
<td>Chartered Financial Analyst (CFA) Institute</td>
<td>BS in Finance, Applied Investment Management (AIM). The AIM program is a CFA Program Partner. The partnership designation means that Marquette University offers a degree program that covers at least 70 percent of the CFA Institute's Program Candidate Body of Knowledge, the CFA Institute Ethical and Professional Standards, and other requirements.</td>
<td><a href="http://www.cfainstitute.org/partners/university/Pages/cfa_program_partners_overview.aspx">http://www.cfainstitute.org/partners/university/Pages/cfa_program_partners_overview.aspx</a></td>
</tr>
</tbody>
</table>
| College of Education                        | Wisconsin Department of Public Instruction          | College of Education:  
- Licensure programs in administration: superintendent, director of instruction, principal  
- Licensure programs in teaching: middle childhood-early adolescence; early adolescence-adolescence  
- Graduate Education:  
- Licensure programs in pupil services: school counselor  
- Graduate Speech-Language Pathology  
- Licensure programs in teaching: special education - speech and language pathology  
- Licensure program in bilingual-bicultural (18 credit-hour minor) | http://tepdl.dpi.wi.gov/epp/educator-preparation-program-providers |
### About Marquette University

**Graduate School**
- Commission on Accreditation of Allied Health Education Programs (CAAHEP)
- Specialist in Blood Banking (SBB) portion of the Master's in Transfusion Medicine program. The Master's in Transfusion Medicine is a collaboration between Marquette University and the BloodCenter of Wisconsin. The first 18 credits, consisting of the SBB program, are completed at the BloodCenter of Wisconsin. An additional 21-22 credits are completed at Marquette University. Marquette University has no direct affiliation with the Council on Accreditation of Allied Health Education Programs (CAAHEP). The SBB Program is accredited by CAAHEP. CAAHEP provides the standards, assessors and accreditation with sponsorship from the American Association of Blood Banks (AABB). AABB does not conduct separate accreditation.

- [http://www.caahep.org/](http://www.caahep.org/)

**College of Nursing**
- Wisconsin Board of Nursing
- The State of Wisconsin Board of Nursing certifies that Marquette University College of Nursing fulfilled the requirements for an accredited school of professional nursing leading to a baccalaureate degree.

- [http://drl.wi.gov/profdetail.asp?pdetailid=2142&profid=46&locid=0](http://drl.wi.gov/profdetail.asp?pdetailid=2142&profid=46&locid=0)

**Law School**
- Association of American Law Schools
- JD

- [http://www.aals.org](http://www.aals.org)

**College of Health Sciences**
- American Physical Therapy Association
- Marquette, ProHealth Care, & Zablocki VA Medical Center Neurologic Residency Program (Credentialed)

- [https://www.apta.org/](https://www.apta.org/)

**College of Health Sciences**
- National Strength and Conditioning Association
- Exercise Physiology program; For successfully meeting established criteria, the National Strength and Conditioning Association officially recognizes Marquette University’s Program in Strength and Conditioning.


### Legal Disclosure

Marquette University does not discriminate in any manner contrary to law or justice on the basis of race, color, gender, age, sexual orientation, religion, disability, veteran's status or national origin in its educational programs or activities, including employment and admissions. At the same time, Marquette cherishes its right and duty to seek and retain personnel who will make a positive contribution to its religious character, goals, and mission in order to enhance the Jesuit, Catholic tradition. Federal laws (Titles VI, VII and IX; the Age Discrimination Act in Employment of 1967 as amended, the Rehabilitation Act of 1973 as amended, the Veteran’s Readjustment Assistance Act of 1974, and the Americans With Disabilities Act of 1990) prohibit such discrimination.

Employee inquiries concerning the application of Section 503 of the Rehabilitation Act of 1973, Section 402 of the Vietnam Era Veteran’s Readjustment Assistance Act of 1974 and Title I of the Americans with Disabilities Act of 1990 may be referred to the Office of Human Resources; Straz Tower; P.O. Box 1881; Milwaukee, WI 53201-1881; (414) 288-7305.

Student inquiries concerning Section 504 of the Rehabilitation Act of 1973 and Title II of the Americans with Disabilities Act of 1990 may be referred to the Office of Student Educational Services; Alumni Memorial Union; P.O. Box 1881; Milwaukee, WI 53201-1881; (414) 288-1645.

Student and employee inquiries concerning the application of Titles VI, VII, the Age Discrimination in Employment Act of 1967, as amended, and Executive Order 11246, as amended, may be referred to Lynn Mellantine, Affirmative Action Officer: Straz Tower; P.O. Box 1881, Milwaukee, WI 53201-1881; (414) 288-3430. Student and employee inquiries concerning the application of Title IX may be referred to Christine Taylor, Title IX Coordinator: Alumni Memorial Union, Room 437; P.O. Box 1881, Milwaukee, WI 53201-1881, (414) 288-3151 OR to the Office for Civil Rights: 500 W. Madison St., Suite 1475, Chicago, IL 60661-4544, (312) 730-1560.

The Marquette University Board of Trustees approved the Affirmative Action Program, formalizing the university’s position toward human rights. This program reaffirms and specifies action programs to continue the pledge of promotion and equal opportunity for all qualified persons.

State Authorization: Marquette University is registered as a Private Institution with the Minnesota Office of Higher Education pursuant to sections 136A.61 to 137A.71. Registration is not an endorsement of the institution. Credits earned at the institution may not transfer to all other institutions.
## Written Agreements

As per Federal Financial Aid regulations, the following is a list of the entities with which Marquette University has a written agreement that enables Marquette students to broaden their educational experience.

### Domestic Programs

<table>
<thead>
<tr>
<th>Name</th>
<th>Location</th>
<th>Sponsoring Academic Unit</th>
<th>Portion of the Program that is delivered by the Entity/Institution</th>
<th>Method of Delivery</th>
<th>Costs Students May be Expected to Incur</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milwaukee Institute of Art and Design (MIAD)</td>
<td>Milwaukee, WI</td>
<td>College of Communication</td>
<td>Various; Fine Arts- Graphic Design minor; Fine Arts-Studio Art minor</td>
<td>In person</td>
<td>Students pay Marquette tuition for the MIAD courses; No additional tuition is charged; however, MIAD courses may have course-specific fees for supplies.</td>
</tr>
<tr>
<td>Medical College of Wisconsin (MCW)</td>
<td>Wauwatosa, WI</td>
<td>Graduate School</td>
<td>Master's in Bioinformatics-up to 49%; all other non-Biomedical Engineering full-time Ph.D. students-up to 6 credits.</td>
<td>In person</td>
<td>Students pay Marquette tuition; there are no additional costs to the students.</td>
</tr>
<tr>
<td>Medical College of Wisconsin (MCW)</td>
<td>Wauwatosa, WI</td>
<td>Graduate School</td>
<td>All Biomedical Engineering Master's Programs/Ph.D. students are now enrolled at MCW</td>
<td>In person</td>
<td>Students pay Marquette tuition; there are no additional costs to the students.</td>
</tr>
<tr>
<td>University of Wisconsin - Milwaukee</td>
<td>Milwaukee, WI</td>
<td>Graduate School</td>
<td>Up to 6 credits.</td>
<td>In person or on-line classes depending on method of delivery that UWM uses.</td>
<td>Students pay Marquette tuition; there are no additional costs to the students.</td>
</tr>
<tr>
<td>The Blood Center of Wisconsin</td>
<td>Milwaukee, WI</td>
<td>Graduate School</td>
<td>MS in Transfusion Medicine 18 out of 38-40 credits are awarded</td>
<td>In person</td>
<td>$4,915.00 total for the entire 18 credits.</td>
</tr>
<tr>
<td>General Electric (GE) Edison Systems Engineering Program</td>
<td>Waukesha, WI</td>
<td>Graduate School</td>
<td>Master's in Electrical and Computer Engineering-30%; Master's in Biomedical Engineering-18-20%; Master's in Mechanical Engineering-18-20%</td>
<td>In person</td>
<td>None; this training is required as part of the students' employment at GE.</td>
</tr>
<tr>
<td>General Electric (GE) Edison Healthcare Software Program</td>
<td>Waukesha, WI</td>
<td>Graduate School</td>
<td>Master's in Computing-33-40%</td>
<td>In person</td>
<td>None; this training is required as part of the students' employment at GE.</td>
</tr>
<tr>
<td>General Electric (GE) Edison Aviation Engineering Program</td>
<td>Grand Rapids, MI</td>
<td>Graduate School</td>
<td>Master's in Computing-33-40%</td>
<td>In person</td>
<td>None; this training is required as part of the students' employment at GE.</td>
</tr>
<tr>
<td>Midwest Catholic Consortium, which includes various locations</td>
<td></td>
<td>Graduate School</td>
<td>No more than 6 credits.</td>
<td>In person or online, depending on method of delivery that the host institution uses</td>
<td>Tuition is paid at the home institution; there are no additional costs to the students.</td>
</tr>
<tr>
<td>Jesuit Multilateral Agreement - Jesuit MBA</td>
<td>Participants are located throughout the United States **</td>
<td>Graduate School</td>
<td>Depends on the timing of when a student transfers to the new institution; however, it will be less than 50%.</td>
<td>It varies by school; most programs are in person</td>
<td>Students pay the tuition at the school into which they transferred; there are no additional costs to the students.</td>
</tr>
</tbody>
</table>

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* Loyola University Chicago (Chicago, IL); Marquette University (Milwaukee, WI); Notre Dame University (South Bend, IN); Saint Louis University (St. Louis, MI), and any of these institutions international locations.

** Boston College; Canisius College; Creighton University; Fairfield University; Fordham University; Gonzaga University; John Carroll University; Loyola Marymount University; Loyola University Chicago; Loyola University Maryland; Loyola University New Orleans; Rockhurst University; Saint Joseph's University; Saint Louis University; Santa Clara University; Seattle University; University of Detroit Mercy; University of San Francisco; University of Scranton; and Xavier University.
# Study Abroad Programs

<table>
<thead>
<tr>
<th>Name</th>
<th>Location</th>
<th>Sponsoring Entity/Institution</th>
<th>Portion of the Program that is delivered by the Institution</th>
<th>Method of Delivery</th>
<th>Costs Students May Be Expected to Incur</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Economics</strong></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Universidad del Salvador</td>
<td>Buenos Aires, Argentina</td>
<td>Office of International Education</td>
<td>Students earn one semester’s worth of credit, typically 12-18 credits.</td>
<td>In Person</td>
<td>$28,204 (Fall) $27,660 (Spring)</td>
</tr>
<tr>
<td>Casa de la Mateada</td>
<td>Cordoba, Argentina</td>
<td>Office of International Education</td>
<td>Students earn one semester’s worth of credit, typically 12-18 credits.</td>
<td>In person</td>
<td>$28,204 (Fall) $27,660 (Spring)</td>
</tr>
<tr>
<td>University of Peking Technology (summer)</td>
<td>Beijing, China</td>
<td>College of Business Administration</td>
<td>Students earn one semester’s worth of credit, typically 12-18 credits.</td>
<td>In Person</td>
<td>$26,840 (Fall) $31,190 (Spring)</td>
</tr>
<tr>
<td><strong>Finance and Management</strong></td>
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<tr>
<td><strong>University of Beijing (summer)</strong></td>
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<tr>
<td><strong>Spanish</strong></td>
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<tr>
<td><strong>Catholic</strong></td>
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</tr>
<tr>
<td><strong>University of Cordoba</strong></td>
<td>Santiago, Chile</td>
<td>Office of International Education</td>
<td>Students earn one semester’s worth of credit, typically 12-18 credits.</td>
<td>In Person</td>
<td>$31,650 (Fall) $31,000 (Spring)</td>
</tr>
<tr>
<td><strong>University of Melbourne</strong></td>
<td>Melbourne, Australia</td>
<td>Office of International Education</td>
<td>Students earn one semester’s worth of credit, typically 12-18 credits.</td>
<td>In Person</td>
<td>$31,650 (Fall) $31,000 (Spring)</td>
</tr>
<tr>
<td><strong>Australian Catholic University</strong></td>
<td>Sydney, Australia</td>
<td>Office of International Education</td>
<td>Students earn one semester’s worth of credit, typically 12-18 credits.</td>
<td>In Person</td>
<td>$31,650 (Fall) $31,000 (Spring)</td>
</tr>
<tr>
<td><strong>Univ of Maryknoll University</strong></td>
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</tr>
<tr>
<td><strong>Pontificia Universidad de Chile</strong></td>
<td>Santiago, Chile</td>
<td>Office of International Education</td>
<td>Students earn one semester’s worth of credit, typically 12-18 credits.</td>
<td>In Person</td>
<td>$31,650 (Fall) $31,000 (Spring)</td>
</tr>
<tr>
<td><strong>Universidad de Chile</strong></td>
<td>Santiago, Chile</td>
<td>Office of International Education</td>
<td>Students earn one semester’s worth of credit, typically 12-18 credits.</td>
<td>In Person</td>
<td>$31,650 (Fall) $31,000 (Spring)</td>
</tr>
<tr>
<td><strong>BIT (Beijing Institute of Technology)</strong></td>
<td>Beijing, China</td>
<td>College of Business Administration</td>
<td>Students earn one semester’s worth of credit, typically 12-18 credits.</td>
<td>In Person</td>
<td>$31,650 (Fall) $31,000 (Spring)</td>
</tr>
<tr>
<td><strong>Peking University</strong></td>
<td>Beijing, China (summer)</td>
<td>College of Business Administration</td>
<td>Students earn one semester’s worth of credit, typically 12-18 credits.</td>
<td>In Person</td>
<td>$31,650 (Fall) $31,000 (Spring)</td>
</tr>
<tr>
<td><strong>Peking University, Guanghua School of Management</strong></td>
<td>Beijing, China</td>
<td>College of Business Administration</td>
<td>Students earn one semester’s worth of credit, typically 12-18 credits.</td>
<td>In Person</td>
<td>$31,650 (Fall) $31,000 (Spring)</td>
</tr>
<tr>
<td><strong>The Beijing Center for Chinese Studies</strong></td>
<td>Beijing, China</td>
<td>Office of International Education</td>
<td>Students earn one semester’s worth of credit, typically 12-18 credits.</td>
<td>In Person</td>
<td>$31,650 (Fall) $31,000 (Spring)</td>
</tr>
<tr>
<td><strong>The Beijing Center for Chinese Studies (summer)</strong></td>
<td>Beijing, China</td>
<td>Office of International Education</td>
<td>Students earn one semester’s worth of credit, typically 12-18 credits.</td>
<td>In Person</td>
<td>$31,650 (Fall) $31,000 (Spring)</td>
</tr>
<tr>
<td><strong>Southwestern University of Finance and Economics</strong></td>
<td>Chengdu, China</td>
<td>Office of International Education</td>
<td>Students earn one semester’s worth of credit, typically 12-18 credits.</td>
<td>In Person</td>
<td>$31,650 (Fall) $31,000 (Spring)</td>
</tr>
</tbody>
</table>

*Varies by credit load; students pay program directly. Additional information is found here: [http://www.marquette.edu/abroad/where.shtml](http://www.marquette.edu/abroad/where.shtml)*
<table>
<thead>
<tr>
<th>Ligan University (summer)</th>
<th>Hong Kong, China</th>
<th>Office of International Education</th>
<th>Students typically earn 6 credits in the summer term.</th>
<th>Varies by credit load; students pay program directly. Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>Lingnan University</td>
<td>Hong Kong, China</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>In person $27,440 (Fall) $27,654 (Spring) Varies by session. Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
</tr>
<tr>
<td>Tongji University, Shanghai, China (summer)</td>
<td>College of Business Administration</td>
<td>Students typically earn 5 credits in the summer term.</td>
<td>Varies by credit load; students pay program directly. Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
<td></td>
</tr>
<tr>
<td>Tongji University, Shanghai, China</td>
<td>College of Business Administration</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>In person $25,990 (Fall) $28,740 (Spring) Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
<td></td>
</tr>
<tr>
<td>Xiangtan University</td>
<td>Xiangtan, China</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>In person Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
</tr>
<tr>
<td>Sun Yat-Sen University</td>
<td>Zhuhai, China</td>
<td>College of Business Administration</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>In person $25,590 (Fall) $28,640 (Spring) Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
</tr>
<tr>
<td>Danish Institute for Study Abroad, Copenhagen</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>In person $31,725 (Fall) $29,940 (Spring) Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
<td></td>
</tr>
<tr>
<td>Danish Institute for Study Abroad, Copenhagen</td>
<td>College of Business Administration</td>
<td>Students typically earn 3-6 credits in the summer term.</td>
<td>Varies by program. Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
<td></td>
</tr>
<tr>
<td>Danish Institute for Study Abroad, Copenhagen</td>
<td>Office of International Education</td>
<td>Students typically earn 3-10 credits in the summer term.</td>
<td>Varies by credit load; students pay the program directly. Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
<td></td>
</tr>
<tr>
<td>University of Copenhagen</td>
<td>Copenhagen, Denmark</td>
<td>Office of International Education</td>
<td>For graduate students only; Students earn one semester's worth of credit, typically 6-9 credits.</td>
<td>In person $33,205 (Fall) $32,375 (Spring) Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
</tr>
<tr>
<td>University of Southern Denmark</td>
<td>Sonderborg, Denmark</td>
<td>College of Business Administration</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>In person $26,840 (Fall) $31,190 (Spring) Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
</tr>
<tr>
<td>The American University in Cairo</td>
<td>Cairo, Egypt</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>In person $27,574 Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
</tr>
<tr>
<td>The American University in Cairo</td>
<td>Cairo, Egypt</td>
<td>Office of International Education</td>
<td>Students typically earn 6 credits in the summer term.</td>
<td>Varies by credit load; students pay program directly. Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
</tr>
<tr>
<td>Casa de la Solidaridad</td>
<td>San Salvador, El Salvador</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>In person $25,632 (Fall) $24,982 (Spring) Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
</tr>
<tr>
<td>Casa de la Solidaridad (summer)</td>
<td>San Salvador, El Salvador</td>
<td>Office of International Education</td>
<td>Students typically earn 6 credits in the summer term.</td>
<td>Varies by credit load/subjects studied; students pay program directly. Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
</tr>
<tr>
<td>University of Birmingham</td>
<td>Birmingham, England</td>
<td>College of Business Administration</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>In person $27,440 (Fall) $34,290 (Spring) Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
</tr>
<tr>
<td>University of Birmingham</td>
<td>Birmingham, England</td>
<td>Office of International Education</td>
<td>Students typically earn 3-6 credits in the summer term.</td>
<td>Varies by credit load; students pay program directly. Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
</tr>
<tr>
<td>University of Kent</td>
<td>Canterbury, England</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>In person $29,828 (Fall) $28,050 (Spring); students pay program directly. Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
</tr>
<tr>
<td>City University</td>
<td>London, England</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>In person $32,752 (Fall) $31,750 (Spring) Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
</tr>
<tr>
<td>Kings College</td>
<td>London, England</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>In person $31,578 (Fall) $31,000 (Spring) Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
</tr>
<tr>
<td>Kings College Summer Program</td>
<td>London, England</td>
<td>Office of International Education</td>
<td>Students typically earn 3-6 credits in the summer term.</td>
<td>Varies by credit load/subjects studied; students pay program directly. Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
</tr>
<tr>
<td>Institution</td>
<td>Location</td>
<td>Program</td>
<td>Credit Information</td>
<td>Tuition Costs</td>
</tr>
<tr>
<td>-------------------------------------------------</td>
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</tr>
<tr>
<td>St. Mary's-Twickenham</td>
<td>London, England</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>$30,040 (Fall) $11,285 (Spring)</td>
</tr>
<tr>
<td>St. Mary's-Twickenham (summer)</td>
<td>Twickenham, England</td>
<td>Office of International Education</td>
<td>Students typically earn 3-6 credits in the summer term.</td>
<td>Varies by credit load; students pay program directly. Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
</tr>
<tr>
<td>ENSEIRB</td>
<td>Bordeaux, France</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits</td>
<td>$33,479 Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
</tr>
<tr>
<td>ESSEC</td>
<td>Cergy, France</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>$26,878 (Fall) $31,290 (Spring) Varies by session. Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
</tr>
<tr>
<td>EDHEC Business School</td>
<td>Lille, France</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>$36,295 (Spring) Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
</tr>
<tr>
<td>European Summer Program at Lille Catholic University</td>
<td>Lille, France</td>
<td>Office of International Education</td>
<td>Students typically earn 5-9 credits in the summer term.</td>
<td>Varies by credit load/subjects studied; students pay program directly. Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
</tr>
<tr>
<td>Université Catholique de Lille</td>
<td>Lille, France</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>$28,554 Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
</tr>
<tr>
<td>Université Catholique de Lille (summer)</td>
<td>Lille, France</td>
<td>Office of International Education</td>
<td>Students typically earn 3-6 credits in the summer term.</td>
<td>Varies by credit load; students pay program directly. Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
</tr>
<tr>
<td>Université Catholique de Lyon (ESDES)</td>
<td>Lyon, France</td>
<td>College of Business Administration</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>$26,902 (Fall) $18,770 (Spring) Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
</tr>
<tr>
<td>Université Catholique de Lyon (ESDES)</td>
<td>Lyon, France</td>
<td>College of Business Administration</td>
<td>Students typically earn 6 credits in the summer term.</td>
<td>Varies by credit load; students pay program directly. Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
</tr>
<tr>
<td>Institut Catholique de Paris</td>
<td>Paris, France</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>$29,140 (Fall) $28,890 (Spring) Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
</tr>
<tr>
<td>Institut Catholique Paris Summer Program</td>
<td>Paris, France</td>
<td>Office of International Education</td>
<td>Students typically earn 6-9 credits in the summer term.</td>
<td>Varies by credit load/subjects studied; students pay program directly. Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
</tr>
<tr>
<td>Sciences-Po</td>
<td>Paris, France</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>$30,028 (Fall) $30,140 (Spring) Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
</tr>
<tr>
<td>Sciences-Po (summer)</td>
<td>Paris, France</td>
<td>Office of International Education</td>
<td>Students typically earn 3-6 credits in the summer term.</td>
<td>Varies by credit load; students pay program directly. Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
</tr>
<tr>
<td>Université de Poitiers</td>
<td>Poitiers, France</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>$34,255 (Fall) $33,651 (Spring) Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
</tr>
<tr>
<td>EM Strasbourg</td>
<td>Strasbourg, France</td>
<td>College of Business Administration</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>$26,802 (Fall) $30,740 (Spring) Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
</tr>
<tr>
<td>EM Strasbourg (summer)</td>
<td>Strasbourg, France</td>
<td>College of Business Administration</td>
<td>Students typically earn 7 credits in the summer term.</td>
<td>Varies by credit load/subjects studied; students pay program directly. Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
</tr>
<tr>
<td>Catholic University of Eichstatt/Ingolstadt</td>
<td>Eichstatt, Germany</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>$37,228 Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
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<tr>
<td>Catholic University of Eichstatt/Ingolstadt summer program</td>
<td>Eichstatt, Germany</td>
<td>Office of International Education</td>
<td>Students typically earn 6 credits in the summer term.</td>
<td>Varies by credit load/subjects studied; students pay program directly. Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
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<tr>
<td>Institution</td>
<td>Location</td>
<td>Sponsor</td>
<td>Credit Information</td>
<td>Tuition and Fee</td>
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<tr>
<td>Goethe University</td>
<td>Frankfurt, Germany</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>$28,140 (Fall) $27,290 (Spring) Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
</tr>
<tr>
<td>Phillips Universitat</td>
<td>Marburg, Germany</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>$27,690 (Fall) $26,840 (Spring) Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
</tr>
<tr>
<td>The American College of Greece</td>
<td>Athens, Greece</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>$30,140 Varies by session. Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
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<tr>
<td>The American College of Greece</td>
<td>Athens, Greece</td>
<td>Office of International Education</td>
<td>Students typically earn 3-6 credits in the summer term.</td>
<td>Varies by credit load; students pay program directly. Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
</tr>
<tr>
<td>Hong Kong Institute of Education</td>
<td>Tai Po, Hong Kong</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>$27,240 (Fall) $26,493 (Spring) Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
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<tr>
<td>Management Development Institute</td>
<td>Gurgaon, India</td>
<td>College of Business Administration</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>$29,252 (Fall) $32,590 (Spring) Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
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<td>University College Dublin</td>
<td>Dublin, Ireland</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>$31,050 (Fall) $30,450 (Spring) Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
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<td>University College Dublin Nursing</td>
<td>Dublin, Ireland</td>
<td>Office of International Education</td>
<td>Students typically earn 6 credits in the summer term.</td>
<td>Varies by credit load; students pay program directly. Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
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<tr>
<td>National University of Ireland</td>
<td>Galway, Ireland</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>$28,700 (Fall) $27,400 (Spring) Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
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<tr>
<td>National University of Ireland, Galway Summer Program</td>
<td>Galway, Ireland</td>
<td>Office of International Education</td>
<td>Students typically earn 6 credits in the summer term.</td>
<td>Varies by credit load; students pay program directly. Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
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<td>Gonzaga in Florence Summer Program</td>
<td>Florence, Italy</td>
<td>Office of International Education</td>
<td>Students typically earn 6 credits in the summer term.</td>
<td>Varies by credit load/subjects studied; students pay program directly. Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
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<tr>
<td>Gonzaga University</td>
<td>Florence, Italy</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>$34,965 (Fall) $33,669 (Spring) ; students pay the program directly. Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
</tr>
<tr>
<td>Universitá Cattolica del Sacro Cuore</td>
<td>Milan, Italy</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>$31,019; students pay program directly. Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
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<tr>
<td>Università Cattolica del Sacro Cuore</td>
<td>Milan, Italy</td>
<td>Office of International Education</td>
<td>Students typically earn 3-9 credits in the summer term.</td>
<td>Varies by credit load; students pay the program directly. Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
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<tr>
<td>John Cabot University</td>
<td>Rome, Italy</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>$30,590 (Fall) $31,490 (Spring) Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
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<tr>
<td>John Cabot University Summer Program</td>
<td>Rome, Italy</td>
<td>Office of International Education</td>
<td>Students typically earn 3-12 credits in the summer term.</td>
<td>Varies by credit load/subjects studied; students pay program directly. Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
</tr>
<tr>
<td>John Felice Rome Center</td>
<td>Rome, Italy</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>$30,790 (Fall) $30,542 (Spring) Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
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<td>Loyola Rome Center</td>
<td>Rome, Italy</td>
<td>Office of International Education</td>
<td>Students typically earn 3-12 credits in the summer term.</td>
<td>Varies by credit load; students pay program directly. Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
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<td>LUISS Universita Guido Carli</td>
<td>Rome, Italy</td>
<td>College of Business Administration</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>$26,878 (Fall) $31,740 (Spring) Additional information is found here: <a href="http://www.marquette.edu/abroad/where.shtml">http://www.marquette.edu/abroad/where.shtml</a></td>
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<tr>
<td>University/Campus</td>
<td>Location/Country</td>
<td>Office/Program</td>
<td>Credit Load</td>
<td>Delivery</td>
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<tr>
<td>Nagasaki University</td>
<td>Nagasaki, Japan</td>
<td>Office of International Education</td>
<td>Student's earn on semester's worth of credit, typically 12-18 credits.</td>
<td>In person</td>
</tr>
<tr>
<td>Sophia University (summer)</td>
<td>Tokyo, Japan</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>In person</td>
</tr>
<tr>
<td>Sophia University (summer)</td>
<td>Tokyo, Japan</td>
<td>Office of International Education</td>
<td>Students typically earn 6 credits in the summer term.</td>
<td>In person</td>
</tr>
<tr>
<td>University of Jordan</td>
<td>Amman, Jordan</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>In person</td>
</tr>
<tr>
<td>University of Jordan (summer)</td>
<td>Amman, Jordan</td>
<td>Office of International Education</td>
<td>Students typically earn 3-6 credits in the summer term.</td>
<td>In person</td>
</tr>
<tr>
<td>University of Luxembourg</td>
<td>Luxembourg City, Luxembourg</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>In person</td>
</tr>
<tr>
<td>Universidad Iberoamericana</td>
<td>Mexico City, Mexico</td>
<td>College of Business Administration</td>
<td>Students earn one semester's worth of credit, typically 3-6 credits in the summer term.</td>
<td>In person</td>
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<tr>
<td>Tecnologico de Monterrey</td>
<td>Various cities, Mexico</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>In person</td>
</tr>
<tr>
<td>EGE Rabat</td>
<td>Rabat, Morocco</td>
<td>College of Business Administration</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>In person</td>
</tr>
<tr>
<td>Ateneo de Manila University</td>
<td>Manila, Philippines</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>In person</td>
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<tr>
<td>Casa Bayanihan University</td>
<td>Manila, Philippines</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>In person</td>
</tr>
<tr>
<td>South Africa Service Learning Program</td>
<td>Bellville, Republic of South Africa</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>In person</td>
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<tr>
<td>University of Western Cape</td>
<td>Capetown, South Africa</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>In person</td>
</tr>
<tr>
<td>Sogang University</td>
<td>Seoul, South Korea</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>In person</td>
</tr>
<tr>
<td>Sogang University (summer)</td>
<td>Seoul, South Korea</td>
<td>Office of International Education</td>
<td>Students typically earn 6-9 credits in the summer term.</td>
<td>In person</td>
</tr>
<tr>
<td>IQS-Universitat Ramon Llull</td>
<td>Barcelona, Spain</td>
<td>College of Business Administration</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>In person</td>
</tr>
<tr>
<td>Universidad Loyola Andalucia-Cordoba</td>
<td>Cordoba or Seville, Spain</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>In person</td>
</tr>
<tr>
<td>Saint Louis University-Madrid Campus</td>
<td>Madrid, Spain</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>In Person</td>
</tr>
<tr>
<td>Saint Louis University-Madrid Campus (summer)</td>
<td>Madrid, Spain</td>
<td>Office of International Education</td>
<td>Students typically earn 3-6 credits in the summer term.</td>
<td>In person</td>
</tr>
<tr>
<td>Universidad Pontificia Comillas</td>
<td>Madrid, Spain</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>In person</td>
</tr>
<tr>
<td>University</td>
<td>City, Country</td>
<td>Office of International Education</td>
<td>Credit Earned &amp; Length</td>
<td>Delivery Method</td>
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<tr>
<td>Universidad de Duesto</td>
<td>San Sebastian, Spain</td>
<td>College of Business Administration</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>In person</td>
</tr>
<tr>
<td>Winterthur School of Management and Law</td>
<td>Zurich, Switzerland</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>In person</td>
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<tr>
<td>Fu Jen Catholic University</td>
<td>New Taipei City, Taiwan</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>In person</td>
</tr>
<tr>
<td>Mahidol University International College</td>
<td>Bangkok, Thailand</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>In person</td>
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<tr>
<td>Mahidol University International College (summer)</td>
<td>Salaya, Thailand</td>
<td>Office of International Education</td>
<td>Students typically earn 3-6 credits in the summer term.</td>
<td>In person</td>
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<tr>
<td>Faith University</td>
<td>Istanbul, Turkey</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>In person</td>
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<tr>
<td>Vietnam National University</td>
<td>Ho Chi Minh City, Vietnam</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>In person</td>
</tr>
<tr>
<td>AMIDEAST</td>
<td>Various locations</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>In person</td>
</tr>
<tr>
<td>Center for Education Abroad at Arcadia University</td>
<td>Various locations</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>In person</td>
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<tr>
<td>Center for Education Abroad at Arcadia University (summer)</td>
<td>Various locations</td>
<td>Office of International Education</td>
<td>Students typically earn 3-9 credits in the summer term.</td>
<td>In person</td>
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<td>ISU Hessen</td>
<td>Various locations</td>
<td>Office of International Education</td>
<td>Students typically earn 6 credits in the summer term.</td>
<td>In person</td>
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<tr>
<td>School for International Training (SIT)</td>
<td>Various locations</td>
<td>Office of International Education</td>
<td>Students earn one semester's worth of credit, typically 12-18 credits.</td>
<td>In person</td>
</tr>
<tr>
<td>School for International Training (SIT) (summer)</td>
<td>Various locations</td>
<td>Office of International Education</td>
<td>Students typically earn 3-9 credits in the summer term.</td>
<td>In person</td>
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<tr>
<td>AMIDEAST (summer)</td>
<td>Various</td>
<td>Office of International Education</td>
<td>Students typically earn 3-12 credits in the summer term.</td>
<td>In person</td>
</tr>
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</table>
Welcome to the undergraduate section of the Marquette University Bulletin that describes programs offered in seven colleges across the university. Many of these programs are nationally recognized, and all are grounded in long-standing traditions of Jesuit education. Each undergraduate’s academic experience begins with the University Core of Common Studies, which comprises course work in nine key knowledge areas: 1) Rhetoric, 2) Mathematical Reasoning, 3) Individual and Social Behavior, 4) Diverse Cultures, 5) Literature/Performing Arts, 6) Histories of Cultures and Societies, 7) Science and Nature, 8) Human Nature and Ethics and 9) Theology. In these core courses, the distinctive “Marquette experience” begins to take shape, as students develop an approach to human understanding grounded in the liberal arts.

Within each college, students complete foundation courses crucial to their disciplines, and then immerse themselves in the more specialized courses required for their majors and minors. The bulletin describes the individual courses available to you and offers examples of semester-by-semester course schedules to help guide your choices. At Marquette University we emphasize the need to integrate theory and practice, and reflection and action, so we offer many opportunities for you to learn through experiences outside the classroom. Co-curricular opportunities abound and include study abroad, undergraduate research, living-learning communities in the residence halls and internships. Each semester hundreds of Marquette students participate in service-learning courses that involve significant engagement with the local community. Two extraordinary examples of our co-curricular opportunities are the Les Aspin Center in Washington, D.C., where students work in Congressional offices or government agencies while taking course work on politics, and the service learning program in Cape Town, South Africa, where students work with community organizations on social justice issues.

As you will see, each college offers meaningful and unique programs, courses, student organizations and clubs and activities. What they all share is a commitment to making your Marquette education a transformational experience. The faculty and staff listed in this bulletin will be happy to explain how a Marquette education helps our students “Be the Difference” in the world. I hope you enjoy your visit to the Marquette site!

Sincerely,

John Su, Ph.D.
Vice Provost for Academic Affairs

How to Use This Bulletin

This 2016-2017 Marquette University Undergraduate Bulletin governs curricular requirements for all undergraduate students entering Marquette University during the 2016-17 academic year. The curricular requirements for all active academic programs are outlined herein, and are applicable to new freshmen, new transfer students (advanced standing), readmitted students who have stopped out for more than one year and second/additional bachelor degree students. All academic policy and course additions/revisions apply to all students as of the date they become effective, regardless of whether they were in effect at the time the student initially enrolled at Marquette. Each entering student can view degree requirements of the programs in this bulletin or in Academic Advisement, Marquette's degree audit system, which is built upon the bulletin in effect at the time of admission or readmission. Students are encouraged to consult with Academic Advisement throughout their tenure at Marquette. This bulletin is archived at the end of the academic year and continues to be available online. The university reserves the right to amend any of its academic programs, requirements for degrees, tuitions, fees, etc., at any time, in its sole discretion.
Admission and Readmission to the Undergraduate Colleges

Application for Undergraduate Admission

Prospective students apply online: marquette.edu/explore/

Admission to Marquette University may be granted by the Committee on Admissions to an applicant whose qualifications indicate a potential for successful college work. During the application process, the educational background of the applicant is carefully reviewed, and each applicant is given personal attention and consideration. However, no application is considered for any applicant with an outstanding balance of $3,000 or more already owed the university.

Undergraduate applicants are considered for admission to Marquette University in one of the following classifications:

• Admission as a Freshman: Degree-seeking applicants entering college for the first time.
• Admission as a Transfer Student (Advanced Standing): Degree-seeking applicants who have been enrolled or registered in an institution of higher learning since high school graduation, but have not earned a bachelor's degree.
• Admission as an Additional Degree Student: Degree-seeking applicants who have already earned a bachelor's degree at an institution other than Marquette and wish to earn an additional one.
• Admission as a Non-degree Student: Non-degree seeking applicants who take credit-bearing classes at Marquette.

All transcripts required in the admission process must be official. Official transcripts are those that are printed on security paper and come directly from U.S. Mail from another institution's record/registrar office to the Office of Undergraduate Admissions, or those that are delivered electronically directly to the Office of Undergraduate Admissions via a secured third party method that has been verified by the sending institution.

The address for institutions to send official transcripts is:

Office of Undergraduate Admissions
Marquette University
P.O. Box 1881
Milwaukee, WI 53201-1881

If Marquette University has reason to suspect an applicant's high school diploma, transcript or other information is fraudulent or not valid, the dean or his/her designate will investigate the matter. The Office of Admissions reserves the right to rescind admission in cases where fraudulence is found.

Applicants with questions not answered in this section are encouraged to visit Office of Undergraduate Admissions (http://www.marquette.edu/explore) or call at (414) 288-7302.

Admission as a Freshman

All records and other materials required for admission are described in this section. Admission decisions are made on a competitive, pooled basis.

Freshman applications and supporting credentials must be postmarked no later than Dec. 1. With the exception of physical therapy and athletic training, applications will continue to be accepted and reviewed on a space-available basis after the Dec. 1 deadline. If colleges of the university have special admission procedures and requirements, they are listed in the respective sections of this bulletin.

For success in all of its programs, Marquette University recommends a balanced high school preparation with course work in the following areas: English, mathematics, natural science, social studies, and foreign language. The chart below lists the minimum recommended preparation.

Recommended High School Preparation

<table>
<thead>
<tr>
<th>Subject</th>
<th>Arts and Sciences</th>
<th>Business Administration</th>
<th>Communication</th>
<th>Engineering</th>
<th>Nursing</th>
<th>Health Sciences</th>
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<td>English</td>
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<td>Social Studies</td>
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<td>Foreign Language</td>
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<td>Mathematics</td>
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<td>3#</td>
<td>2</td>
<td>4</td>
<td>3##</td>
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<tr>
<td>Science (any)</td>
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<tr>
<td>Biology</td>
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<tr>
<td>Chemistry</td>
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<tr>
<td>Physics</td>
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Additional Academic Subjects

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<tbody>
<tr>
<td>TOTAL Academic Units</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>16</td>
</tr>
</tbody>
</table>

* Academic units specifically required for admission.

# Algebra, geometry, intermediate algebra required. Four units of mathematics recommended.

## Algebra and geometry required. Three units of mathematics recommended.

† Pre-medical/dental and science majors should complete three units of science (preferably biology, chemistry, physics; where physics is unavailable, another senior-level science or math course should be substituted).

†† Students interested in international business are strongly urged to complete four units of a single foreign language.

**High School Diploma**

Graduation from an accredited high school or the equivalent is required. Admission is determined by the high school transcript submitted at the time of application, normally after six or seven semesters of high school. After admission, the student must submit a final high school transcript before the first semester of attendance that indicates the date the high school diploma was earned. If the high school diploma is not earned, the high school equivalency is determined and verified by the Dean of Admissions upon review of the applicant's documents.

**Entrance Examinations**

All applicants for admission as freshmen are required to take the Scholastic Aptitude Test (SAT) of the College Entrance Examination Board or the examination of the American College Testing Program (ACT). Information concerning these examinations can be obtained from high school counselors or by requesting information from the respective organizations: The College Board (http://www.collegeboard.com) or ACT (http://www.act.org).

**Application Fee and Tuition Deposit**

There is no application fee for domestic undergraduate applicants. An applicant who is admitted may reserve a place in the incoming freshman class by forwarding a $200 tuition deposit (and a $300 housing deposit if university housing is desired) by the deadline date specified in his or her admission notification. The tuition deposit is applied to the tuition assessment of the first term (the housing deposit is applied to the housing charges for the first term). The tuition and housing deposits are non-refundable.

**Admission as a Transfer Student (Advanced Standing)**

Students from other colleges, universities, or schools of recognized standing, who have pursued courses equivalent to those offered at Marquette University and have not earned a bachelor's degree, may be considered for admission as a transfer student. Transfer applicants are considered on a rolling basis for all programs except nursing. Refer to the admissions website for transfer admission deadlines and details.

Applicants submit the application forms, their final official high school transcript and an official transcript from each post-secondary school, college, university or other institution in which he or she was registered. Failure to report attendance at any such institution since high school graduation during the admission process is considered sufficient reason for dismissal.

A transfer applicant who has completed fewer than 12 term hours of college level work (or its equivalent) must also submit official SAT or ACT test scores for a completed application. (See Entrance Examinations above.) Generally, a transfer applicant must present a satisfactory record from the schools previously attended. Specific programs may require an average above a 2.500 (on the four-point system). Applicants who are seeking to enter some of Marquette’s academic programs as juniors or seniors may, at the discretion of the dean or director, have some of their lower-division requirements substituted by courses or credit earned at another institution prior to admission.

**Transfer Course/Credit Policy**

Marquette University welcomes transfer students to its community and recognizes the unique contribution transfer students bring to Marquette. Our academic programs are grounded in the Jesuit tradition of inclusiveness and we know you will experience a transformational education during your degree completion at Marquette University.

Following is Marquette’s transfer policy, outlining the conditions for transfer of courses/credit to Marquette.

1. Institutions from which transfer courses/credit can be accepted by Marquette:

   a. Baccalaureate granting U.S. institutions that are fully accredited by one of the six regional accrediting associations.

      • Middle States Association of Colleges and Schools
      • New England Association of Colleges and Schools
      • North Central Association of Colleges and Schools
b. Two-year institutions that are fully accredited by one of the six above listed regional accrediting organizations.
c. Tertiary-level international institutions that are formally recognized by that country’s ministry of education or its equivalent.

2. Types of courses that will be evaluated for transfer credit:
   a. College-level courses, regardless of the mode of delivery.
   b. Credit earned through Credit by Examination.
   c. Credit for military training and education provided by the armed services.
      - Evaluated in accordance with the recommendations of the American Council on Education (ACE).
      - Service members may qualify for military transfer credit up to the overall university transfer credit limit and must submit an official copy of their military record for evaluation.
   d. Courses taken as part of military service through a regionally accredited institution.

3. Types of courses that will not be evaluated for transfer credit:
   a. Courses that include, but are not limited to, those earned as part of a certificate, vocational or professional training program.
      - For example: air conditioning, automotive technology, culinary arts.
   b. Developmental/Remedial/Non-college level courses.
      - For example: pre-college level courses in English, math, writing.
   c. Activity/Skills courses, without theory as a significant component of the content.
      - For example: courses where students are exercising or participating in a sport and courses where students learn the keyboard and/or an application.
   d. Stand-alone experiential courses.
      - For example: internships, clinicals, practica, co-op experiences, etc.
   e. Major-specific courses taken more than 10 years prior to matriculation.
      - Note: some courses, including major-specific courses and their prerequisites may have a shorter sunset period in some colleges.

4. Grades:

   Grades are not accepted in the transfer approval process; only credits will transfer.
   Courses with a grade of C or higher will be reviewed.

   Some majors may require a higher grade to fulfill requirements.
   a. Pass/Fail courses will be accepted for credit, assuming the institution’s policy states that the Pass grade reflects a C or higher.
   b. Repeated courses will only be reviewed and accepted for credit once, even if taken at different institutions. The most recent grade received will be used in the evaluation process.

5. Requirements:
   a. Courses will not be evaluated or accepted until an official transcript is received directly from the transfer institution.
   b. All transfer students must fulfill the requirements of the college into which they are admitted, regardless of the number of transfer credits earned.
   c. A minimum of 60 credits of the total credits needed for a Marquette degree must be earned at Marquette.
   d. The final 30 credits of the degree must be earned at Marquette (see the University Residency policy (p. 73)).
   e. A minimum of 32 upper-division credits must be earned at Marquette.
   f. A minimum of 15 credits in the major must be earned at Marquette.
   g. A minimum of 9 credits in the minor must be earned at Marquette.

6. Credit Conversion:

   Credit Conversion: Courses that are taken at an institution using quarter credits or units other than semester credits will be converted to semester credits and when the conversion results in partial credits, the course will satisfy the content of the course to the nearest whole number, as per normal rounding up calculations (i.e., 2.50-2.99 will satisfy the content of a 3 credit requirement; 3.50-3.99 will satisfy the content of a 4 credit requirement, etc.); however, the total number of credits needed for a specific requirement may not be satisfied and therefore, in some colleges additional Marquette credits could be required.
7. International Transfer Courses:

a. Courses taken at institutions outside of the United States will be subject to review by the Office of International Education (OIE).

b. To complete the evaluations, students should submit the following:

- Official academic results listing dates of study, courses taken, grades/marks received. Note: Attested copies accepted.
- Official, exact English translation of academic records (if not issued in English)
- Course descriptions (in English) of all courses taken.

c. Students who have studied medicine, nursing, and other health related fields may need to have their credentials evaluated by a professional credential evaluation agency.

8. Test Credits:

a. Marquette awards test credit such as AP, IB, CLEP, and A-Level based on official test scores, not credits awarded at previous institutions.

b. Test credit may be applied to UCCS requirements, the major, the minor, or as electives.

c. Test credits for major-specific courses more than 10 years old will not be accepted.

- Note: some test credits associated with major-specific courses and their prerequisites may have a shorter sunset period in some colleges.

d. Test credit will be revoked when a student enrolls and earns credit in a course for which test credit was previously awarded.

Note: Refer to individual colleges on transfer credit policy for any additional transfer requirements.

Admission as an Additional Undergraduate Degree Student

Baccalaureate degree holders from an accredited institution other than Marquette, with good scholastic records may be considered for admission as an additional baccalaureate degree student. Marquette bachelor degree graduates, refer to the Readmission section (p. 26) of this bulletin.

Additional bachelor degree-seeking applicants submit the transfer admission form, their final official high school transcript and an official transcript from each post-secondary school, college, university or other institution in which he or she was registered. Failure to report attendance at any such institution since high school graduation during the admission process is considered sufficient reason for dismissal.

Generally, an additional bachelor’s applicant must present a satisfactory record from the schools previously attended. Specific programs may require an average above a 2.500 (on the four-point system).

Additional baccalaureate degree students must complete all of the requirements of the college that offers the degree into which they are admitted. The minimum residence requirement is 32 additional semester hours of upper-division Marquette credit. These students are not eligible for graduation with university honors and class rank does not apply. In addition, these students may be eligible for Federal Stafford loans; however, are not eligible for other Federal, State or Marquette institutional aid. It is recommended that students who have already earned a baccalaureate degree and wish to further their education should consider the option of applying for admission to a graduate program.

The university may accept credit from two-and four-year accredited educational institutions based on an individual evaluation of credits. Refer to the Admission as a Transfer Student (Advanced Standing (p. 20)) section above for Marquette’s complete course/credit transfer policy.

Placement Exam / Credit

Marquette University recognizes Advanced Placement, College Level Examination Program, International Baccalaureate and Cambridge A-Levels and will award credit and/or placement to freshmen and transfer students based on examination scores earned.

Advanced Placement (AP)

Degree-seeking matriculated students may be granted advanced placement or credit for college level courses taken in high school. Usually such courses are under the auspices of the Advanced Placement Program of The College Board, and tests are taken upon the recommendation of high school teachers. The tests are administered by The College Board only in the high schools.

Marquette University faculty committees review the content of the Advanced Placement Program to determine course equivalents and required scores. Test results, sent by the College Board Advanced Placement Program, are received during the summer prior to enrollment. Students are notified by mail of the decision concerning advanced placement shortly after the university has received the test results.

The following chart lists the advanced placement subjects accepted at Marquette and the amount of credit that may be awarded for each score. AP credit awards are similar to transfer credit in that they are not calculated into the student’s cumulative grade point average. Students with AP credit awards are encouraged to consult with respective departments prior to registering for more advanced courses in the freshman year.

Additionally, pre-medical or pre-dental students should consult with the health professions adviser before accepting AP credits.
<table>
<thead>
<tr>
<th>Subject/Score</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art - History</td>
<td>No Credit</td>
<td>3 cr. for FIAR 9290</td>
<td>6 cr. for HIST 1201 and HIST 1202</td>
</tr>
<tr>
<td>Art - Studio: Drawing</td>
<td>No Credit</td>
<td>3 cr. for FIAR 1000</td>
<td>3 cr. for FIAR 1000</td>
</tr>
<tr>
<td>Art - Studio: 2-D Design</td>
<td>No Credit</td>
<td>3 cr. for FIAR 1100</td>
<td>3 cr. for FIAR 1100</td>
</tr>
<tr>
<td>Art - Studio: 3-D Design</td>
<td>No Credit</td>
<td>3 cr. for FIAR 9290</td>
<td>3 cr. for FIAR 9290</td>
</tr>
<tr>
<td>Biology</td>
<td>No Credit</td>
<td>3 cr. for BIOL 1009</td>
<td>6 cr. for BIOL 1001 and BIOL 1002</td>
</tr>
<tr>
<td>Capstone Research</td>
<td>No Credit</td>
<td>3 cr. for ARSC 9290</td>
<td>3 cr. for ARSC 9290</td>
</tr>
<tr>
<td>Capstone Seminar</td>
<td>No Credit</td>
<td>3 cr. for ARSC 9290</td>
<td>3 cr. for ARSC 9290</td>
</tr>
<tr>
<td>Chemistry</td>
<td>4 cr. for CHEM 1001</td>
<td>8 cr. for CHEM 1001 and CHEM 1002</td>
<td>8 cr. for CHEM 1001 and CHEM 1002</td>
</tr>
<tr>
<td>Chinese Language and Culture</td>
<td>Placement into CHNS 2001</td>
<td>3 cr. for CHNS 2002</td>
<td>6 cr. for CHNS 2001 and CHNS 2002</td>
</tr>
<tr>
<td>Computer Science Principles</td>
<td>No Credit</td>
<td>3 cr. for COSC 1000</td>
<td>3 cr. for COSC 1000</td>
</tr>
<tr>
<td>Computer Science A</td>
<td>No Credit</td>
<td>4 cr. for COSC 1010</td>
<td>4 cr. for COSC 1010</td>
</tr>
<tr>
<td>Economics: Macro</td>
<td>No Credit</td>
<td>3 cr. for ECON 1104</td>
<td>3 cr. for ECON 1104</td>
</tr>
<tr>
<td>Economics: Micro</td>
<td>No Credit</td>
<td>3 cr. for ECON 1103</td>
<td>3 cr. for ECON 1103</td>
</tr>
<tr>
<td>English Language/Literature and Composition</td>
<td>No Credit</td>
<td>3 cr. for ENGL 1001</td>
<td>6 cr. for ENGL 1001 and ENGL 1002</td>
</tr>
<tr>
<td>Environmental Science</td>
<td>No Credit</td>
<td>3 cr. for PHYS 1009</td>
<td>3 cr. for PHYS 1009</td>
</tr>
<tr>
<td>French Language and Culture</td>
<td>Placement into FREN 2001</td>
<td>4 cr. for FREN 2003</td>
<td>3 cr. for FREN 3001</td>
</tr>
<tr>
<td>German Language and Culture</td>
<td>Placement into GRMN 2001</td>
<td>4 cr. for GRMN 2003</td>
<td>3 cr. for GRMN 3001</td>
</tr>
<tr>
<td>Government and Politics: Comparative</td>
<td>No Credit</td>
<td>3 cr. for POSC 2401</td>
<td>3 cr. for POSC 2401</td>
</tr>
<tr>
<td>Government and Politics: United States</td>
<td>No Credit</td>
<td>3 cr. for POSC 2201</td>
<td>3 cr. for POSC 2201</td>
</tr>
<tr>
<td>History: United States</td>
<td>No Credit</td>
<td>6 cr. for HIST 2101 and HIST 2102</td>
<td>6 cr. for HIST 2101 and HIST 2102</td>
</tr>
<tr>
<td>History: European</td>
<td>No Credit</td>
<td>3 cr. for HIST 1002</td>
<td>3 cr. for HIST 1002</td>
</tr>
<tr>
<td>History: World</td>
<td>No Credit</td>
<td>6 cr. for HIST 9290</td>
<td>6 cr. for HIST 9290</td>
</tr>
<tr>
<td>Human Geography</td>
<td>No Credit</td>
<td>3 cr. for ANTH 2203</td>
<td>3 cr. for ANTH 2203</td>
</tr>
<tr>
<td>Italian Language and Culture</td>
<td>Placement into ITAL 2001</td>
<td>3 cr. for ITAL 2002</td>
<td>6 cr. for ITAL 2001 and ITAL 2002</td>
</tr>
<tr>
<td>Latin</td>
<td>Placement into LATN 2001</td>
<td>3 cr. for LATN 2001</td>
<td>6 cr. for LATN 2001 and LATN 2002</td>
</tr>
<tr>
<td>Mathematics: Calculus AB</td>
<td>No Credit</td>
<td>4 cr. for MATH 1450</td>
<td>4 cr. for MATH 1450</td>
</tr>
<tr>
<td>Mathematics: Calculus BC</td>
<td>4 cr. for MATH 1450</td>
<td>8 cr. for MATH 1450 and MATH 1451</td>
<td>8 cr. for MATH 1450 and MATH 1451</td>
</tr>
<tr>
<td>Music Theory</td>
<td>No Credit</td>
<td>3 cr. for MUSI 1020</td>
<td>3 cr. for MUSI 1020 and 3 cr. for MUSI 9290</td>
</tr>
<tr>
<td>Physics 1*</td>
<td>No Credit</td>
<td>4 cr. for PHYS 1001</td>
<td>4 cr. for PHYS 1001</td>
</tr>
<tr>
<td>Physics 2*</td>
<td>No Credit</td>
<td>4 cr. for PHYS 1002</td>
<td>4 cr. for PHYS 1002</td>
</tr>
<tr>
<td>Physics C*# (Mechanics)</td>
<td>No Credit</td>
<td>3 cr. for PHYS 1003</td>
<td>3 cr. for PHYS 1003</td>
</tr>
<tr>
<td>Physics C*# (Electricity and Magnetism)</td>
<td>No Credit</td>
<td>3 cr. for PHYS 1004</td>
<td>3 cr. for PHYS 1004</td>
</tr>
<tr>
<td>Psychology</td>
<td>No Credit</td>
<td>3 cr. for PSYC 1001</td>
<td>3 cr. for PSYC 1001</td>
</tr>
<tr>
<td>Spanish Language and Culture</td>
<td>Placement into SPAN 2001</td>
<td>4 cr. for SPAN 2003</td>
<td>3 cr. for SPAN 3001</td>
</tr>
<tr>
<td>Spanish Literature and Culture</td>
<td>Placement into SPAN 2003</td>
<td>3 cr. for SPAN 3001</td>
<td>6 cr. for SPAN 3001 and SPAN 3500</td>
</tr>
<tr>
<td>Statistics</td>
<td>No Credit</td>
<td>3 cr. for MATH 1700</td>
<td>3 cr. for MATH 1700</td>
</tr>
</tbody>
</table>

* Those students planning to attend medical or dental school are advised not to accept AP credit or placement in physics, and should consult with the health professions adviser.

# Science and engineering majors should note that credit received does not include lab credit. Labs must be completed at Marquette.

**Note:** No course awards or placement are granted for scores of 1 or 2. AP code is 1448. Revised May 2016.

**Cambridge A-Levels**

Marquette University reviews A-Level coursework for credit based on course content. In order to be reviewed, applicants must submit a copy of the syllabus of each course for which they are seeking credit. Email syllabi to admissions@marquette.edu.
College Level Examination Program (CLEP)
Credit for some college courses may be earned through the College Level Examination Program (CLEP) of The College Board. Recent high school graduates as well as those who have acquired knowledge in ways other than through traditional formal classroom attendance may benefit from these tests. The maximum number of credits that students can earn by CLEP examination is 30. Credit is not granted for any of the five general examinations. It is granted only for those approved subject examinations listed below. Credits are approved by the respective faculty, dean or director. Credit will be designated as earned by CLEP on the student record CLEP credit awards are similar to transfer credit, in that they are not calculated into the student’s cumulative grade point average.

General information on CLEP costs and test centers may be obtained from The College Board (http://www.collegeboard.com/clep).

<table>
<thead>
<tr>
<th>Subject/Required Score</th>
<th>50</th>
<th>55</th>
<th>60</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Biology</td>
<td>BIOL 1009 - 3 cr.</td>
<td>BIOL 1001 - 3 cr.</td>
<td>BIOL 1002 - 3 cr.</td>
</tr>
<tr>
<td>General Chemistry</td>
<td>CHEM 1001 - 4 cr. CHEM 1002 - 4 cr.</td>
<td>CHEM 1001 - 4 cr. CHEM 1002 - 4 cr.</td>
<td>CHEM 1001 - 4 cr. CHEM 1002 - 4 cr.</td>
</tr>
<tr>
<td>Analysis and Interpretation of Literature</td>
<td>ENGL 9292 - 3 cr.</td>
<td>ENGL 9292 - 3 cr.</td>
<td>ENGL 9292 - 3 cr.</td>
</tr>
<tr>
<td>American Literature</td>
<td>ENGL 9292 - 3 cr.</td>
<td>ENGL 9292 - 3 cr.</td>
<td>ENGL 9292 - 3 cr.</td>
</tr>
<tr>
<td>English Literature</td>
<td>ENGL 9292 - 3 cr.</td>
<td>ENGL 9292 - 3 cr.</td>
<td>ENGL 9292 - 3 cr.</td>
</tr>
<tr>
<td>Western Civilization 1</td>
<td>HIST 1001 - 3 cr.</td>
<td>HIST 1001 - 3 cr.</td>
<td>HIST 1001 - 3 cr.</td>
</tr>
<tr>
<td>Western Civilization 2</td>
<td>HIST 1002 - 3 cr.</td>
<td>HIST 1002 - 3 cr.</td>
<td>HIST 1002 - 3 cr.</td>
</tr>
<tr>
<td>History of the United States 1</td>
<td>HIST 2101 - 3 cr.</td>
<td>HIST 2101 - 3 cr.</td>
<td>HIST 2101 - 3 cr.</td>
</tr>
<tr>
<td>History of the United States 2</td>
<td>HIST 2102 - 3 cr.</td>
<td>HIST 2102 - 3 cr.</td>
<td>HIST 2102 - 3 cr.</td>
</tr>
<tr>
<td>Information Systems and Computer Applications</td>
<td>COSC 1000 - 3 cr.</td>
<td>COSC 1000 - 3 cr.</td>
<td>COSC 1000 - 3 cr.</td>
</tr>
<tr>
<td>College Algebra</td>
<td>MATH 1100 - 3 cr.</td>
<td>MATH 1100 - 3 cr.</td>
<td>MATH 1100 - 3 cr.</td>
</tr>
<tr>
<td>Calculus with Elementary Functions</td>
<td>MATH 1450 - 4 cr.</td>
<td>MATH 1450 - 4 cr.</td>
<td>MATH 1450 - 4 cr.</td>
</tr>
<tr>
<td>American Government</td>
<td>POSC 2201 - 3 cr.</td>
<td>POSC 2201 - 3 cr.</td>
<td>POSC 2201 - 3 cr.</td>
</tr>
<tr>
<td>Introduction to Psychology 1</td>
<td>PSYC 1001 - 3 cr.</td>
<td>PSYC 1001 - 3 cr.</td>
<td>PSYC 1001 - 3 cr.</td>
</tr>
<tr>
<td>Introduction to Sociology</td>
<td>SOCI 1001 - 3 cr.</td>
<td>SOCI 1001 - 3 cr.</td>
<td>SOCI 1001 - 3 cr.</td>
</tr>
<tr>
<td>Principles of Microeconomics</td>
<td>ECON 1103 - 3 cr.</td>
<td>ECON 1103 - 3 cr.</td>
<td>ECON 1103 - 3 cr.</td>
</tr>
<tr>
<td>Principles of Macroeconomics</td>
<td>ECON 1104 - 3 cr.</td>
<td>ECON 1104 - 3 cr.</td>
<td>ECON 1104 - 3 cr.</td>
</tr>
</tbody>
</table>

Note: The score reported on CLEP reports is the scaled score, not the percentile. CLEP code is 1448. Revised May 2015

Decisions about core credit for transfer courses, Advanced Placement courses, International Baccalaureate, and CLEP are made by college designees in consultation with the director of Core Curriculum.

International Baccalaureate (IB)
Marquette recognizes the rigorous academic preparation provided students who pursue IB courses as part of their high school curriculum. Matriculated students may be granted credit for their Higher Level (HL) IB courses. The International Baccalaureate Diploma Programme is offered at secondary institutions around the world, including 520 schools in the United States. The International Baccalaureate Organization (IBO) certifies IB World Schools, develops the curriculum and examinations and administers the exams.

Marquette University faculty committees review the content of the International Baccalaureate curriculum to determine course equivalents and required scores. Test results, sent by the International Baccalaureate Organization, are received during the summer prior to enrollment. Students should contact their College advising office to learn which IB credits have been awarded prior to registering for courses in the freshman year.

The following chart lists the Higher Level (HL) IB courses accepted at Marquette and the amount of credit that may be awarded for each score. IB credit awards are similar to transfer credit in that they are not calculated into the student’s cumulative grade point average. Students with IB credit awards are encouraged to consult with respective departments prior to registering for courses in the freshman year. Additionally, pre-medical or pre-dental students should consult with the health professions adviser before accepting IB credits.

<table>
<thead>
<tr>
<th>Group</th>
<th>Subject/Score</th>
<th>H4</th>
<th>H5</th>
<th>H6</th>
<th>H7</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Language</td>
<td>English A</td>
<td>ENGL 1001: 3 cr. ENGL 1002: 3 cr.</td>
<td>ENGL 1001: 3 cr. ENGL 1002: 3 cr.</td>
<td>ENGL 1001: 3 cr. ENGL 1002: 3 cr.</td>
<td>ENGL 1001: 3 cr. ENGL 1002: 3 cr.</td>
</tr>
<tr>
<td>First Language</td>
<td>All non-English A Languages</td>
<td>FOLA waiver 3 humanities credits</td>
<td>FOLA waiver 3 humanities credits</td>
<td>FOLA waiver 3 humanities credits</td>
<td>FOLA waiver 3 humanities credits</td>
</tr>
<tr>
<td>Second Language</td>
<td>French, German, Spanish B</td>
<td>Placement into 2001 level</td>
<td>Placement into 2003 level</td>
<td>4 credits for 2003 level</td>
<td>3 credits for 3001 level</td>
</tr>
</tbody>
</table>
--- | --- | --- | --- | --- | ---
Individuals and Societies Business and Management | MANA 9290: 3 cr. | MANA 9290: 3 cr. | MANA 9290: 3 cr. | MANA 9290: 3 cr.
Individuals and Societies Economics | ECON 1103: 3 cr. | ECON 1103: 3 cr. | ECON 1103: 3 cr. | ECON 1103: 3 cr.
Individuals and Societies Geography | ANTH 9290: 3 cr. PHYS 9290: 3 cr. | ANTH 9290: 3 cr. PHYS 9290: 3 cr. | ANTH 9290: 3 cr. PHYS 9290: 3 cr. | ANTH 9290: 3 cr. PHYS 9290: 3 cr.
Individuals and Societies History: Africa | HIST 1401: 3 cr. HIST 9290: 3 cr. | HIST 1401: 3 cr. HIST 9290: 3 cr. | HIST 1401: 3 cr. HIST 9290: 3 cr. | HIST 1401: 3 cr. HIST 9290: 3 cr.
Individuals and Societies History: Americas | HIST 1101: 3 cr. HIST 1301: 3 cr. | HIST 1101: 3 cr. HIST 1301: 3 cr. | HIST 1101: 3 cr. HIST 1301: 3 cr. | HIST 1101: 3 cr. HIST 1301: 3 cr.
Individuals and Societies History: Asia & Oceania | HIST 1501: 3 cr. HIST 9290: 3 cr. | HIST 1501: 3 cr. HIST 9290: 3 cr. | HIST 1501: 3 cr. HIST 9290: 3 cr. | HIST 1501: 3 cr. HIST 9290: 3 cr.
Individuals and Societies History: Europe & Middle East | HIST 1002: 3 cr. HIST 9290: 3 cr. | HIST 1002: 3 cr. HIST 9290: 3 cr. | HIST 1002: 3 cr. HIST 9290: 3 cr. | HIST 1002: 3 cr. HIST 9290: 3 cr.
Individuals and Societies History: Islam | HIST 9290: 6 cr. | HIST 9290: 6 cr. | HIST 9290: 6 cr. | HIST 9290: 6 cr.
Individuals and Societies Information Technology in a Global Society | BUAD 9290: 3 cr. | BUAD 9290: 3 cr. | BUAD 9290: 3 cr. | BUAD 9290: 3 cr.
Individuals and Societies Philosophy | PHIL 1001: 3 cr. PHIL 9290: 3 cr. | PHIL 1001: 3 cr. PHIL 9290: 3 cr. | PHIL 1001: 3 cr. PHIL 9290: 3 cr. | PHIL 1001: 3 cr. PHIL 9290: 3 cr.
Individuals and Societies Psychology | PSYC 1001: 3 cr. | PSYC 1001: 3 cr. | PSYC 1001: 3 cr. | PSYC 1001: 3 cr.
Experimental Sciences Biology | BIOL 1001: 3 cr. BIOL 9290: 3 cr. | BIOL 1001: 3 cr. BIOL 9290: 3 cr. | BIOL 1001: 3 cr. BIOL 9290: 3 cr. | BIOL 1001: 3 cr. BIOL 9290: 3 cr.
Experimental Sciences Physics | PHYS 1003: 4 cr. PHYS 9290: 4 cr. | PHYS 1003: 4 cr. PHYS 9290: 4 cr. | PHYS 1003: 4 cr. PHYS 9290: 4 cr. | PHYS 1003: 4 cr. PHYS 9290: 4 cr.
Mathematics Computer Science | COSC 1000: 3 cr. | COSC 1000: 3 cr. | COSC 1000: 3 cr. | COSC 1000: 3 cr.
Mathematics Mathematics | MATH 1450: 4 cr. | MATH 1450: 4 cr. | MATH 1450: 4 cr. | MATH 1450: 4 cr.
The Arts Dance | DANC 9290: 6 cr. | DANC 9290: 6 cr. | DANC 9290: 6 cr. | DANC 9290: 6 cr.
The Arts Film | FILM 9290: 6 cr. | FILM 9290: 6 cr. | FILM 9290: 6 cr. | FILM 9290: 6 cr.
The Arts Theatre Arts | THAR 9290: 6 cr. | THAR 9290: 6 cr. | THAR 9290: 6 cr. | THAR 9290: 6 cr.
The Arts Visual Arts | FIAR 9290: 6 cr. | FIAR 9290: 6 cr. | FIAR 9290: 6 cr. | FIAR 9290: 6 cr.

Note: No course awards are granted for scores of H1-H3. Revised May 2016

Placement in Foreign Language Courses

Students in the Klingler College of Arts and Sciences, international business majors in the College of Business Administration, College of Education and speech pathology and audiology majors in the College of Health Sciences must satisfy a foreign language requirement for graduation. This may be accomplished by placement, course work, or both. The goal of the Department of Foreign Languages and Literatures is to place students in the most appropriate level of foreign language study based on their previous exposure to the language. For more information, see the Academic Regulations (p. 64) section in this bulletin.

Admission with Non-degree Status

Students who wish to pursue courses for personal or professional development and who do not wish to pursue a degree may apply for admission with non-degree status. Although supporting credentials are not ordinarily required for the admission of non-degree students, Marquette reserves the right to request these if deemed appropriate to complete an admission review.

Students who have been dismissed from other colleges or universities may be admitted with non-degree status with the lapse of at least one term since the dismissal, and only then with the approval of the Committee on Admissions. Such applicants must file official transcripts from schools previously
attended before their requests for admission will be reviewed. These transcripts must be sent directly to the Office of Undergraduate Admissions by the other institutions; transcripts are not accepted by Marquette if routed through the student.

Students who wish to apply for student financial aid and/or transfer credits/courses into Marquette must seek degree status and apply for admission as a freshman, a transfer student or an additional degree-seeking student.

Additional regulations for non-degree students appear in the Academic Regulations (p. 71) section of this bulletin.

### Change of Status

Applicants who enter any program at Marquette University with non-degree status may later apply for degree status, as either full time or part time through the Office of Undergraduate Admissions, according to the deadlines for the term. This application will not be considered for any student with an outstanding balance of $3,000 or more already owed the university. Various criteria may be considered by the colleges during the review of the student’s request for a status change, including, but not limited to: current Grade Point Average, cumulative Grade Point Average, prior academic record and prior academic misconduct issues. Students having earned a degree at Marquette and wish to continue the semester after the degree was earned, or return at a later semester, follow the readmission policies of the university. (See Readmission to the university in this section of this bulletin.)

### Admission of Non-immigrant Students

Each year, Marquette University is pleased to enroll non-immigrant students from countries throughout the world. Applicants for undergraduate admission who are not citizens or permanent residents of the United States submit their applications to the Office of International Education. The application process is designed to allow international students the opportunity to demonstrate the four abilities that are necessary for successful study at Marquette: high academic ability, positive personal ability, strong English language ability and sufficient financial ability.

To learn more about the application process and deadlines, students who are neither U.S. citizens nor permanent residents, should contact the Office of International Education (OIE). An application, as well as a complete list of required materials, can also be found at the OIE website (http://www.marquette.edu/oie).

Office of International Education
Holthusen Hall, 4th Floor
P.O. Box 1881
Milwaukee, WI 53201 USA
Phone: (414) 288-7289
Email: world@marquette.edu

It is important to remember that the application process can take several weeks to many months, depending primarily upon when the applicant can provide the required materials.

International students who ultimately enroll at Marquette are required to report to OIE as soon as they arrive at the university, where the office provides advising and specialized orientation programs. OIE’s administrators are also the Designated School Officials (DSOs), and students with certain visa statuses need the involvement of OIE in many federal procedures such as extension of stay in the United States, return to the country after a visit abroad, employment and practical training applications and allowance for part-time enrollment in certain situations.

### Readmission to the University

Readmission to Marquette University is required for any former student who wishes to return to the university to complete a first bachelor’s degree, pursue an additional bachelor’s degree or take courses for professional or personal development. In all cases the student must be fully readmitted to the university prior to the session in which he/she wishes to register (see the Academic Calendar (p. 824) for published deadlines).

Readmission will not be considered for any former student with an outstanding balance of $3,000 or more already owed the university, or who has an active Student Affairs/Development or Office of the Registrar registration hold on his or her record. Various criteria may be considered by the colleges during the review of the student’s readmission request, including, but not limited to: current Grade Point Average, cumulative Grade Point Average, prior academic record and prior academic misconduct issues. A student’s academic status at the time the student withdrew, or was withdrawn from the university, remains in effect at the time of readmission. The decision for readmission is at the discretion of the dean and the decision of the dean is final.

**Note:** In no case will a former student’s degree/major/minor/concentration be rescinded for the purpose of earning an additional concurrent degree and/or major and/or minor and/or concentration. In addition, a student may not be readmitted for the purpose of simply earning a major/minor/concentration, without a concurrent degree. In this case, the major or minor or concentration will not be posted to the permanent academic record; however, a notation will be made on the transcript indicating that coursework was completed for the requisite major and/or minor and/or concentration.

### Readmission to First Undergraduate Degree

Former bachelor degree-seeking Marquette University students who wish to return after a lapse of one full term (excluding summer) or whose conditions of dismissal/withdrawal requires readmission to the university, must submit an Application for Readmission, located on the Marquette Central academic forms website. (http://www.marquette.edu/mucentral/registrar/policy_forms.shtml)
A re-entering student who has attended any other institution since leaving Marquette must request that an official transcript from each school be sent directly to the Office of the Registrar. The transcript(s) must be received before the application for readmission will be considered. The transcript(s) must be sent directly to the Office of the Registrar by the other institution(s), or delivered electronically directly to the Office of the Registrar via a secured third party that has been verified by the sending institution. Transcript(s) will not be accepted by Marquette if routed through the student. Records of applicants for readmission, including previous work at Marquette University, are subject to review and to a new evaluation of credits.

A student who interrupts residence for two or more consecutive terms must meet the graduation requirements which prevail at the time of readmission and may not be readmitted to a degree, major and/or minor that is no longer active. A re-entering, non-degree student who wishes to become degree-seeking, must apply through the Office of Undergraduate Admissions and is held to the degree requirements of the catalog in effect at the time of admission as a degree-seeking student. (See Admission with Non-Degree Status (p. 25) in this section of this bulletin).

Because Marquette conducts early registration which begins several months prior to the start of each term, it is to the student’s advantage to apply for readmission as early as possible. Application forms are available online (http://www.marquette.edu/mucentral) and a completed application must be submitted to the Office of the Registrar no later than one week before the start of the session for which the student wishes to enroll. (For the College of Nursing deadlines refer to the Academic Calendar (http://www.marquette.edu/provost/AcademicCalendars.shtml)).

**Readmission to Second / Additional Undergraduate Degree**

Marquette baccalaureate degree holders with good scholastic records may be admitted to pursue an additional baccalaureate degree from Marquette. These students are held to the degree requirements in effect at the time of readmission.

Additional baccalaureate degree students must complete all of the requirements of the college that offers the degree into which they are admitted. The minimum residence requirement is 32 additional semester hours of upper-division Marquette credit and these students are not eligible for graduation with university honors and class rank does not apply. In addition, additional bachelor’s degree students may be eligible for Federal Stafford loans; however, are not eligible for other Federal, State or Marquette institutional aid.

It is recommended that students who have already earned a baccalaureate degree and wish to further their education should consider the option of applying for admission to a graduate program.

**Readmission with Non-degree Status**

Former Marquette students and graduates of Marquette who wish to enroll in courses for personal or professional development only, must apply for readmission as a non-degree student.

Non-degree students are not eligible for financial aid.

**Immunization and Tuberculosis Screening Requirements**

Marquette University requires all newly admitted and readmitted undergraduate, graduate, and professional students to provide dates of certain immunizations and complete a TB Screening questionnaire for tuberculosis. Proof of immunization, immunity or disease incidence, if applicable, for Measles, Mumps, Rubella (MMR), Varicella (chicken pox), Tetanus/Diphtheria/Pertussis and completion of a tuberculosis screening questionnaire is required and must be completed electronically. Directions on how to access the Marquette University Medical Clinic student web portal to complete these forms are found in Checkmarq under the Next Step tab. Directions can also be found on the Marquette University Medical Clinic website (http://www.marquette.edu/shs/forms). Failure to complete the required immunization and TB screening questionnaire within 30 days of the start of the student’s first term or the readmitted term at Marquette will result in the placement of a registration “hold” on future registrations. The hold will be removed once the immunization and screening requirements have been met. Health Sciences, Nursing and Dental students may be required by their departments or colleges to receive additional immunizations. Contact your department or college for specific requirements.
Academic Programs

Undergraduate Programs
Undergraduate programs consist of the University Core of Common Studies and a specific major in one of the seven undergraduate colleges, the College of Arts and Sciences, College of Business Administration, College of Communication, College of Education, College of Engineering, College of Health Sciences and College of Nursing. All undergraduates take the University Core of Common Studies courses in nine knowledge areas that provide a Jesuit liberal arts foundation (fully described in the University Core of Common Studies (p. 77) section of the bulletin). Specific majors within each college are detailed in the college's section of the bulletin.

Undergraduate Learning Outcomes
Students who complete an undergraduate degree at Marquette University are prepared to:

- Pursue an integration of knowledge into a comprehensive, transcendent vision of life.
- Apply the knowledge and skills of an academic discipline, program or profession to a career or graduate study.
- Utilize critical thinking and reflection to effect positive change in themselves, others and their communities.
- Communicate in modes appropriate to various subjects and diverse audiences.
- Exercise just, responsible and competent leadership in professional, intellectual and societal contexts.
- Act for social justice within the diverse global human family.

Information about how the university assesses student abilities and preparation for these learning outcomes can be found at the Assessment website (http://www.marquette.edu/assessment). This website also contains outcomes data from 2006 to present.
Accelerated Degree Programs

Certain undergraduate programs, in partnership with the Graduate School, Graduate School of Management or Professional Schools, offer bachelor's to master's or bachelor's to professional degrees in an accelerated format.

Programs administered through the Graduate School

- Biomedical Engineering; B.S.B.E. and M.S. for information contact the department of Biomedical Engineering (http://www.marquette.edu/engineering/biomedical).
- Chemistry; B.S. and M.S. for information contact the department of Chemistry (http://www.marquette.edu/chem).
- Civil Engineering; B.S.C.E. and M.S. for information contact the department of Civil, Construction and Environmental Engineering (http://www.marquette.edu/engineering/civil_environmental).
- Clinical and Translational Rehabilitation Health Science; M.S. for information contact the program of Exercise Science (http://www.marquette.edu/chs/exercise).
- Communication; B.A. and M.A. for information contact the College of Communication (http://diederich.marquette.edu).
- Computer Science; B.S. and M.S. for information contact the department of Mathematics, Statistics and Computer Science (http://www.marquette.edu/mscs).
- Electrical and Computer Engineering; B.S.E.E. and M.S. for information contact the department of Electrical and Computer Engineering (http://www.marquette.edu/engineering/electrical_computer).
- International Affairs; B.A. and M.A. for information contact the department of Political Science (http://www.marquette.edu/polisci/index.shtml).
- Mechanical Engineering; B.S.M.E. and M.S. for information contact the department of Mechanical Engineering (http://www.marquette.edu/engineering/mechanical).
- Philosophy; B.A. and M.A. for information contact the department of Philosophy (http://www.marquette.edu/phil/index.shtml).
- Political Science; B.A. and M.A. for information contact the department of Political Science (http://www.marquette.edu/polisci/index.shtml).
- Speech-Language Pathology; B.S. and M.S. for information contact the department of Speech Pathology and Audiology (http://www.marquette.edu/chs/speech).

Programs administered through the Graduate School of Management (GSM)

- Accounting; B.S. and M.S.A. for information visit the Accounting website (http://business.marquette.edu/academics/bsa).
- Economics; B.S. and M.S.A.E. for information visit the Economics website (http://business.marquette.edu/academics/msea).
- Human Resources; B.S. and M.S.H.R. for information visit the Human Resources website (http://business.marquette.edu/academics/mshr).
- Psychology; B.A. and M.S.H.R for information visit the Human Resources website (http://business.marquette.edu/academics/mshr).

Programs administered by the College of Health Science Professional

- Direct Entry Physical Therapy; D.P.T.
- Master of Physical Therapy; M.P.A

Pre-dental Scholars (p. 35) and Pre-law Scholars (p. 37) programs are discussed in detail in the Academic Programs section of the Undergraduate Bulletin.
CommUNITY

The McCormick Hall Inclusive Leadership CommUNITY is a vibrant, residential-learning community open to all undergraduate students. It has male and female wings and houses 70 residents. Students from minority and majority cultures have an opportunity to interact with and learn from each other in an environment accepting of all people.

Faculty members from the College of Arts and Sciences have actively participated in the CommUNITY offering MARQ 1954 The Dynamics of Cross-Cultural Engagement 1 and MARQ 1955 The Dynamics of Cross-Cultural Engagement 2, a two-semester seminar (1.5 credit hours/semester) focusing on cultural diversity that is required of all members of the CommUNITY. Students enhance their knowledge of cultures through readings and attendance at cultural events on campus and within the city. Students develop and cultivate leadership skills through planning and implementing social and educational programs with cultural themes, including dinners, speakers and retreats. Students are encouraged to share their experiences and knowledge through involvement in other student organizations and activities.

More information can be found online through Residence Life (http://www.marquette.edu/ori/res/specialty/community.shtml).
Educational Opportunity Program

The Educational Opportunity Program (EOP) is an academic department of Marquette University that assists first-generation college students, underrepresented students and students from low-income families to succeed in higher education. EOP manages four major TRIO grants from the U.S. Department of Education, all of which share the common purpose of making a college education a realistic option for eligible students.

EOP Student Support Services

EOP Student Support Services provide a network of services designed to increase the probability that each student will succeed in the university. Support services include need-based financial aid, a pre-freshman summer program, academic advising, specialized courses, and tutoring, as well as personal and career counseling. Students may apply to EOP-SSS when they apply for admission to Marquette University, after completion of the Marquette application or even after beginning studies at Marquette. The majority of EOP-SSS students enroll as entering freshmen and participate in the EOP-SSS summer program. For application information, call (414) 288-7593.

EOP McNair Scholars Program

The McNair Scholars Program provides services designed to encourage eligible sophomores, juniors and seniors to prepare for doctoral study. During the academic year, McNair Scholars participate in seminars, meet with visiting minority scholars, and attend professional and undergraduate research conferences. In the summer, McNair Scholars receive eight-week paid research internships with Marquette faculty, visit graduate schools and enroll in a GRE preparation course. McNair Scholars are eligible for conference travel grants, research stipends, GRE fee waivers and admissions application fee waivers. For application information, call (414) 288-1771.

EOP Precollege Programs

In addition to Student Support Services and McNair Scholars, EOP administers two pre-college programs to motivate and prepare high school students to enroll and succeed in college. These structured programs provide summer instruction and enrichment programs, as well as after-school activities during the school year. For further information, call (414) 288-7368.
English as a Second Language Program

Office of International Education website (http://www.marquette.edu/oie)

The Office of International Education (OIE) provides advanced English language courses for students of other language backgrounds whose academic success at Marquette requires additional formal instruction in English reading, writing, and listening and speaking skills. All students are welcome to take these English courses although the English Language Placement Test is required to determine appropriate placement. For incoming international students whose evidence of English language ability does not assure adequate proficiency, the English Language Placement Test is mandatory and the results will be used to assign students to appropriate courses. English language (ESLP) courses are offered in both the fall and spring terms. There are also sections of ENGL 1001 Rhetoric and Composition 1 and ENGL 1002 Rhetoric and Composition 2 designated for ESLP students. Up to six credits of ESLP course work may be counted toward degree requirements in all undergraduate colleges except Engineering. Contact the Office of International Education; Holthusen Hall, 4th Floor; (414)288-7289 for information.

Courses

ESLP 1021. Composition. 3 cr. hrs.
Develops strategies and skills necessary for successful academic writing. Reviews the fundamentals of paragraph writing and introduces students to writing academic research papers. If required to take both ESLP 1021 and ENGL 1001, a student must take ESLP 1021 first before enrolling in ENGL 1001 (ESLP section) and ESLP 1025. May not register as audit or S/U option. Prereq: Cons. of dept.

ESLP 1025. Rhetoric and Composition 1 for Non-Native Speakers. 2 cr. hrs.
Provides instruction and practice in using standard U.S. grammar, punctuation and mechanics in academic writing. Targets areas that typically remain problematic for advanced ESL writers. May not register as audit or S/U option. Prereq: Cons. of dept. and must be taken concurrently with an ESLP section of ENGL 1001.

ESLP 1031. Reading. 3 cr. hrs.
Develops strategies and skills necessary for successful academic reading. Provides practice with reading comprehension, vocabulary development, critical thinking and reading study skills. May not register as audit or S/U option. Prereq: Cons. of dept.

ESLP 1041. Listening and Speaking. 3 cr. hrs.
Develops strategies and skills necessary for successful listening and speaking in academic settings. Focuses on listening to lectures and news broadcasts, pronunciation skills, and academic oral presentations. May not register as audit or S/U option. Prereq: Cons. of dept.
Freshman Frontier Program

The Freshman Frontier Program (FFP) is an academic support program especially designed for incoming freshmen who want a jumpstart on the Marquette University experience in a close-knit community. Students self-selecting to participate in this unique program not only work ahead by earning three credits in the summer, but they also benefit from academic support and personalized advising throughout their freshman year.

Summer

During the summer, students enroll in one three-credit course (History, English or Theology) and two college-prep courses. College-prep courses offered in the past have included: Reading & Study Skills, Mathematics Skills, College Writing Skills, Logic and Reasoning Skills, and Preparation for College Chemistry.

Throughout the summer, students will establish a close working relationship with the FFP staff and members of the university faculty. At the same time, students will become familiar with campus and the Milwaukee area. Through various service and social events, students will develop close friendships with other FFP students, which will ease transition in the fall.

Students seeking financial assistance must file the Free Application for Federal Student Aid, or FAFSA form.

Freshman Year

FFP students are a step ahead! Students begin fall having already earned three college credits in the summer.

FFP provides intensive academic support throughout the academic year. Students continue to work closely with the FFP staff with whom they worked during the summer. During the academic year, students receive additional assistance with course selection, major/career exploration and study skills. FFP students have access to tutors, participate in academic workshops designed for their specific needs and build community through FFP-sponsored social and service activities.

This program is administered by the Office of Student Educational Services and more information can be found on the program's website (http://www.marquette.edu/ffp).
Les Aspin Center for Government

Les Aspin Programs

Washington, D.C., Internship Program
The Marquette University Les Aspin Center for Government offers students the opportunity to study in Washington, D.C. as part of their degree program. Students live and work on Capitol Hill, participate in internships with the House, Senate, other government agencies, private sector firms and non-profit organizations. Placements are available for students in all majors. Students receive hands-on training and develop important professional skills. All programs include academic coursework in addition to guest lectures, symposia and site visits. Programs are offered during each fall, spring and summer term. For more information contact the Aspin Center's Washington D.C. office at 202-554-6140.

Milwaukee Internship Program
The Kleczka Internship Program, located on Marquette’s Milwaukee campus, is a local initiative of the Aspin Center. Students participate in 3-credit internship and are placed in a variety of positions in federal, state, county and local government offices, non-profit organizations and private sector firms. Students demonstrating financial need are eligible for a stipend. For more information, contact the Aspin Center’s Milwaukee office at (414) 288-7446.

International Aspin Program
The Aspin Center also conducts periodic programming in Africa during the winter break session. For more information, contact the Aspin Center's Washington D.C. office at (202) 554-6140.
Pre-Dental Scholars

Pre-dental Scholars Program

The Pre-dental Scholars program is an accelerated program which allows students to receive conditional acceptance to Marquette’s School of Dentistry. The Pre-dental Scholars program allows students to reduce from eight years to seven the total time needed to complete bachelor’s and dental degrees. Pre-dental scholars enroll either in the Klingler College of Arts and Sciences or College of Health Sciences and complete their undergraduate studies in three years. Students are awarded a bachelor’s degree upon successful completion of their first year in Marquette’s School of Dentistry. For information, visit the Office of Admissions (http://www.marquette.edu/explore).

Admission to the Pre-dental Scholars Program

Admission to the Pre-dental Scholars program is offered to prospective first year students during the spring of their senior year in high school and to current Marquette students in the spring of their first year, depending on space availability. Admission guarantees the scholar a place in the Marquette University School of Dentistry, after completion of the third year of undergraduate studies (having earned at least 96-98 credits, depending on your undergraduate college requirements), student must meet the academic and behavioral standards of the program, and scores a 17 or higher in each of the eight sections of the Dental Aptitude Test (DAT), as determined by the Marquette Dental Admissions Committee. Any DAT result that includes a subsection score below a 17, is not acceptable and requires a retest. Students who wish to be considered for the Pre-dental Scholars program must complete the Pre-dental Scholars application (http://www.marquette.edu/explore). Selection to the program includes a formal, in-person interview conducted by the School of Dentistry Admissions Committee.

Undergraduate Curriculum

A typical bachelor’s degree consists of four parts: University Core of Common Studies (UCCS) requirements, college curriculum requirements, major requirements and electives. In the first three years of the Pre-dental Scholars program, students partially complete the major requirements and elective hours and finish all UCCS and college curriculum requirements. Courses taken in the fourth year (first year of dental school), count as requirements toward both the bachelor’s and dental degrees.

Approved Majors

Klingler College of Arts and Sciences: Biological Sciences or Physiological Sciences. The Pre-dental Scholars coordinator and faculty advisers is responsible for the academic advising of the pre-dental scholars. See the Typical Planners for course sequence information for pre-dental scholars within the biological sciences and physiological sciences major requirements.

College of Health Sciences: Biomedical Sciences. The associate dean is responsible for the academic advising of the pre-dental scholars. See the Typical Planners for course sequence information for pre-dental scholars within the biomedical sciences major requirements.

Academic Standards for the Pre-dental Scholars

Students maintain a place in the Pre-dental Scholars program by fulfilling the following requirements:

• Earn a cumulative 3.500 grade point average at the end of each semester in the program.
• Receive a grade of no less than a B or better in all science courses.
• Complete a course load of 15-18 credit hours per semester.
• Under no circumstances is a student in this program admitted to the School of Dentistry before completing six semesters of full-time course work at Marquette University.
• AP course work in any science (BIOL or CHEM) does not satisfy prerequisite requirements.

Failure to meet the academic requirements in any semester results in the scholar being placed on probation beginning the following semester. Courses taken in the probationary semester must be approved in writing by the scholar’s academic adviser. If, at the end of this probationary semester, the scholar has not achieved a 3.500 cumulative grade average and/or has received less than a B grade in any science course, they are withdrawn from the program. If the scholar has returned to the academic standards by the end of the probationary semester, they are returned to good standing in the program.

1. During this probationary semester, the scholar must complete a 15-18 credit course load and may not withdraw from any course(s).
2. A second probationary semester is not permitted and results in withdrawal from the program.
3. Failure to meet the academic standards during the spring semester of the junior year results in withdrawal from the program and impacts admission to Marquette’s School of Dentistry.

Appeals: An appeal to any decision must be made to the Pre-dental Scholars Committee in writing and should elaborate on any personal or medical circumstances that affect your academic performance. Any appeal related to grades or classroom performance, however, must be taken up with the faculty involved or through the use of his/her department’s grade appeal procedures.
University Probation: Behaviors and/or activities that lead to University Probation may result in removal from the program and impact admission to Marquette’s School of Dentistry. Such activities include academic dishonesty or any activity deemed inappropriate, unethical or illegal.

Academic Dishonesty: Any activity deemed inappropriate, unethical or illegal, regardless of whether that behavior leads to University Probation, may result in removal from the program and impact admission to Marquette's School of Dentistry.

Course Work: All science courses must be taken at Marquette University unless your academic adviser agrees, in writing and in advance, that circumstances warrant that courses may be taken elsewhere. Science courses taken at junior, community, two-year, or technical schools are not acceptable and do not satisfy the science requirements of this program. Courses in other disciplines are not subject to the above restriction, but must be approved from your college adviser.

Dental Aptitude Test (DAT): The DAT may be taken as early as the spring semester of the sophomore year, but no later than the fall semester of the junior year. The Admissions Office in the School of Dentistry can provide you further information on the nature of this exam, as well as where and when the exam is administered. A Pre-dental Scholar is required to score a 17 or higher in each of the eight sections of the exam. Any DAT result that includes a subsection score below 17, is be acceptable and requires a retest.

Selection to and participation in the program assumes a seven-year commitment to Marquette, including both undergraduate and dental studies. Participants in “good standing” that apply to other programs risk losing their encumbered space in Marquette’s entering Dental class. Withdrawal from this program whether voluntary or otherwise, does not necessarily compromise your ability to apply to Marquette’s School of Dentistry through normal application procedures, providing that you are competitive with other applicants. Dismissal from the program as a result of academic or behavior issues does compromise your candidacy should you apply to Marquette’s School of Dentistry.

Grades/Graduation/Graduation Honors
The undergraduate colleges base their calculations for academic honors on all credits earned toward the bachelor’s degree, including all Dental School credits completed through the term in which the student satisfies all undergraduate degree requirements, including the minimum 120 or 128 credits needed for the degree.

Financial Aid
Since pre-dental scholars spend only three years as an undergraduate at Marquette, the financial aid and scholarships received are applicable only to the first three years at Marquette. After completion of the first three years or undergraduate degree, scholars must apply for financial aid and scholarships as an Independent Graduate/Professional student, rather than as an undergraduate.

Since the criteria for admission to the Pre-dental Scholars program match the criteria for many of the merit-based scholarships awarded by the Office of Undergraduate Admissions, it is highly probable that scholars in the program also receive merit-based scholarships to Marquette University.

It is important to note that these scholarships, while renewable for up to eight semesters at the university, are only for undergraduate study. As a result, scholars are only able to apply these scholarships to the first three years at Marquette, because once classes begin in Marquette's School of Dentistry, scholars are no longer be considered undergraduates. The fourth year or earlier of the scholarship is forfeited.

Pre-dental Scholars would be eligible to apply in the third year for any Dental School financial aid and scholarships available to any student in the first year of Dental School.
Pre-Law Scholars

Pre-Law Scholars Program

The Pre-Law Scholars program is an accelerated program that provides a select group of students with conditional admission to Marquette University Law School. The Pre-Law Scholars program allows students to reduce from seven years to six years the total time needed to complete the bachelor’s and law degrees. Pre-Law Scholars enroll in the College of Arts and Sciences, College of Business Administration, or the College of Communication and choose from a variety of approved majors while completing the required undergraduate portion of their studies in three years. They are awarded a bachelor’s degree upon successful completion of the first year in Law School. Students may be eligible to be awarded the bachelor’s degree earlier if they complete the minimum course and credit requirements for undergraduate graduation prior to this time.

Direct Freshman Admission to the Pre-Law Scholar’s Program

The Pre-Law Scholars Selection Committee, comprised of members of the undergraduate colleges and the Office of Undergraduate Admissions, give primary consideration to high school students who have followed a rigorous college preparatory curriculum and who have demonstrated a potential for success by fulfilling the criteria below:

- High school class rank (if available): Upper 10 percent
- Test Scores: SAT combined score of 1260 or ACT composite score of 28

This application process coincides with the university’s other scholarship competition deadlines, which generally fall on or shortly after February 1. Notification of acceptance occurs in early March, thereby allowing students ample time to weigh their options.

Application: Students provide two applications for the program; the Application for Undergraduate Admission and a separate application for the Pre-Law Scholars program. Download program application (http://www.marquette.edu/explore/scholarships-pre-law.php).

Essay: In 350 to 500 words, describe what personal and educational experiences you have had that have stimulated your interest in a law career.

Marquette Continuing Student Admission

There are always great students that do not receive the direct admit offer or who discover the Pre-Law Scholars Program once they are at Marquette. These students can apply and be admitted to the program as space permits.

Qualifications to become a Pre-Law Scholar:

- Have an overall current cumulative GPA of 3.300 grade point average or greater. This is most easily established by having both an MU GPA and a cumulative GPA from prior institution(s) all above 3.300. In complicated situations, please contact the Law School’s Director of Admissions and Recruitment to work out a resolution to meeting this qualification. Note: Current Marquette students must have completed at least one semester of coursework at Marquette University prior to application to the Pre-Law Scholars Program.
- Be on track to complete the University Core of Common Studies, college curriculum and major requirements, such that no greater than 29 total elective credits remain to complete the undergraduate degree upon law school entry in the fourth year.

Application procedure for currently enrolled Marquette University undergraduates who have transferred from another college or university:

- Meet with your academic adviser to determine whether you meet the qualifications for admission. (Note: you must have at least one semester of coursework completed to establish your MU cumulative GPA.)
- Once you determine you meet the qualifications, both your adviser and you should email the Law School’s Director of Admissions and Recruitment for the next steps toward admission.

Undergraduate Curriculum

A typical bachelor’s degree program in each of these colleges consists of four parts: University Core of Common Studies (UCCS) requirements, college curriculum requirements, major requirements and electives. In the first three years of the Pre-Law Scholars program, students complete the University Core of Common Studies, college curriculum requirements and major requirements. Courses taken in the fourth year (the first year of law school), count as electives for the bachelor’s degree and toward the completion of the law degree.

Approved Majors


Note: Students who wish to pursue other majors may do so in coordination between their academic advisers and the Law School. Pursuing majors other than those listed above may require summer school coursework to fulfill undergraduate curriculum requirements for law school entry in the fourth year.
Pre-major Advisers, the Pre-Law Scholars coordinator and select faculty members are responsible for the academic advising of Pre-Law Scholars.


**Note:** Students majoring in accounting will need to take courses in summer school; also, depending on foreign language placement, international business majors may need to take summer school courses.

The assistant dean of the College of Business Administration is responsible for the academic advising of Pre-Law Scholars.

**Diederich College of Communication:** Advertising, Communication Studies, Corporate Communication, Digital Media, Journalism, Media Studies, Public Relations, Theatre Arts.

**Note:** The minor that is normally required for the degree is waived for Pre-Law Scholars. However, should a student decide to complete their undergraduate degree prior to entering Law School they are required to complete the minor.

The Pre-Law Scholars coordinator and selected faculty members are responsible for the academic advising of Pre-Law Scholars.

**Academic Standards for Pre-Law Scholars**

Admission guarantees the Scholar a place in Marquette Law School, after completion of the third year of undergraduate studies and by completing the University Core of Common Studies, the respective undergraduate college curriculum and major requirements, such that no greater than 29 total elective credits remain to complete the undergraduate degree.

Students maintain a place in the Law School by fulfilling the following requirements:

- Enroll in spring semester Freshman Scholars Seminar (1 credit), “Lawyers in American Society.” (Direct freshmen scholars only; available as course space permits to continuing students entering the program.)
- Attain a cumulative 3.300 grade point average or a grade point average that is equal to or greater than the median GPA of the preceding year’s entering class (whichever is lesser) by the time of application/entrance to Marquette Law School. This includes all college coursework whether taken at Marquette University or at another institution. **Note:** This encompasses all transfer coursework from other institution(s) whether summer sessions, concurrent coursework, or college credit obtained via a dual enrollment program while in high school. Specific questions regarding this standard should be directed to the Law School Office of Admissions.
- Earn a score on the Law School Admissions Test (LSAT) of 155 or one that is equal to or greater than the median score of the preceding year’s entering class at the Law School in order to meet the requirements for early admission to the Law School, whichever is lesser. The LSAT may be taken a maximum of three times in a two year period and must be taken no later than February of the year that you apply to the Law School. The Law School’s Admissions Committee considers the highest score you receive.
- Meet the Law School’s standards for character and fitness. Behaviors and/or activities that lead to University Probation may result in removal from the program and impact admission to Marquette University Law School. Such activities include, but are not limited to, academic dishonesty or any activity deemed inappropriate, unethical or illegal.
- Be on track to fulfill the University Core of Common Studies, the respective undergraduate college curriculum and major requirements, such that you have no greater than 29 total elective credits remaining to complete your undergraduate degree.

Students may choose to complete the fourth year as an undergraduate and graduate prior to entering the Law School; in such a case, the student is guaranteed a place in the Law School entering class the following year, provided the academic standards of the program are met. While the Law School is bound to hold a place for Scholars who meet all requirements, students are not obligated to attend Marquette’s Law School. Students may elect to complete the undergraduate degree in the major(s) chosen.

**Grades/Graduation/Graduation Honors**

The undergraduate colleges base their calculations for academic honors on all credits earned toward the bachelor’s degree, including all Law School credits completed through the term in which the students satisfies all undergraduate degree requirements.

The undergraduate colleges will accept for credit all Law School classes in which the student earns at least a grade of D, the minimum necessary to earn credit for a course in the Law School. If a student were to earn a grade lower than D in the first year of Law School, that student, in order to earn the bachelor’s degree must make up those credits. This may be done by retaking the Law School course (as required by the Law School), or by taking an undergraduate course that fulfills credit requirements for the undergraduate college.

Normally, Scholars walk through the May graduation ceremony. However, because Law School grades are not posted until June, Pre-Law Scholars do not receive their diploma for their bachelor’s degree until the summer of the fourth year. Students may be eligible to graduate earlier if they complete the minimum course and credit requirements prior to this time.
Financial Aid

Pre-Law Scholars spend only three years as an undergraduate at Marquette. Therefore, the undergraduate financial aid and scholarships received are applicable only to the first three years at Marquette. After completion of the first three years or undergraduate degree, Scholars must apply for financial aid and scholarships as an Independent Graduate/Professional student, via the Law School and the Free Application for Federal Student Aid (FAFSA).

Since the criteria for admission to the Pre-Law Scholars program match the criteria for many of the merit-based scholarships awarded by the Office of Undergraduate Admissions, it is highly probable that Scholars entering Marquette in the program also receive merit-based scholarships to Marquette University.

It is important to reiterate that these scholarships, while renewable for up to eight semesters at the university, are only for undergraduate study. As a result, Scholars are only able to apply these scholarships to the first three years at Marquette. Once enrolled in Marquette’s Law School, Scholars are no longer considered undergraduates. The fourth year (or earlier, if applicable) of the undergraduate scholarship is forfeited.

Pre-Law Scholars are considered for Law School financial aid and merit-based scholarships that are available to all eligible students entering the first year of Law School. These scholarships are awarded on a rolling basis; as such, early application to the Law School is encouraged.
Reserve Officers' Training Corps Programs

Air Force ROTC

Marquette University students have the opportunity to pursue a commission in the United States Air Force through the Air Force Reserve Officer Training Corps (AFROTC) program. Required AFROTC courses are offered at Marquette University and are taught by resident full-time Aerospace Studies faculty.

Through this program, Marquette University offers its students the opportunity to prepare for initial active duty assignments as Air Force commissioned officers. In order to receive a commission, AFROTC cadets must complete all university requirements for a degree, complete courses specified by the Air Force, and maintain Air Force moral, academic and physical fitness standards. AFROTC courses are normally taken for credit as part of a student’s electives. The amount of credit given toward a degree for AFROTC academic work varies as determined by the student’s college and major. AFROTC offers three- and four-year programs leading to a commission as an Air Force officer. AFROTC cadets complete the General Military Course, a four-week summer Field Training encampment between their sophomore and junior years and the Professional Officer Course on their way to obtaining their commission upon graduation from Marquette.

General qualifications:

- Be a full-time student.
- Be a United States citizen (for scholarship appointment).
- Be in good physical condition.
- Be of good moral character.
- For pilot or navigator training, fulfill all commissioning requirements before age 29.

General Military Course: The first- and second-year educational program in Air Force Aerospace Studies consists of a series of one-hour courses designed to give students basic information on the role of the U.S. Air Force in the defense of the free world. All required textbooks and uniforms are provided free. The General Military Course is open to all students at Marquette without advance application and does not obligate students to the Air Force in any way.

Field Training: Students pursuing a commission must successfully complete Field Training in order to advance to the Professional Officer Course. Students are competitively selected to attend Field Training based on their performance in the AFROTC program to include their academic and physical fitness record. Field Training is conducted during the summer months at Maxwell Air Force Base in Montgomery, AL. The Air Force pays all expenses associated with Field Training.

The major areas of study include physical training, drill and ceremonies, leadership skill development and application, career orientation and an introduction to Air Force expeditionary training and Air Force deployment environment.

Professional Officer Course: The third and fourth years of Air Force Aerospace Studies instruction are designed to develop skills and attitudes vital to the professional officer. Students completing the Professional Officer Course are commissioned as officers in the U.S. Air Force upon college graduation. All students in the Professional Officer Course receive a nontaxable subsistence allowance of $450 per month during their junior academic year and $500 per month during their senior year.

Leadership Laboratory: Leadership Laboratory is a cadet-centered activity. It is largely cadet planned and directed, in line with the premise that it provides leadership-training experience that will improve a cadet’s ability to perform as an Air Force officer. The freshman and sophomore Leadership Laboratory program introduces Air Force customs and courtesies, drill and ceremonies, wearing the uniform, career opportunities in the Air Force, education and training benefits, and life and work of an Air Force officer. Experiences include preparing the cadet for individual, squadron and flight movements in drill and ceremonies and preparation for the field training assignment prior to the junior year.

The junior and senior Leadership Laboratory program involves the cadets in advanced leadership experiences. Cadet responsibilities include planning and directing the activities of the cadet corps, preparing briefings and written communications. They also provide interviews, guidance, information and other services geared to increase the performance and motivation of underclassman cadets. All Leadership Laboratory students attend two sessions of physical fitness each week.

AFROTC College Scholarship Program: This program provides scholarships to selected students participating in AFROTC. While participating in AFROTC, scholarship students receive paid tuition, fees, laboratory expenses and $600 per year for textbooks. Additionally, scholarship students receive a tax-free monthly stipend of $300 per month as freshmen, $350 per month as sophomores, $450 per month as juniors and $500 per month as seniors. For students already enrolled at Marquette, three-year scholarships are available.

In order to be eligible for this scholarship, students must:

- Be a U.S. citizen.
- Be at least 17 years of age on the date of enrollment and under 31 years of age on Dec. 31 of the estimated year of commissioning.
- Pass an Air Force physical exam.
• Be selected by a board of Air Force officers.
• Have no moral objections or personal convictions that will prevent bearing arms and supporting and defending the Constitution of the United States against all enemies, foreign and domestic (Applicants must not be conscientious objectors.).
• Achieve a qualifying score on the Air Force Officer Qualifying Test.
• Maintain a quality grade point average.

**AFROTC High School Scholarship Program:** High school students may apply for an AFROTC scholarship prior to December 1 of their senior year. Interested students are encouraged to submit applications early. An online scholarship application is available at the U.S. Air Force ROTC website (http://www.afrotc.com). High school students who receive an Air Force scholarship may also be eligible for further subsidies from Marquette University.

For more information on the Air Force ROTC program, visit the Marquette University AFROTC website (http://www.marquette.edu/rotc/airforce).

**Army ROTC**

The Department of Military Science and Leadership (Army ROTC) was established under the auspices of the Klingler College of Arts and Sciences at Marquette University in 1951. Army ROTC (AROTC) is a leadership development program consisting of three interconnected components: 1) on-campus, 2) off-campus and 3) the Leadership Development Program (LDP). By design, the three components dovetail for seamless, progressive and sequential leader development and prepare men and women to receive commissions as second lieutenants in the U.S. Army, Army National Guard, or the U.S. Army Reserve.

**On-Campus Component:** The on-campus component is the Military Science and Leadership (MISL) Curriculum. The curriculum consists of classroom learning, applied leadership labs, leader development exercises, ROTC Battalion command and staff roles and the Army Physical Fitness Training program. Far more comprehensive than traditional curricula, each cadet receives digital textbooks, interacts with the instructor during lessons and engages with multi-media technology.

**Off-Campus Component:** The off-campus component consists of a summer course designed to assess and develop cadet leadership potential. The Cadet Leader Course (CLC) is a capstone training event that usually occurs at the end of the cadet’s third year. This 29-day training event incorporates a wide range of subjects designed to develop and evaluate leadership ability. The event places each cadet and officer candidate in a variety of leadership positions, many of which simulate stressful tactical situations. In addition to proving their leadership abilities and military skills, cadets must meet established standards in physical fitness, navigation, weapons training, communication, first aid, water confidence and patrolling techniques. This paid event is one of two summer training events that a cadet is required to participate in.

The other summer training event is the Cadet Initial Entry Training (CIET). All students who have signed a contract with the U.S. Army will attend this 29 day course to hone their foundational skills and prepare them for entry into the AROTC progression Advanced Course (junior-senior years).

Additionally, each Cadet will participate in two leadership development exercises off campus, one each semester, usually in September and April, from Friday to Sunday. These exercises implement practical lessons learned throughout the year from the course, laboratory and physical training curricula.

**Leadership Development Program:** The Leadership Development Program (LDP) is the cornerstone of ROTC training and leadership development. The LDP is an individual-focused assessment process that standardizes leader performance measures. It organizes the extremely complex components of leadership into a useful learning model — standards of performance and a methodology to achieve them. The model accommodates all levels of proficiency and assures personalized development throughout a cadet’s ROTC experience, from program entry to commissioning. Within the LDP, experienced and qualified observers (Military Science and Leadership Instructors) maximize individual potential by administering structured, progressively complex leadership experiences and cadet leadership skills are refined through self-assessment, peer assessment and instructor feedback.

We understand that today’s students need flexibility, so we offer a variety of options in completing this leadership development program. The two primary options are: the four-year program and the two-year program.

**Four-year Program:** The four-year program is divided into two phases: the basic course and the advanced course. 1) The basic course is taken during a student’s freshman and sophomore years. These courses are open to all students on an elective basis and upon successful completion students receive University credit. Students incur no military obligation for completing basic course requirements and these courses are free to all registered undergraduate and graduate Marquette University students. 2) The advanced course is taken during a student’s junior and senior year. Students in this program must have completed the basic course, have two years remaining in college and enter into a contract with the U.S. Army. Advanced course students take classes in leadership and participate in leadership laboratories to prepare for the five-week Cadet Leader Course during the summer between junior and senior years. Students receive monetary compensation for attending this training.

**Two-year Program:** The two-year program is designed for students at four-year institutions who did not take AROTC during their first two years of college, students entering a two-year graduate course of study, or students who have previous military experience. Students begin formal training by attending the 29 day paid Cadet Initial Entry Training (CIET). Successful completion of this training is a pre-requisite for enrolling in the AROTC advanced course.

**Scholarships:** The Army offers a number of scholarship opportunities to Marquette students enrolled in the Senior ROTC Program. High School seniors can apply for four-year, three-year advance designee and four-year nursing scholarships. These scholarships are applied for through the Army ROTC website (http://www.goarmy.com/rotc.html) and are awarded based upon merit, not financial need, by the U.S. Army Cadet Command. These
scholarships pay full-tuition annually with a $1,200 textbook allowance. Scholarship students also receive $300-$500 a month stipend during each semester their scholarship is in effect.

Marquette University provides additional incentive funds for national and campus based scholarship winners. Four-year scholarship winners receive $7,000 annually toward university housing and board. Three-year advance designee winners receive $20,000 in benefits for the freshman year toward tuition. Campus based scholarship winners receive up to $3,500 per each semester of their scholarship toward university housing and board.

Prospective students interested in a four-year Reserve Officers’ Training Corps Scholarship should start the application process during their junior and senior year of high school. Four-year scholarship applications are only available at the Army ROTC website (http://www.goarmy.com/rotc.html) or by calling Cadet Command at (800) USA-ROTC for a paper application. Current college students may apply for four-, three- and two-year on-campus scholarships through participation in ROTC and the Marquette Department of Military Science.

In order to be eligible for a scholarship, students must:

- Be a U.S. citizen.
- Be under 34 years of age at the time of commissioning.
- Have a minimum cumulative GPA of 2.500 on a 4.0 scale.
- Have a minimum score of 920 on the SAT or 19 on the ACT.
- Satisfactorily explain any record of minor civil infractions.
- Pass a Department of Defense Medical Evaluation.
- Have no moral obligation or personal convictions that will prevent student from bearing arms and supporting and defending the Constitution of the United States.

On-Campus applications are submitted to the Department of Military Science. On-campus applications may be submitted at any time during the school year. Students that apply are subject to a board of review by a panel of ROTC cadre and university administration for selection.

**Nursing Scholarships:** Marquette University is one of 41 colleges and universities to be designated as one of the U.S. Army’s Nursing Centers of Excellence. The U.S. Army Cadet Command is able to offer four-year and three-year nursing scholarships annually to qualified applicants to the Marquette University College of Nursing. The application process and scholarship benefits are the same as those for other ROTC scholarships. The applicant should start the application process between the junior and senior years of high school. Nursing students already enrolled in the College of Nursing may also apply for two and three year on-campus scholarships through the ROTC department.

**Non-scholarship Program:** All students enrolled in the advanced course receive a monthly stipend of $450 (juniors) or $500 (seniors) to cover expenses during the school year. Successful completion of the advanced course leads to commissioning in the U.S. Army, U.S. Army Reserve or National Guard. Veterans: Men and women at Marquette University with prior military service may enroll directly into the advanced course with the permission of the Professor of Military Science and proper academic alignment. Veterans must be able to meet the age, citizenship and physical standards of the Reserve Officers’ Training Corps program.

**Graduate Educational Delay:** Students may request that their active duty service be deferred to attend graduate school, law school, medical school or physical therapy school.

**Cross-enrollment:** Students enrolled in other southeast Wisconsin universities and colleges may, with approval of the dean of the Klingler College of Arts and Sciences, enroll in Military Science courses and participate in the AROTC program at Marquette while continuing their major curricula at these neighboring institutions.

For course descriptions, course credit and other information see the Arts and Sciences section of this bulletin. For complete information, contact the Department of Military Science; Gymnasium, A100; Marquette University; P.O. Box 1881; Milwaukee, WI 53201-1881 or call either (414) 288-7195 or (800) 563-7339 or visit the AROTC website (http://www.marquette.edu/rotc/army).

**Naval ROTC**

The Naval ROTC Unit, established at Marquette University in 1940, provides qualified commissioned officers for the United States Navy and Marine Corps. Marquette’s Naval ROTC (NROTC) program is also one of the largest in the country for commissioning Navy Nurse Officers. The mission is to develop midshipmen morally, physically and intellectually for careers in the United States Naval Service. Graduates who complete all requirements will receive commissions and serve on active duty in the Navy or Marine Corps, with a minimum three-year commitment for non-scholarship students and four-year commitment for scholarship students.

Academically, the Naval Science Department, in the Klingler College of Arts and Sciences, teaches naval science courses and administers the program. All midshipmen are required to register for and participate in a three-hour weekly drill period. A naval science class is required each term, with few exceptions, for which Marquette grants credit toward graduation requirements. Midshipmen on scholarship or advanced standing also attend paid summer internship training for four to six weeks each summer. This summer training introduces midshipmen to the fleet and the life of a junior naval officer. Summer training also provides an orientation to each of the different warfare specialties (air, surface, submarine and Marine Corps).
All NROTC students fall into one of two broad categories: scholarship or non-scholarship (college program). Some students will enter Marquette with a four-year scholarship earned on a competitive basis while still in high school. Scholarships are for full tuition, fees, a textbook stipend, laboratory expenses and include a subsistence stipend of $250 to $400 per month, depending on class year. In addition, Marquette provides incentive funds for scholarship winners. Four-year scholarship winners receive about $7,000 per year toward university housing and board. For more information visit the Office of Undergraduate Admissions’ website (http://www.marquette.edu/explore/scholarships.php).

Students not on scholarship are termed College Program students. They receive uniforms, naval science text books and $350 or $400 per month during their junior and senior years, respectively. All college program students are eligible to compete for Naval Education and Training Command scholarships. Students are selected on a competitive basis after completing a minimum of one term as an NROTC college program student. Selection boards meet once or twice a year to consider students based on their most recent term. Students may receive scholarship benefits ranging from two to six terms. Once selected, the students receive all the benefits and incur the same active duty requirements as students in the regular scholarship program.

Navy option scholarship students, except nurse option, must complete two terms of calculus by the end of the sophomore year and two terms of calculus-based physics by the end of the junior year. Navy option college program students must complete one year each in mathematics and physical science. Two terms of English and either HIST 3118 American Military History or POSC 4376 American National Security Policy are required for all Navy option students, except nurse option and a world cultural awareness course is required for all Navy option students.

Marine Corps option students, scholarship and college program, are required to complete four of the above naval science class requirements, along with two Marine Corps naval science courses that are taught their junior and senior years. Calculus and physics are not required unless they are a prerequisite of the major field of study. Students are required to take HIST 3118 American Military History or POSC 4376 American National Security Policy and a world cultural awareness course. In addition, each student is required to complete a six-week officer training course at Quantico, Va., during the summer between the junior and senior years.

All scholarships are awarded on the basis of merit and personal qualifications. The FAFSA is not required for consideration for naval scholarships.

For more information, contact the Department of Naval Science; Marquette University; P.O. Box 1881; Milwaukee, WI 53201-1881, call (414) 288-7076 or (800) 554-NAVY or visit the NROTC website (http://www.marquette.edu/rotc/navy).
Study Abroad Program

Study Abroad Programs

The Office of International Education (OIE), as a catalyst for comprehensive internationalization, educates the greater Marquette community to become interculturally competent women and men for others through mutually beneficial collaborations in teaching, research and service.

Within OIE, the Study Abroad program strives to offer students a range of international opportunities that meet their academic, vocational, cultural and developmental goals. These goals are aligned with student’s program choice from a diverse palette of academic year, semester and summer programs. These programs include Marquette-sponsored programs with on-site directors, exchange and study abroad programs with partner universities and short-term faculty-led programs.

Study Abroad Learning Outcomes

Study Abroad participants have individual goals for participating in an international experience. OIE also has goals, in the form of learning outcomes, for study abroad participants:

- **Increase Intercultural Competence**: Interacting effectively and appropriately within a variety of cultural contexts through knowledge, skills and attitudes.
- **Develop a Global Perspective**: Developing and enhancing one’s global perspective cognitively, intrapersonally and interpersonally.
- **Personal Growth and Development**: Gaining confidence in one’s perceived independence, goal accomplishment and sense of purpose.
- **Second-language Acquisition**: Improving one’s written, oral, auditory and speaking abilities in a second language.

To integrate a study abroad experience into the Marquette experience and develop these vital skill sets, students are encouraged to inquire about study abroad opportunities as early as freshman year with OIE and their colleges. Students should regularly refer to the list of ever expanding available programs on the Marquette Study Abroad website (http://www.mu.edu/abroad).

Policies and Procedures

All Marquette students seeking academic credit from an overseas academic experience to transfer back to Marquette University are required to follow the study-abroad policies and procedures as outlined below, in the study abroad handbook and on the Marquette Study Abroad website (http://www.mu.edu/abroad). This applies to all students regardless of the nature of their academic experience abroad, the length of the term abroad and the sponsoring institution. Student who do not comply with these policies will not get credit for their experience abroad. Additionally, any student traveling internationally under the auspices of Marquette are required to register with OIE. This may include, but is not limited to, research, conferences, academic competitions, performances and athletics.

- Students planning to study abroad must be in good academic and disciplinary standing when applying to study abroad.
- All students planning to study abroad for academic credit are required to complete and submit the general Marquette study abroad online application by October 1 for the spring semester and by March 1 for the summer term, fall semester or academic year. Upon acceptance to a program, students are also required to submit additional materials and, if necessary, complete further program specific requirements. The application process can be found on the Study Abroad website (http://www.mu.edu/abroad).
- All Marquette students, regardless of college or program, must attend the in-person orientation, as well as complete the online pre-departure modules and assessments by the required deadlines.
- Students are responsible for informing OIE of any changes or cancellations to their study abroad plans that may occur after the deadline for submitting the general Marquette study abroad required documents on October 1 or March 1. Students are also responsible for informing their program of any changes and/or cancellations throughout their study abroad experience.
- In order to maintain continuous enrollment, all students studying abroad (both during the academic year and summer) must register for the appropriate study abroad course as advised by OIE. These courses are limited for use by students earning credit through an approved institution abroad. All study abroad must be approved by Marquette prior to enrollment in the study abroad placeholder course.
- Students who fail to register for the required study abroad course prior to the first day of the study abroad program, will be registered for the course by the University and are responsible for all the tuition and fees associated with that class and program. Students who are registered for the required study abroad course, fail to attend the study abroad program and have not dropped the class by the first day of the study abroad program, will be withdrawn from the program by the University and assigned a grade of UW. This grade may not be appealed.
- Students are required to discuss their plans to study abroad with a financial aid counselor and are personally responsible for understanding how their financial aid does, or does not, apply for a study abroad program.
- All students are required to enroll in the mandatory comprehensive overseas health insurance program through GeoBlue International Health Insurance for the duration of their studies abroad.
- Students are responsible for obtaining all necessary travel documents including, but not limited to, passports, visas and airline tickets.
- Students are responsible for coordinating any and all housing arrangements at Marquette and at their study abroad location for the semester or year they are away and for the semester they return to campus.
• Students may study abroad through other non-Marquette programs subject to approval by the Office of International Education and their college. Any students studying through approved non-Marquette programs must complete all required Marquette application procedures and are also required to complete a consortium agreement between Marquette and the sponsoring institution provided that any of the following are true:

1. The student is seeking any financial aid (including alternative loans) for the term of study abroad (applies to the fall, spring and summer terms); and/or
2. The student needs verification of at least half-time enrollment in order to defer loan repayments due to a prior history of receiving federal financial aid (applies to semester terms only); and/or
3. The student needs full-time enrollment for health insurance purposes (applies to semester terms only).
Summer Studies

Summer Studies offers courses that are applicable to degrees in all colleges and schools of the university in the following session formats: two consecutive six-week sessions and several additional sessions longer than the traditional six-week format. Short courses varying in length are offered within various sessions.

Domestic and foreign travel programs are offered each summer and provide students with an exciting off-campus study experience.

Summer Studies provides an opportunity for students to take needed course work, accelerate their programs of study and enroll in courses of personal interest.

For admissions and course offering information, visit the Summer Studies website (http://www.marquette.edu/programs/summer_studies).
University Honors Program

The University Honors Program (UHP) is an all-university program, enrolling undergraduate students from the Colleges of Arts and Sciences, Business Administration, Communication, Education, Engineering, Health Sciences and Nursing, with a focus on experiential and interdisciplinary learning, undergraduate research and a broad and rigorous core curriculum shaped by Jesuit humanist ideals.

The UHP Curriculum is divided into two parts: Core Honors and Disciplinary Honors. Students who complete Core Honors plus either at least one Disciplinary Honors Program or an Honors Project within the University Honors Program earn Comprehensive Honors.

Core Honors

Students apply to and are admitted to Core Honors before they enter Marquette. Core Honors consists of eight Core Honors courses plus three Honors Seminars, the majority of which are completed in students’ first two years. Core Honors courses are either courses created by departments specifically for the UHP, or Honors versions of courses also offered to non-Honors students. Most Core Honors courses meet requirements in the University Core of Common Studies taken by almost all undergraduate students at Marquette.

Core Honors Courses

Core Honors students are required to take five specific Core Honors courses, plus three Core Honors courses chosen from several course options. All Core Honors students take paired, integrated sections of ENGL 1301H Honors English 1 and PHIL 1001H Honors Philosophy of Human Nature in the fall of the freshman year, and paired, integrated sections of HIST 2001H Honors The World and the West and PHIL 2310H Honors Theory of Ethics in the spring of the freshman year. They are also required to take THEO 1001H Honors Introduction to Theology which can be taken at any time along with the additional Core Honors courses.

The remaining three required Core Honors courses are chosen from the following:

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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1001H</td>
<td>Honors General Biology 1</td>
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<tr>
<td>BIOL 1002H</td>
<td>Honors General Biology 2</td>
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<tr>
<td>CHEM 1001H</td>
<td>Honors General Chemistry 1</td>
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<tr>
<td>CHEM 1002H</td>
<td>Honors General Chemistry 2</td>
<td>4</td>
</tr>
<tr>
<td>ECON 1104H</td>
<td>Honors Principles of Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1302H</td>
<td>Honors English 2</td>
<td>3</td>
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<tr>
<td>PHYS 1013H</td>
<td>Honors Classical and Modern Physics with Calculus 1</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 1014H</td>
<td>Honors Classical and Modern Physics with Calculus 2</td>
<td>4</td>
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<tr>
<td>POSC 2201H</td>
<td>Honors American Politics</td>
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<tr>
<td>POSC 2401H</td>
<td>Honors Comparative Politics</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 2050H</td>
<td>Honors Research Methods and Designs in Psychology</td>
<td>4</td>
</tr>
<tr>
<td>THEO 2000H</td>
<td>Honors Hebrew Scriptures: Old Testament Overview</td>
<td>3</td>
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<tr>
<td>THEO 2100H</td>
<td>Honors New Testament Overview</td>
<td>3</td>
</tr>
<tr>
<td>THEO 2200H</td>
<td>Honors The Bible Through the Ages</td>
<td>3</td>
</tr>
<tr>
<td>THEO 2210H</td>
<td>Honors Great Moments in Christian Theology</td>
<td>3</td>
</tr>
<tr>
<td>THEO 2250H</td>
<td>Honors Spiritual Exercises of St. Ignatius</td>
<td>3</td>
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<tr>
<td>THEO 2300H</td>
<td>Honors Quests for God, Paths of Revelation</td>
<td>3</td>
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<tr>
<td>THEO 2310H</td>
<td>Honors Explorations in Christian Theology</td>
<td>3</td>
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<tr>
<td>THEO 2400H</td>
<td>Honors Christian Discipleship</td>
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<tr>
<td>THEO 2410H</td>
<td>Honors Christian Faith in Cultural Contexts</td>
<td>3</td>
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<tr>
<td>THEO 2500H</td>
<td>Honors Theology, Violence and Nonviolence</td>
<td>3</td>
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<tr>
<td>THEO 3010H</td>
<td>Honors Hebrew Scriptures/Old Testament Selected Books</td>
<td>3</td>
</tr>
<tr>
<td>THEO 3100H</td>
<td>Honors A Faith Worth Dying For? Martyrs, Saints, and Theology</td>
<td>3</td>
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<tr>
<td>THEO 3110H</td>
<td>Honors New Testament Selected Books</td>
<td>3</td>
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<tr>
<td>THEO 3230H</td>
<td>Honors Theology in the Writings of C.S. Lewis</td>
<td>3</td>
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<tr>
<td>THEO 3320H</td>
<td>Honors The Event and the Meaning of Vatican II</td>
<td>3</td>
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<tr>
<td>THEO 3420H</td>
<td>Honors Bridging the Racial Divide</td>
<td>3</td>
</tr>
<tr>
<td>THEO 3530H</td>
<td>Honors Theology and Economics</td>
<td>3</td>
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</table>

Note: Honors students satisfy three of the UCCS Rhetoric credits with ENGL 1301H Honors English 1, taken in the fall term of the first year. If credit is not awarded via Advanced Placement, International Baccalaureate or transfer credit, students may satisfy the other three UCCS Rhetoric credits with one of the following:
CMST 1000  Introduction to Communication  3
COMM 1100  Contemporary Presentation  3
DGMD 2335  Introduction to Scriptwriting  3
ENGL 1001  Rhetoric and Composition 1  3
ENGL 1002  Rhetoric and Composition 2  3
ENGL 3210  Writing Practices and Processes  3
ENGL 3220  Writing for Workplaces  3
ENGL 4210  Writing, Literacy, and Rhetoric Studies  3
ENGL 4220  Rhetorical Theories and Practices  3
ENGL 4250  Creative Writing: Fiction  3
ENGL 4260  Creative Writing: Poetry  3
ENGL 4954  Seminar in Creative Writing  3

Core Honors Seminars
All Core Honors students also take three Honors seminars:

HOPR 1953H Honors Program First Year Seminar, in the fall term of their first year; HOPR 2953H Honors Program Second Year Seminar any term after their first year; and HOPR 3957H Honors Core Capstone Seminar taken junior year, if schedule permits or senior year.

Disciplinary Honors
Disciplinary Honors Programs, in which students do Honors work in their majors, are administered by departments, programs or colleges for their undergraduate majors. Students are admitted to a Disciplinary Honors Program by the department, program or college administering the Program according to the Program’s rules and requirements. Admitted students are not required to be pursuing or to have completed Core Honors. All Disciplinary Honors Programs require at least six credits of coursework and completion of a disciplinarily appropriate project (thesis; creative, research or professional project) which may be completed as part of the six credits of coursework. Students with multiple majors who are admitted to multiple Disciplinary Honors Programs may double-count no more than three credits toward more than one Disciplinary Honors Program.

The College of Nursing, the Department of Biomedical Sciences in the College of Health Sciences and the Department of Psychology in the College of Arts and Sciences each offer Disciplinary Honors Programs for their majors.

Comprehensive Honors
Students earn comprehensive Honors by completing Core Honors, plus one of the following:

1. At least one Disciplinary Honors Program

   Students whose major departments or colleges offer Disciplinary Honors Programs are in most cases not eligible to propose Honors Projects, with rare exceptions for academic and/or professional reasons that must be approved by the department chair, faculty mentor and UHP Director.

2. An Honors Project comprising at least six credits of coursework (which may include laboratory research or thesis-writing for credit) in the student’s major department or college.

   Students intending to pursue Honors Projects must secure faculty mentors in their discipline and submit prospectuses for their Honors Projects to both their home departments and the UHP Director in consultation. All completed Honors Projects must be assessed and approved by both the home department (at minimum, faculty mentor, with approval by department chair) and the UHP Director.

Grade Point Average Requirements
Students must achieve a 3.200 cumulative grade point average to graduate with a Core Honors and therefore with a Comprehensive Honors Degree. All Disciplinary Honors Programs require at least a 3.200 cumulative GPA at the time of entry, and at least a 3.200 major grade point average for graduation with Disciplinary Honors. If a Core Honors student drops below a 3.200 in any term during the sophomore or subsequent years, he or she is placed on Core Honors academic probation until the cumulative 3.200 is attained. Students must earn a grade of C or better in a course in order for it to count toward Core Honors and the Comprehensive Honors degree.

Study Abroad
Up to two courses taken in a Marquette-approved study-abroad program may be counted toward Core Honors, at the discretion of the UHP Director.
Courses

HOPR 1953H. Honors Program First Year Seminar. 1 cr. hr.
The first-year seminars are intended to introduce Marquette Honors students to the university's top teachers and scholars through small seminars offering both classroom excitement and intellectual stimulation. These are one-credit, non-graded seminars that meet for 75 minutes once a week, and each section consists of no more than 10 students. The content of the individual seminars varies; our primary goal is to offer students the opportunity to pursue in some depth a specific intellectual topic in an academic setting that is fun, safe, and that encourages exploration and risk taking. S/U grade assessment. Prereq: Admission to Marquette University Honors Program.

HOPR 2953H. Honors Program Second Year Seminar. 2 cr. hrs.
The second-year seminar allows students to investigate a topic from a perspective that joins a specific disciplinary technique (e.g., literary analysis, philosophical inquiry, scientific empiricism) with a non-traditional academic approach in an effort to broaden the confines of intellectual inquiry. Examples of non-traditional approaches include contemplative practice, action and reflection, and vocation discernment components. The specific topics will differ among individual sections but the goals common to all sections include helping students to understand the relationship between disciplinary-based and more non-traditional modes of inquiry and the limitations and assets of each; appreciate the value of contemplative and experiential practices in gaining a richer understanding of the meaning and implications of an issue; and explore the reciprocal relationship between contemplation and action. S/U grade assessment. Prereq: HOPR 1953 and admission to Marquette University Honors Program.

HOPR 3953. Honors Program Junior Seminar. 3 cr. hrs.
The seminar topic of broad cultural interest investigated through a variety of approaches drawn often from several disciplines. Topics vary. Guest faculty from within the university are invited to conduct the seminar and encouraged to arrange as many different and experimental teaching formats as are consonant with the topic considered. Offered every term. Honors students only. Limited to 15. Prereq: A grade of C or better in HOPR 2953 and admission to the Honors Program.

HOPR 3957H. Honors Core Capstone Seminar. 1 cr. hr.
The seminar topic of broad interdisciplinary interest; topics vary. Three faculty from different disciplines co-teach the seminar, which includes lectures and small group discussions. S/U grade assessment. Prereq: Admission to Marquette University Honors Program.

HOPR 4953. Honors Program Senior Full Circle Seminar. 3 cr. hrs.
The course culminates the Honors Program Seminar Series by offering an integrative multidisciplinary seminar that encourages students to transcend the increasingly specialized disciplinary perspectives that characterize the latter stages of one's college career. In an effort to bring students "full circle" in the learning process, the seminar returns to selected texts and concepts studied in earlier Honors Foundation Courses and Seminars. The seminar is focused on a specific theme and challenges students' abilities to make connections surrounding this theme in different historical periods, disciplines, cultures and models of inquiry (e.g. analytic or contemplative). The explicit goal of this course is to help students begin to recognize how their education has contributed to a framework for thinking about, making decisions in, and interacting with the world. Prereq: HOPR 1953, HOPR 2953, cons. of dept. ch., cons. of program director, and Sr. stndg. in the Honors Program.
Academic Regulations

Academic Integrity

Academic integrity is the foundation of learning, research and scholarship. To that end, it is imperative that all members of the university community adhere to a shared understanding of the standards outlined in this policy. All faculty, staff and students are required to recognize, respect and uphold:

- The Statement on Academic Integrity
- The Honor Pledge
- The Honor Code
- Best Practices
- Academic Misconduct Policy

Statement on Academic Integrity

We, the scholars of Marquette University, recognize the importance of personal integrity in all aspects of life and work. We commit ourselves to truthfulness, honor and responsibility by which we earn the respect of others. We support the development of good character in our academic community and commit to uphold the highest standards of academic integrity as an important aspect of personal integrity. Our commitment obliges us as students, faculty and staff to conduct ourselves according to the Marquette University Honor Code set forth below. We do this in pursuit of Marquette University’s mission, which is the search for truth, the discovery and sharing of knowledge, the fostering of personal and professional excellence, the promotion of a life of faith and the development of leadership expressed in service to others.

Students are asked to commit to academic integrity through the following honor pledge. Faculty may require students to sign the pledge in their courses or for any individual assignment.

Honor Pledge

I recognize the importance of personal integrity in all aspects of life and work. I commit myself to truthfulness, honor and responsibility, by which I earn the respect of others. I support the development of good character and commit myself to uphold the highest standards of academic integrity as an important aspect of personal integrity. My commitment obliges me to conduct myself according to the Marquette University Honor Code.

Honor Code

The honor code obliges students:

1. To fully observe the rules governing exams and assignments regarding resource material, electronic aids, copying, collaborating with others, or engaging in any other behavior that subverts the purpose of the exam or assignment and the directions of the instructor.
2. To turn in work done specifically for the paper or assignment and not to borrow work either from other students, or from assignments for other courses, unless approved by the faculty member.
3. To give full and proper credit to sources and references and to acknowledge the contributions and ideas of others relevant to academic work.
4. To report circumstances that may compromise academic honesty, such as inattentive proctoring or premature posting of answers.
5. To complete individual assignments individually and neither to accept nor give unauthorized help.
6. To accurately represent their academic achievements, which may include their grade point average, degree, honors, etc., in transcripts, in interviews, in professional organizations, on resumes and in the workplace.
7. To report any observed breaches of this honor code and academic honesty.

Academic integrity is a matter of great importance to the entire Marquette community and as such the honor code obliges others on campus as well.

The honor code obliges instructors:

1. To monitor and design exams and assignments so that honest students will not be disadvantaged by other students who might choose to cheat if given the opportunity.
2. To report circumstances that may compromise academic honesty, such as inattentive proctoring or premature posting of answers.
3. To follow all published procedures regarding cases of academic misconduct.
4. To report any observed breaches of this honor code and academic honesty.

The honor code obliges researchers:

1. To give full and proper credit to sources and references and to acknowledge the contributions and ideas of others relevant to research.
2. To conduct research experiments according to professional standards of objectivity, conscientiousness, reliability and transparency.
3. To conduct all experiments according to professional ethical standards and, when applicable, to submit all proposed investigations to the relevant oversight bodies.
4. To provide sufficient documentation of research methodology so that other researchers in the field may replicate work.
5. To observe all duties required by copyright, trademark, patent and/or other applicable laws or regulations.
6. To follow all published procedures regarding cases of personal and academic misconduct.
7. To report any observed breaches of this honor code and academic honesty.

The honor code obliges staff:

1. To interpret procedures and regulations in the spirit of furthering the highest standards of personal and academic integrity.
2. To report circumstances that may compromise academic honesty, such as inattentive proctoring or premature posting of answers.
3. To follow through on reporting, punishment and record-keeping on all incidents of personal and academic misconduct.
4. To follow all published procedures regarding case of personal and academic misconduct.
5. To report any observed breaches of this honor code and academic honesty.

Academic Integrity Best Practices

In addition to the honor code, members of the Marquette University community commit to the following set of best practices.

As students we strive to come to class on time and to be prepared for the material at hand. This includes all readings and assignments. We strive to devote our full attention to the class proceedings and to be fully engaged in class discussions and activities. We recognize the importance of asking questions about material we don’t understand, as it helps other students who may not have thought of the question but need to hear the answer and it gives the instructor valuable feedback. We respect the views of classmates and instructors and we avoid distracting the class and instructor with irrelevant conversations or behavior. We strive to prepare for exams in a timely manner and to seek help from the instructor when necessary during the preparation. We start preparing papers, projects and homework assignments early enough to have sufficient time to do the best we can.

As instructors we strive to be prepared and current with respect to the content and conduct of our courses and to plan the course and class sessions to achieve the course objectives effectively. We strive to answer questions honestly and completely and to acknowledge when we do not have an answer. We strive to give all students equal opportunity to participate in class discussions and activities. We respect students’ views on issues of judgment and we clearly distinguish between our personal opinions and our professional expertise. We are available during office hours or at arranged times to work with students individually to help them to master course material. We strive to develop and update exams and assignments so that they are meaningful tests of understanding and progress toward achieving course objectives. Finally, we give due and careful consideration to students’ answers and submissions when evaluating them and assigning grades.

As researchers we strive to be honest, accurate, efficient, ethical, objective and accountable in conducting and reporting our research efforts. Where applicable, we aim to publish in outlets accessible to other professionals in the field for the greatest possible dissemination of creative scholarly research.

As staff we strive to serve all faculty and students within the confines of Marquette University’s policy and procedure. We recognize the importance of serving all faculty and students fairly and on a timely basis, while maintaining confidentiality. We respect teaching and learning and support faculty and students in this endeavor every day.

Academic Integrity Tutorial

All undergraduate, graduate and health science professional students must successfully complete an Academic Integrity tutorial during their first term of enrollment, or be subject to a registration hold for the following term.

Academic Misconduct Policy

Definitions of Academic Misconduct

Academic misconduct includes, but is not limited to, individual violations, helping another student with any form of academic misconduct, failing to report any form of academic misconduct, or intentionally interfering with the educational process in any manner. Faculty, staff or students who are aware of academic misconduct and fail to report it are considered complicit in these actions. The following sections provide representative examples of academic misconduct. If a student is in doubt as to whether an action or behavior is subject to the academic misconduct policy, he/she should consult an appropriate member of the Academic Integrity Council, faculty or staff.

Cheating

1. Copying from others for an assignment and/or during an examination, test or quiz.
2. Obtaining, or attempting to obtain, an assignment, examination, test, quiz or answer key without authorization.
3. Using unauthorized electronic devices or materials for an assignment, during an examination, test or quiz.
4. Communicating answers or providing unauthorized assistance for an assignment, examination, test or quiz.
5. Using unauthorized answers or assistance for an assignment, examination, test or quiz.
6. Offering one’s own work to another person, or presenting another person’s work as one’s own.
7. Completing an assignment and/or taking an examination, test or quiz for another student, or having someone complete an assignment, take an examination, test or quiz for oneself.

8. Tampering with an assignment, examination, test or quiz after it has been graded and then returning it for additional credit.

9. Outsourcing assignments, papers, examinations, tests, quizzes to fellow students or third parties.

Plagiarism
Plagiarism is intellectual theft by the unethical use of sources. It means use of another’s creations or ideas without proper attribution. Credit must be given for every direct quotation, for paraphrasing or summarizing any part of a work and for any information that is not common knowledge. Plagiarism is further addressed in the Academic Integrity Tutorial.

Academic Fraud
1. Altering or forging documents including forms, letters, grade reports, medical reports, transcripts and verifications.

2. Submitting substantial portions of the same work for credit in more than one course, or from previous institutions, without receiving permission from all instructors involved.

3. Using purchased answers, or selling answers to assignments, examinations, quizzes or papers.

4. Attending class for another, or having others attend class for oneself.

5. Falsifying the records of clients or patients.

6. Misrepresenting oneself, degree(s), areas of study, coursework and/or grade point average.

Research Misconduct
The University Research Misconduct Policy (http://www.marquette.edu/orsp/documents/ResearchMisconductPolicy1_09.pdf) applies to faculty, staff, students and others who are employed by or affiliated with Marquette University. Research misconduct is defined as fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results.

Procedures for Incidents of Academic Misconduct
When a faculty member or other member of the Marquette community has reason to suspect or receives notification of a student’s alleged academic misconduct, he or she must complete the Academic Misconduct Report form and submit it to the Academic Integrity Director within five business days of obtaining information about an alleged violation. The reporter must include a summary and attach evidence, if any, of the alleged misconduct.

The Academic Integrity Director will notify the student and select an Investigating Officer to review the materials, interview the student and the reporter of the alleged misconduct. Within six business days of receiving the Academic Misconduct Report form, the Investigating Officer will determine if the case warrants further action or is to be dismissed and inform the Academic Integrity Director of same. In cases involving more than two students, the investigation period may be extended one day for each additional two students at the discretion of the Academic Integrity Director. The timeline for investigation may be adjusted during periods when students and faculty are away from campus. Once the Investigating Officer informs the Academic Integrity Director of the decision, the Academic Integrity Director or designee will review the Investigating Officer’s summary and notify the student within two business days of the disposition. For cases moving forward, the Academic Integrity Director will determine whether the case is eligible for expedited review or must be referred for a full hearing.

A student who withdraws from a class or the University, and is later found to have violated the Academic Integrity Policy, the withdrawal may be changed to an administrative or failing grade.

Expedited Procedure
The Academic Integrity Director may offer an expedited review, specifying the maximum penalty that could be assigned, if the student has no record of academic misconduct at Marquette University and the Director deems the alleged misconduct minor. Expedited review will not be offered to students in Health Science Professional courses or graduate students alleged to have cheated or committed academic fraud or extensive plagiarism. A copy of the expedited offer will be sent to the student’s college/school office and the faculty member in whose class the misconduct occurred.

The student has two business days to respond to the Academic Integrity Director. If the student accepts responsibility and the penalty, the Academic Integrity Director will send a final letter to the student summarizing the finding and the penalty. At the same time, the Academic Integrity Director, will send a letter specifying the penalty to the student’s college/school office and the faculty member in whose class the misconduct occurred.

If the student does not accept the expedited review option, the case will move to a full hearing.

In all cases where a student has been found in violation, a copy of the file relating to the alleged misconduct will be forwarded to the Office of the Registrar to be held in the student’s permanent confidential file.
Full Hearing
A Hearing Board will be convened by the Academic Integrity Director for cases that are ineligible for expedited review, all cases in which students request a hearing or cases the Academic Integrity Director deems appropriate. The Board, will generally consist of two faculty, two students and the Dean’s Office Designee from the student’s college/school. The Dean’s Office Designee will act as the Hearing Board Chair.

- On being formed, the Hearing Board will review all documents and material related to the alleged misconduct.
- A hearing will normally occur within ten business days of the Board's formation. The hearing may be delayed by up to 30 business days if the Board cannot be convened.
- The Board will determine whether there are witnesses it wishes to call in addition to the student under investigation. The student under investigation may also request additional evidentiary witnesses and provide additional information for consideration to the board facilitator at least two business days prior to the hearing.
- The student may bring an individual for support. This person is not allowed to contribute to the proceedings. If the support person is an attorney, a representative from the Office of the General Counsel at Marquette must also be present. In these cases the hearing may need to be rescheduled to allow a member of the Office of the General Counsel to attend.
- Prior to deliberation, the Board will excuse all non-Board members from the meeting.
- Within three business days of the hearing, the Academic Integrity Director will send a letter to the Office of the Dean in the student’s home College/School. The Dean’s office has three business days to review the finding and inform the Academic Integrity Director of any changes to the recommended penalty.
- Within six business days of the hearing, the Academic Integrity Director will inform the student summarizing the finding and the outcome (i.e., any penalty).
- A copy of the file relating to the alleged misconduct will be forwarded to the Office of the Registrar to be held in the student's permanent confidential file and if applicable, the maximum grade penalty allowed will be forwarded to the faculty member in whose class the misconduct occurred.

Student Appeals
A student has the right to appeal the hearing board’s determination if he/she believes the determination was unfounded, biased or capricious or there is new information available that was not available at the time of hearing which affects the disciplinary decision. In this case the student should submit a formal written appeal stating the grounds for appeal and relevant documentation to the Academic Integrity Director within five calendar days of the notification of the decision. Upon receipt of the appeal the Academic Integrity Director will convene a review of the student’s actions by the Academic Integrity Council Executive Committee. The committee reviews the details of the student's actions and may ask to speak to the student, the instructor, the chair of the department offering the course, associate deans and others. The Academic Integrity Executive Committee will review the appeal and, make a determination within five business days of receipt of the appeal. The Academic Integrity Director will provide a written statement to all parties concerned. The decision of the Academic Integrity Executive Committee is final. A copy of the decision will be placed in the student academic file located in the Office of the Registrar. The disciplinary response and procedure for incidents of academic dishonesty that do not lead to suspension or expulsion concludes at this step.

For actions involving campus-wide sanctions, such as suspension or expulsion, the student has the right of appeal to the Office of the Provost. A formal written appeal stating the grounds for appeal and available documentation is to be submitted to the Office of the Provost within five business days of the notification of the hearing board’s decision. The provost or designee will conduct a review of the appeal materials, may seek additional information and may consult with the student, faculty, chair(s), associate dean(s), deans and others. The final decision to uphold or modify the action of the hearing board will be provided to the student and to the dean and associate dean of the student’s assigned college within fifteen business days of receipt of the appeal. A copy of the provost’s decision will be placed in the student academic file located in the Office of the Registrar. The decision of the provost is final.

Maintenance of Disciplinary Records
Records relating to academic misconduct will be maintained by the Office of the Registrar in perpetuity. The university will not release a student’s disciplinary records to any person and/or entity unless authorized to do so by the student in question or when required by law.

Professional Ethics and Standards
These procedures do not supersede or take the place of procedures established for students who violate professional standards applicable to a particular program, college or school. Separate procedures and/or outcomes may be invoked when students are found in violation of professional standards or codes of ethics related to special programs, licensure or certification as determined by the program’s external or internal professional requirements. It is the student’s responsibility to know and follow these standards/codes of ethics, which are part of the student’s academic program. These special expectations and procedures, including the appeals process, will be provided to the student upon enrollment in the program and are available in published form in the administrative offices overseeing these programs.

Academic Advising
The University's Advising Philosophy
Advising fosters intellectual, moral and personal growth in students. It is informed by the teachings of Ignatius Loyola, who advocated that Jesuit schools should educate students who will lead and be a leaven for good. This requires that students obtain both a firm base of knowledge and a strong sense
of personal responsibility. Thus, Marquette seeks to educate on both the intellectual and moral level. The mark of academic success is the ability of students to function as well-educated, responsible members of society.

**Goals for Advising**

The primary purpose of advising is to enhance the academic performance of students. The result of this process should be graduates who are demonstrably committed to academic excellence and who assume responsibility for their own actions. Their growth toward this goal can be observed in their ability to make sound personal and academic choices.

Advising is much more than class scheduling, although that is obviously a regular component. In the same way that formal study affects a student’s intellectual growth, advising is an ongoing developmental process that helps students discern their life/career goals, and contribute to their values, their personal fulfillment and the educational plans for reaching those goals. As part of this process, advisers can give attention to matters relating to academic performance and also be watchful for non-academic issues that could have an impact on student academic performance.

**Adviser and Student Expectations**

Marquette University is committed to the shaping of students’ intellectual and personal development. Academic advising contributes substantially to this mission. It assumes a good working relationship between advisers and students. At Marquette University we strive to provide advising within the following set of expectations:

Students may anticipate the following from advisers:

1. The adviser recognizes the goal of advising is the academic success and personal growth of the student.
2. The adviser works to develop good rapport with the student and in doing so, also serves as a mentor.
3. The adviser has knowledge of major course content, course sequencing, the University Core of Common Studies (UCCS) and graduation requirements as provided in the bulletin.
4. The adviser is available during his or her regular office hours or by appointment and prepares for each scheduled session by reviewing the advisee’s record before the meeting.
5. In addition to showing common courtesy toward the advisee, the adviser listens carefully, provides encouragement and support and respects the advisee’s ability to make decisions.
6. The adviser helps the student develop strategies for academic success and understand the possible associated consequences.
7. The adviser identifies and addresses potential conflicts that might arise in the students’ schedule and develops a long-term schedule to avoid conflicts (e.g., prerequisites, infrequent offerings, etc.).
8. The adviser informs advisees of opportunities and information, particularly related to majors and minors but also including internships, research, graduate and professional school opportunities.
9. The adviser understands that academic performance can be influenced by factors unrelated to the classroom and is prepared to deal with these issues and make referrals as necessary.
10. The adviser knows where to direct a student to additional resources when necessary.

Advisers may anticipate the following from students:

1. The student accepts full responsibility for his or her academic success and acknowledges that the adviser is a major resource for achieving that success.
2. The student understands bulletin information including graduation requirements.
3. The student acknowledges that successful advising requires openness and honesty with the adviser.
4. The student works to develop a good rapport with his or her adviser.
5. The student has a desired expectation for his or her Marquette experience and comes to meetings prepared to discuss career goals, co-curricular interests, etc.
6. The student prepares for advising sessions by developing semester schedules that meet certain long-term goals such as fulfilling the requirements of the UCCS and college curriculum.
7. The student should have knowledge of the classes he or she is interested in taking as well as alternative options, and recognizes that his or her plans may change.
8. The student shows common courtesy toward the adviser including honoring all advising appointments once scheduled.
9. The student seeks appropriate help to solve problems that may adversely affect his or her academic performance. The student recognizes that the academic adviser is the appropriate person with whom to start this process.
10. The student ensures that all questions and concerns are adequately addressed.

This statement evolved from a collaborative effort that included members of the Marquette University Student Government and the Committee on Academic Procedures. Reviewed by Marquette University General Counsel, February 1, 2006. Revised and approved by the University Board of Undergraduate Studies, March 1, 2006. Approved by the Academic Senate, March 20, 2006
The Klingler College of Arts and Sciences Pre-major Advising Manual (2003-2004) is the source for much of the information contained herein.

**Academic Censure (Probation/Dismissal/Academic Alert)**

**Overview**

All undergraduate students are expected to maintain a minimum of a 2.000 cumulative grade point average (GPA) in all Marquette coursework. However, there are additional requirements that may lead to academic censure, as described below.

Marquette defines academic censure in one of three categories: **Academic Probation** (two types): College Probation and Reinstated on Probation; **Academic Dismissal** (two types): Required to Withdraw for Academic Reasons and Required to Withdraw for Academic Misconduct; and the **College Academic Alert**. All of these censure statuses are maintained permanently on the student’s academic record; however, only three appear permanently on Marquette University’s official transcript as follows:

1. Reinstated on Probation
2. Required to Withdraw for Academic Reasons
3. Required to Withdraw for Academic Misconduct

**Satisfactory Academic Progress**: While not an academic censure issue per se, the financial aid regulation requiring the university to evaluate the qualitative (GPA) satisfactory academic progress of each student is also discussed in this policy, as by federal regulations, it must be aligned with the University academic dismissal policy. The satisfactory academic progress notation will be maintained permanently on the student’s record; however, will not appear on Marquette’s official transcript. In addition, satisfactory academic progress does not impact or reverse the academic censure notations described above. Refer to the Complete Financial Aid Satisfactory Academic Progress Policy (http://www.marquette.edu/mucentral/financialaid/resources_elig_standards.shtml) on the OSFA website for additional information on SAP.

**Policies/Process**

**Academic Probation-College Probation**

A student is placed on college academic probation according to the policies of his/her individual college (see the respective college sections of the Undergraduate bulletin for details). This probation status does not impact financial aid eligibility. Likewise, financial aid eligibility does not impact or reverse academic probation.

**Academic Dismissal-Required to Withdraw for Academic Reasons (RWAR)**

The Office of the Registrar (OTR) and the Office of Student Financial Aid (OSFA) will monitor cumulative GPAs at the end of each term (fall, spring and summer).

A student who does not meet the GPA requirements listed below will be academically dismissed by the college (coded as RWAR by OTR) and the student’s record will also reflect his/her failure to maintain satisfactory academic progress (coded as SAP by OSFA):

1. A student having attempted 24 or fewer credit hours must maintain a cumulative GPA of 1.500 or higher.
2. A student having attempted more than 24 credit hours must maintain a cumulative GPA of 2.000 or higher.

In addition:

1. Those students who have been granted an official Medical Withdrawal by the University will not be subject to RWAR for the term in which the Medical Withdrawal is approved. They will, however, be subject to SAP for that term.
2. Those students who withdraw from their first term at Marquette will not be subject to RWAR in that term. They will, however, be subject to SAP for that term.
3. Those students who choose the audit (AU) option in all classes will not be subject to RWAR or SAP for that term. However, should these students withdraw and/or receive a grade of AUA in that same term, they will be subject to RWAR and SAP.
4. Those students enrolled in audit-only programs will not be subject to RWAR or SAP. However, should these students withdraw from the audit-only program or classes and/or receive a grade of AUA in that same term, they will be subject to RWAR and SAP.
5. The Undergraduate Academic Censure Committee will communicate RWAR decisions via email and via FedEx letters to the student’s home address; OSFA will communicate SAP via Marquette email. As per the University email policy, it is the student’s responsibility to monitor his/her Marquette email at all times.
6. A student coded with RWAR who is not reinstated will be dropped from any classes in which he/she is subsequently registered.

**RWAR/SAP Appeal process**

The RWAR/SAP is appealed on one form, as per the instructions contained in the RWAR/SAP email(s) and letters received at the end of the term. This form is used whether the student wishes to appeal to his/her original college or to other colleges.
The Academic Censure/Satisfactory Academic Progress Appeal form is posted on the Marquette Central academic forms website (http://www.marquette.edu/mucentral/registrar/policy_forms.shtml) and includes all of the required information the student must submit in order to have his/her appeal reviewed. The Undergraduate Academic Censure Committee has the final decision on all RWAR/SAP appeals.

If the appeal is approved:

1. The student will be ‘Reinstated on Probation’ and the college will design an academic plan for the student, outlining how the student will regain his/her satisfactory academic and degree progress standing and the student will become financial aid eligible.
2. The plan must be measurable and ensure that the student is able to meet Marquette’s SAP standards by a specific point in time. Plans should include courses to be taken, expected grades and a time frame to complete the outlined objectives.
3. The plan will be monitored and evaluated at the end of each term.
4. Should the student be on a multiple term plan and the student is satisfying that plan at the end of each term, the student will not be subject to RWAR or SAP, regardless of the GPA of the student.
5. Should the student not fulfill all of his/her academic obligations as outlined in the plan, the student will again be coded as RWAR and SAP and subject to all provisions of this policy.

Academic Dismissal-Academic Misconduct

Dismissal for academic misconduct (RWAM) is determined per the Academic Integrity (p. 50) policy found in the Undergraduate bulletin and at the Academic Integrity (http://www.marquette.edu/provost/integrity/) website. Once this determination has been made, the student will be dismissed from the university. This action results in ineligibility to register at Marquette. Reinstatement criteria for the student who is dismissed, if applicable, will be outlined in the dismissal notice. If the student is allowed to return to the university, a permanent notation of ‘Reinstated to the University’ will appear on the student’s academic record and Marquette’s official transcript.

College Academic Alert (CAA)

A student who does not fall under the university RWAR or SAP criteria as outlined above, however fails to make progress in his/her particular college or major, will be barred from future registration by a CAA registration hold and may be dropped from any classes in future terms for which he/she is registered.

1. The CAA hold is assigned by the college office and is specific to the individual college’s degree progress policies (see the respective college section of the Undergraduate bulletin). The college will communicate this information via the Marquette email. As per the University email policy, it is the student’s responsibility to monitor his/her Marquette email at all times.
2. The student may appeal the CAA to his/her original college or other colleges by using the same Academic Censure/Satisfactory Academic Progress Appeal form on the Marquette Central academic forms website. (http://www.marquette.edu/mucentral/registrar/policy_forms.shtml)
3. If the appeal is approved, the CAA hold is removed and the student will be notified via Marquette email.

Academic Programs Defined

An academic program is a combination of courses and related activities organized for the achievement of specific learning outcomes as defined by the University. This includes programming at both the undergraduate, graduate and professional level and consists of degrees, majors, minors, concentrations, specializations and certificates.

Degree Program

An academic program of study leading to a bachelor’s, master’s, Ph.D. or professional degree. All degree programs require a minimum number of semester credit hours, as referenced in the official bulletins of the University that are produced each academic year.

Major

A comprehensive course of study in a given discipline at the undergraduate level. A minimum of 30 semester credit hours must be earned in the major.

Minor

A course of study in a discipline or interdisciplinary cluster at the undergraduate level that is other than the student’s major area of study. A minimum of 18 semester credit hours must be earned in the minor.

Concentration

A sub-set of a discipline organized in clusters of focused courses taken within an undergraduate major. A minimum of 9 semester credit hours must be earned in the concentration.
Specialization
An integrated, coherent set of courses that define a limited topic or field of study at the graduate level that is taken within the degree program. A minimum of 12 semester credit hours must be earned in the specialization.

Certificate
A post-baccalaureate or post-master program of study offered at the graduate or professional level, in which a specific skill set is demonstrated at the end of the program, usually culminating in a capstone course. In order to earn a certificate, the program of study must be offered apart from a degree; however, the courses in a certificate program may be applied toward a graduate or professional degree program. A minimum of 12 semester credit hours must be earned in a certificate program.

Dual Degree
A formal agreement where two degrees are conferred simultaneously from two institutions (or colleges/schools with one institution), some courses/credits taken at both institutions/colleges/schools apply to both degrees and two diplomas are produced, one for each degree.

Joint Degree
A formal agreement where one degree is conferred from two institutions (or colleges/schools within one institution), some courses/credits taken at both institutions/colleges/schools apply to the degree and both institutions/colleges/schools are listed on a single diploma.

Academic Standing
Students are considered to be in good standing as long as they are eligible to enroll in classes at Marquette.

Awarding Diplomas and Certificates
This policy defines and outlines the process for approval and distribution for official Marquette University certificates and diplomas.

Programs of Study Defined
1. A degree program is defined as an approved academic program of study, outlined in a Marquette University bulletin, that contains a degree and, in the case of an undergraduate, at least one major and leads to an official diploma and notation of such on the University’s official transcript.
2. A certificate program is defined as an approved academic program of study, outlined in a Marquette University bulletin that includes the specialized study of a subject area and leads to an official certificate and notation of such on the University’s official transcript.
3. An official diploma or certificate is defined as one on which the university seal is affixed and is released only by the Office of the Registrar.

Policy
1. Structuring of degree and certificate programs requires approval through the appropriate Marquette University curriculum process.
2. Requirements for all Marquette academic programs of study are to be documented in the appropriate Marquette University bulletin by the college/school/department offering the degree or certificate program. No official diploma or certificate will be awarded that does not first appear in the appropriate bulletin.
3. The college/school offering the degree or certificate program bears the responsibility for authenticating completed program requirements. Changes or exceptions in course requirements for individual students must be documented in the academic record of the student, either online, when the program of study requirements are in the University degree audit system (Academic Advisement), or, on paper when not.
4. Diplomas and certificates will be ordered and issued only by the Office of the Registrar, in consultation with the appropriate college/school of the student and the Office of the Provost.
5. Diplomas and certificates cannot be earned retroactively. Students must first apply for graduation, satisfy all applicable degree/course/credit requirements and appear on the Trustee’s List before a diploma or certificate will be produced or posted to the student’s official academic record. Students may not appear on the Trustee’s List until all applicable degree/course/credit requirements are satisfied. The posting date of the diploma or certificate will be the earliest available diploma/certificate date after the student appears on a Trustee’s List.
6. No student will be allowed to officially declare a degree or certificate program once it has been discontinued, except those who entered the university in an academic year prior to the discontinuation and maintained continuous enrollment on the same academic level as the discontinued program (i.e., undergraduate, graduate, etc.) until completion of his/her program of study. Once a student fails to register for one term (except summer), or graduates from a program of study, he/she has failed to maintain continuous enrollment on that academic level, even if readmitted to the same academic level.
7. When certification of a specific skill or acknowledgement of completion of a learning experience is needed, university administrators and deans are authorized to prepare and issue a letter acknowledging completion of such program on official letterhead, or produce a document recognizing the experience; however, the document must include the name of the issuing college/school and the University seal may not be used on these documents.
8. A letter or other document certifying completion of a course is not considered an official diploma or certificate; and therefore, will not be posted to the student’s official academic record.
Attendance

The undergraduate/health science professional attendance policy specifies the role of the student, the instructor and university administrators in cases when students are absent from one or more classes.

Withdrawal from a Course Due to Poor Attendance

Students are responsible for attending all class meetings for courses in which they are registered.* Any absence, regardless of the reason, prevents students from getting the full benefit of the course and, as such, no distinction is made between excused and unexcused absences for purposes of recording attendance.

1. For courses in which attendance is regularly taken, an instructor or college office may withdraw a student from a course due to excessive absences and assign a grade of WA (Withdrawn-Excessive Absences). In these cases, instructors must document the dates of absenteeism.

   • Such action may be initiated, for example, in a 16-week course when the number of class hours missed exceeds twice the number of course credits. As such, a student may be assigned the grade of WA when more than 6 classes have been missed in a 3 credit course, when more than 8 classes have been missed in a 4 credit course and when more than 10 classes have been missed in a 5 credit course.

   • As examples: students who miss more than 6 classes in a 3 credit course that meets 50 minutes, 3 times per week, will be considered to have excessive absences and may be assigned a WA. Likewise, students who miss more than 4 classes in a 3-credit course that meets 75 minutes, 2 times per week, will be considered to have excessive absences and may be assigned a WA.

2. For those courses in which attendance is not taken on a regular basis, an instructor or college office may withdraw a student when it becomes apparent through missed assignments that the student has excessive absences.

   In such cases, a student’s last date of attendance is determined by the last date of participation in an academically-related activity for the course including, but not limited to: an exam or quiz, a submitted assignment, participation in a lab activity, or in computer-assisted instruction.

Students assume all consequences that ensue as a result of receiving a WA grade. These consequences include, but are not limited to: a delay in graduation, loss of eligibility for certain scholarships or financial aid, loss of full-time student status.

Online Courses and Attendance

Online courses at Marquette University are designed to be highly interactive and collaborative, as authentic learning takes place within a social context. To help ensure an effective learning experience, all students in online courses are expected to participate on a regular basis. Participation is defined as “submitting required work as assigned; being an active contributor and responder to fellow students and the instructor in a timely basis, as set forth by online discussion guidelines in each course.” Failure to participate may be counted toward the number of absences allowed before a WA is assigned as described above.

If technical circumstances prevent a student from entering the course site for a period of time, it is the student’s responsibility to contact the instructor in a timely manner if the student wishes to receive credit for any missed online activities.

Additional Attendance Policies

The above two sections represent university attendance standards. Each undergraduate college may enforce additional attendance policies for certain courses; consult your college handbook, college section of the current bulletin, or the individual course syllabus/attendance policy for more information.

Extended Absences

In the event that the student will be gone for an extended period, where two weeks or more classes will be missed, the student or a family member, if the student is unable, should communicate with the college office as soon as possible. The student may explore options, such as incomplete grades, withdrawing from the class, or seeking a medical withdrawal. These options may not be available in every case and should be pursued before the student is withdrawn for excessive absences. Once a WA is entered for a course, these options are no longer available. The University deadline for withdrawal is published in the Academic Calendar.

Making Up Work from a Missed Class

In the case of missed assignments, the University does make a distinction between reasons for absences.

In the case of absences due to legal obligations, religious observance, or participation in Division 1 athletics and other university sanctioned events, if documented in advance, students should be given the opportunity to make up class examinations or other graded assignments that are missed, where possible.

Students should consult faculty and the respective syllabus for their policies regarding makeup work. Faculty may allow students to make up the missed work, where possible, if the absence is due to officially sponsored university activities (e.g., band or presenting a paper at a conference), hospitalization, the death or acute illness of an immediate family member (e.g., parent or caregiver, sibling, spouse, or child), mandatory admission interviews for professional or graduate school, or post-graduate employment interviews that cannot be rescheduled, required participation in military duties including required ROTC training and medical examinations or similar serious reason. Faculty may require documentation.
The manner in which the work will be made up is left to the discretion of each individual faculty member. The opportunity to make up work is considered a privilege, not a right.

It is recognized that sometimes an exam or graded assignment is impossible to make up. Some faculty may assign collaborative projects that depend on other classmates, or oral presentations that incorporate questioning by the entire class, or may use evaluative methods that cannot easily be replicated by the instructor. This policy does not prohibit any member of the faculty from making the determination that certain course work cannot be made up. Faculty who intend to deny the opportunity to make up certain exams or projects because of absences resulting from legal obligations, religious observance or university sanctioned activities and related travel, must inform the student of these consequences (reduced grade or otherwise) in writing, at the beginning of the class (preferably in the course syllabus).

In the event that a student is absent for reasons specified above (e.g., representing the university) and the instructor issues some portion of the grade on the basis of participation or, more directly, attendance, it is impossible for the student to directly “make up” the work. In these cases, faculty should recognize that the student’s grade should not be penalized for the absence. Except in cases of field experience, practicums, student teaching, clinicals, or clinical internships, the student should be given the opportunity to achieve the same grade based on a smaller number of classes or some alternative means of making up the points missed.

Student and Faculty Responsibilities Regarding Attendance and Makeup Work

The following responsibilities are outlined in order to minimize the difficulties for both students and instructors caused by absences due to legal obligations, religious observance or university sanctioned activities and related travel:

Students:

1. Students are responsible for attending all class meetings for courses in which they are registered.
2. Students should make every effort to schedule classes that will minimize conflicts caused by foreseeable activities and related travel.
3. Since it is up to each student to understand and abide by each instructor’s policy on issues related to attendance, students should consult the instructor if any portion is not understood.
4. Students should provide written notification of all scheduled events (e.g., dates of religious observance or scheduled travel for intercollegiate athletics), including a schedule of all activities and related travel to all their instructors within the first two weeks of each semester.
5. Students should provide written notification of all other absences as soon as possible for events not foreseen at the beginning of the semester. (e.g., extended athletic seasons, hospitalization). If the student wishes to make up work, documentation may be required by the professor and should be turned in to the professor for absences less than a week and to the college office for absences of a week or longer.
6. Students should obtain any class notes or other course material missed due to these absences, prior to taking any subsequent examinations or submitting any subsequent graded assignments.
7. Students should make arrangements with the instructor to make up any missed work that can be made up, prior to any foreseeable absences and as soon as possible for any unforeseeable absences.
8. Regardless of the reason for the absence, students are responsible for learning what happened in class. Students who anticipate missing one or more class periods should contact the instructor ahead of time, just as they should contact their instructor as soon as possible after an absence.
9. Students are responsible for monitoring their absences during the term.

Faculty:

1. Faculty have a responsibility to meet every class period during the semester or term. Faculty should make every effort to seek coverage from another faculty member, if they cannot hold class because of professional travel or short term illness.
2. Faculty should determine and notify students in writing the first day of class, preferably in the course syllabus, if any component of the grade is based on attendance and/or participation and whether or not the opportunity to make up missed work, including assignments, quizzes, examinations and so forth, will be provided.
3. If faculty allow some or all assignments to be made up, they should specify the conditions students must meet to be given the opportunity to make up missed work.
4. If a faculty member does not provide information about make up work in writing, students can expect to be given a reasonable amount of time to complete work that is missed as a result of being absent due to serious reason (see above).
5. Faculty should consult the Office of Campus Ministry’s list of major religious holidays likely to affect Marquette students. Please note that this is not an exhaustive list. Faculty are encouraged to accommodate students who are participating in bona fide religious observances whether or not the observance is included on the Campus Ministry list.
6. While the University does not require faculty to take attendance, if any part of the course grade is based on attendance and/or participation, the faculty member should keep thorough documentation of class attendance.
7. When it is determined that a student is approaching the maximum number of absences, faculty should communicate with the college office and the student.

* While instructors begin to deliver course content from the first day of class and students are expected to attend all the classes for which they are registered, the University allows students to add classes until the close of registration, as published in the academic calendar. The obligation to attend
class begins once a student is registered for a class. Students are not considered absent and the expectation is that students will be allowed to make up any graded work that was given before the student enrolled.

** The Marquette University Medical Clinic does not provide documentation of illness, or of a visit to the Medical Clinic though they may provide information to students whose illness may require temporary accommodation (e.g., concussion). Likewise, college and other university offices (e.g., the Counseling Center and Student Affairs) do not provide documentation of an absence on behalf of the student.

**Audit**

Students who wish to audit courses without earning credit must present evidence of their preparation for the course or courses in which they wish to enroll. Auditors are required to attend all classes but are not required to complete written course assignments or examinations. Certain courses may not be audited, such as University Core of Common Studies and courses in the major (check with your college to determine other courses that cannot be audited).

Students must first register for the course via CheckMarq, then request the audit option from the student’s college office with the Audit Request form located on the Marquette Central academic forms website. (http://www.marquette.edu/mucentral) Auditing a class must be approved by the college. The deadline to request the audit option for each session is the last day to register for the class as listed on the Academic Calendar (p. 824).

**Classification**

An undergraduate student must have earned 24 credit hours before being classified as a sophomore; 60 hours before being classified as a junior and 92 hours before being classified as a senior.

**Commencement**

Commencement at Marquette is a symbolic ceremony provided for students, faculty and families in celebration of our students’ accomplishments. Following is the policy regulating participation in the University Commencement.

1. Marquette offers one Commencement per year. Commencement will be held in May, following the spring term.

2. Spring Graduates:
   - Undergraduate/Master's/Health Sciences Professional students: students who are in good standing, have met the appropriate graduation application deadline and will complete their degree requirements, including the official recording of any transfer work by the end of the spring term may participate in Commencement held in the same calendar year.
   - Dental students: students who are in good academic standing, have met the appropriate graduation application deadline and will complete their degree requirements, including the official recording of any transfer work by the end of the spring term will participate in Commencement held in the same calendar year.
   - Doctoral students: candidates must have met the appropriate graduation application deadline, have any transfer credit officially recorded, successfully defended their dissertation, received approval by their dissertation committee for any required revisions, submitted their dissertation to the Graduate School and received approval of the dissertation format by the Graduate School before the published deadline in order to participate in the Commencement held in the same calendar year.
   - Law students: students who are in good academic standing, have met the appropriate graduation application deadline and will complete their degree requirements, including the official recording of any transfer work by the end of the spring term will participate in Commencement held in the same calendar year.

3. Summer and Fall Graduates:
   - Undergraduate/Master's/Health Sciences Professional students: students who are in good academic standing, have met the appropriate graduation application deadline and will complete their degree requirements, including the official recording of any transfer work after the May Commencement ceremony of a given calendar year, may participate in the Commencement held in that calendar year, or may choose to participate in the Commencement held in the following calendar year.
   - Dental Students:
     a. Summer graduates: Students who are in good academic standing, have met the appropriate graduation application deadline and will complete their degree requirements, including the official recording of any transfer work by the end of the spring term may participate in spring commencement. Such students may also participate in selected May commencement ceremonies in the School of Dentistry.
     b. Fall graduates: Student who are required to enroll in any fall semester course in the School of Dentistry are specifically prohibited from participating in any May commencement ceremony for either Marquette University or the School of Dentistry.
   - Doctoral students: candidates who complete their degree/dissertation requirements (see #2 above) after the May Commencement ceremony of a given calendar year, will be hooded and honored at a Hooding Ceremony hosted by the Graduate School in December, or may participate in Commencement held in the following calendar year.
   - Law students:
     a. Summer graduates: students who are in good academic standing, have met the appropriate graduation application deadline and will complete their degree requirements, including the official recording of any transfer work in the the summer term after May Commencement of a given calendar year, may participate in the May Commencement ceremony of that same calendar year and will be hooded and honored at a May
Hooding Ceremony hosted by the Law School; or may choose to be hooded and honored at a December Hooding Ceremony hosted by the Law School of that same calendar year.
b. Fall graduates: students who complete their degree requirements in the fall term of a given calendar year may be hooded and honored in the December Hooding Ceremony, hosted by the Law School and may participate in the May Commencement of the following calendar year; or may participate in both the May Commencement and May Hooding Ceremony of the following calendar year.

4. Students' names/degrees appear in the Commencement Program in which they participate, regardless of the term in which they graduate. Latin Honors, if awarded, will also be noted, based on the last grading cycle in which the student was enrolled; however, the final determination of Latin Honors is based on the final grades earn in the term in which the degree is conferred.

5. Degree conferral and Latin Honors are certified by the official Marquette transcript noting the degree completion. Receipt of a diploma, participation in the commencement ceremony or the name/degree/honors listed in the Commencement Program do not constitute certification of the same.

6. Any exceptions to this policy must be approved by the Provost.

Commencement Notification

The Office of the President sends one invitation/announcement to the name indicated on the Graduation Application each graduating student submits online via the Student Center in CheckMarq (https://checkmarq.mu.edu). However, there is no limit to the number of family members and friends who may attend the university-wide Commencement exercises; tickets are not needed. For further information on the university-wide ceremony, contact University Special Events at (414) 288-7431 or visit the Commencement website (http://www.marquette.edu/commencement). College Commencement ceremony, if occurring, may require tickets. For further information on college ceremonies, contact the appropriate college office.

Conferral of Degrees and Certificates

The process for determining diploma or certificate conferral dates and the distribution of diplomas, certificate and transcripts with degrees posted is outlined below. Refer to the Academic Calendar (p. 824) for the dates of all these processes.

The Friday after May Commencement-the Friday before the end of summer term graduation

1. Students may have degrees or certificates conferred every Friday, as long as all required grades are recorded in CheckMarq and all degree requirements are completed according to the college/school's schedule.
2. Colleges/Schools will verify degrees/certificates and must submit a list of those graduating to the Provost's Office by noon of the appropriate Friday.
3. The Office of the Registrar will post the degrees/certificates of all students who appear on the graduation list, the following week.
4. Diploma or certificate conferral date = the Friday the list is submitted.
5. Transcripts with degrees/certificates posted are available the week after the graduation list is submitted.
6. The Office of the Registrar will order diplomas or certificates for these students after the graduation list is submitted.
7. These diplomas and certificates are available for mailing or pick-up 4-6 weeks after the graduation list is submitted.

September-November and January-April

1. Students may have degrees or certificates conferred the last business day of the month, as long as all required grades are recorded in CheckMarq and all degree/certificate requirements are completed according to the college/school's schedule.
2. Colleges/Schools will verify degrees/certificates and must submit a list of those graduating to the Provost's Office by noon of the last business day of the month.
3. The Office of the Registrar will post the degrees/certificates of all students who appear on the graduation list the following week.
4. Diploma or certificate conferral date = the last business day of the month.
5. Transcripts with degrees/certificates posted are available the week after the graduation list is submitted.
6. Office of the Registrar will order diplomas or certificates for these students after the graduation list is submitted.
7. These diplomas and certificates are available for mailing or pick-up 4-6 weeks after the graduation list is submitted.

May, December and the end of summer term graduation in August

1. Students may have degrees or certificates conferred as long as all required degree/certificate requirements are completed according to the college/school's schedule.
2. Colleges/Schools will verify degrees/certificates and submit graduation lists to the Provost's Office. Refer to the Academic Calendar (p. 824) for the exact date.
3. Refer to the appropriate Academic Calendar for the diploma or certificate conferral date.
4. The Office of the Registrar will post the degrees/certificates of all students who appear on the graduation list.
5. Refer to the Academic Calendar (p. 824) for the exact date diplomas and certificates are available for pick-up at Marquette Central or for mailing from the Office of the Registrar.
6. Refer to the Academic Calendar (p. 824) for the exact date transcripts with degrees or certificates posted are available from the Office of the Registrar.

Course Levels
Lower-division courses are numbered 1000-2999 and normally are taken by freshmen and sophomores. Upper-division courses are numbered 3000-4999 and normally are taken by juniors and seniors. Students must earn a minimum of 32 Marquette upper-division credits in order to earn a degree at Marquette.

Credit
The semester hour is the unit of academic credit used by Marquette University. Following is the minimally required contact hours for classes and is based on a 15-week semester:

1. Classroom Based Courses: must meet a minimum of 50 minutes per credit per week. In addition, it is assumed that an additional workload will be assigned to equal 2 hours of coursework outside the classroom for each 50 minutes of meeting time (e.g., a total of 170 minutes per credit, per week).
2. Blended and Non-Classroom Based Courses: must include some form of instruction and/or homework and/or activity that equals a minimum of 170 minutes per credit, per week.
3. Those courses that meet in a compressed format (i.e., fewer than 15 weeks), must make up the minimum of 170 minutes per credit, per week within the timeframe of the course offering.

Semester hour credit is given only in accordance with descriptions for individual courses, as published in the Undergraduate Bulletin. No credit is given for a course in which a student has not registered.

Credit for courses pursued at another educational institution while simultaneously enrolled at Marquette (concurrent registration) will not be allowed unless specifically authorized by the dean. See Study at Other Institutions (p. 74) policy of this bulletin.

Credit Load
The following colleges have established a maximum credit load allowed for students whose degree/major fall within that college:

<table>
<thead>
<tr>
<th>Undergraduate degree student enrolled in:</th>
<th>Max. credits fall term and spring term (total per term)</th>
<th>Max. credits summer term (per session total/ total per term)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts and Sciences</td>
<td>20 credits</td>
<td>8 / 16</td>
</tr>
<tr>
<td>Business Administration</td>
<td>19 credits</td>
<td>8 / 16</td>
</tr>
<tr>
<td>Communication</td>
<td>19 credits</td>
<td>8 / 16</td>
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<tr>
<td>Education</td>
<td>20 credits</td>
<td>8 / 16</td>
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<tr>
<td>Engineering</td>
<td>20 credits</td>
<td>8 / 16</td>
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<tr>
<td>Health Sciences</td>
<td>19 credits</td>
<td>8 / 16</td>
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<tr>
<td>Nursing</td>
<td>18 credits</td>
<td>8 / 16</td>
</tr>
</tbody>
</table>

The Fall and Spring schedule for full-time undergraduate student is normally 15-18 credit hours. Non-degree students are normally limited to a maximum of seven credit hours each term.

An upperclassman may be allowed, with consent of the dean/dean designee, to carry more than the maximum college established credit load.

Credit for courses pursued at another institution while simultaneously enrolled at Marquette (concurrent registration) will not be allowed unless specifically authorized by the dean/dean designee of the student's degree.

Credit by Marquette Examination

College Level Credit by Exam
Marquette recognizes that students by virtue of independent study, previous training or experience may already possess mastery of the content of some courses in which they have not been formally registered. To enable students to enrich or accelerate their course of study, the university provides for the establishment of academic test credit by means of a Marquette Credit by Exam (MCBE) and/or the College Level Examination Program (CLEP). This is in addition to test credit awarded via AP, Cambridge A-Levels or IB.

Test credits do not include grades; are not calculated into the Marquette GPA; do not factor into the credit load of the student (full-time, part-time); cannot be used to repeat a Marquette class; and, cannot be used to satisfy the Senior Residency requirement.

In addition, there are other policies relating to these two exams:
1. Students must register for MCBE or CLEP and take these exams before the end of their second semester at Marquette. This deadline excludes the summer term.

   Note: Students enrolled in the Undergraduate Professional Studies programs are exempt from this restriction.

2. Courses available for MCBE or CLEP are determined by the college in which the subject matter resides and students wishing to take a MCBE or CLEP credit must submit a request for such an examination to that college office. The decision of the college is final.

3. To qualify for a MCBE or CLEP exam, students must be:
   A degree-seeking Marquette student.
   Registered for other courses at Marquette for the term in which the exam is requested.

4. A student may not earn credits via the MCBE or CLEP for courses they have previously taken or audited (regardless of the institution at which the course was taken).

5. MCBE or CLEP may not be taken in any subject matter more elementary than that for which the student is currently enrolled and/or for which the student has previously received credit or been placed into.

6. The student must pay a fee for the MCBE credits prior to taking the exam.

7. A C or better must be earned on the MCBE for credit to be awarded; if less than a C is earned, the MCBE will be recorded on the student’s record, indicating that no credit was earned.

8. CLEP credit awards are determined by the score earned (see the Admissions section of the Undergraduate Bulletin).

9. MCBE and CLEP can only be attempted once for any course.

10. A maximum of 30 credits may be earned through MCBE and/or CLEP.

**Enrollment Status**

The undergraduate enrollment status is based on enrolled credit hours each semester. A full-time enrollment status means a student is enrolled in a minimum of 12 credits; a half-time academic load means a student is enrolled in 6-11 credits; enrollment in fewer than 6 credits is considered less than half-time status for the student.

**Examinations (Midterm and Final)**

**Midterm Exams/Grades**

The university requires that midterm grades be assigned to students in most undergraduate courses and that these grades be based on appropriate written evidence of achievement at the time of grading. Midterm grades are assigned mid-way through the fall and spring term, as per the deadline in the Academic Calendar (p. 824). Mid-term grades will be factored into the final grade assigned at the end of the session in which the class is scheduled. The University deadline for changing of the I grade does not apply to mid-term grades and as such, any missing assignments/exams that contributed to a mid-term I grade must be completed by the end of the session.

The undergraduate courses in which faculty have the option to assign a midterm grade are these: Exchange; Marquette-Led Study Abroad; Workshop/Institute/Studio; Practicum/Clinical/Field Experience/Student Teaching; Internship/Externship; Independent Study/Research; Senior Capstone; Senior Project; Senior Thesis. If midterm grades are, or are not, to be assigned in these courses, the instructor will include this information in his/her syllabus distributed at the beginning of the term. All other undergraduate courses require a midterm grade. Make-up examinations are at the discretion of the instructor, as outlined in the instructor’s attendance policy.

**Final Exams/Grades**

Final examinations are held in most subjects. A student’s achievement during the term/session in each of his or her subjects and, expressed as a letter grade, is based on the combined results of class work, examinations and any other grading criteria set forth in the course syllabus. Once a final permanent grade is assigned, no additional work may be submitted.

Should a student have more than three final examinations scheduled on one day, and these examinations are not in the form of a team project presentation, a take-home examination or a final paper, he/she has the option to reschedule one of those final examinations. The student must contact his/her college office prior to examination week to reschedule an examination. The decision as to which examination will be rescheduled is at the discretion of the college.

A student who misses a final examination risks receiving an F grade for the course. Students are held to the standard, as outlined in the instructor's attendance policy, which is distributed at the beginning of each term. In addition, make-up examinations are at the discretion of the instructor, as outlined in the instructor’s attendance policy.

**Faculty Grading**

All official grades are entered by the primary instructor of the course into CheckMarq (not D2L), by the grading deadline for each session, as published in the Academic Calendar (p. 824) and are based on the work students completed during the session in which the class was offered. Once a final permanent grade is assigned, no additional work may be submitted. While other approved personnel of the university may assist the faculty in grade submission on the university’s course management system (D2L); only the primary instructor may enter and approve the grades in CheckMarq. Note:
Students other than TAs assigned to either teach or assist in a particular class are not considered 'approved personnel' for assisting with grades, even if trained on FERPA.

**Family Education Rights and Privacy Act (FERPA)**

In compliance with the Family Educational Rights and Privacy Act, Marquette University notifies its students each term of their rights to inspect, amend, and prevent disclosure of their education records. For further information, consult Marquette's FERPA policy, located on the Marquette Central academic policies website (http://www.marquette.edu/mucentral/registrar/policy_index.shtml).

**Placement in Foreign Language Courses**

Students in the Klingler College of Arts and Sciences, international business majors in the College of Business Administration, College of Education and speech pathology and audiology majors in the College of Health Sciences must satisfy a foreign language requirement for graduation. This may be accomplished by placement, course work or both. The goal of the Department of Foreign Languages and Literatures (http://www.marquette.edu/fola) is to place students in the most appropriate level of foreign language study based on their previous exposure to the language.

**Foreign Language Requirement**

The following procedures have been established by the Department of Foreign Languages and Literatures for placement in foreign language courses:

1. Students who have never studied the language, or who are beginning the study of a new language, do not have to take a placement examination. They should register for an Elementary Language course numbered 1001.
2. Students who have earned high school credit in Chinese, French, German, or Spanish, and who plan to continue with the study of that language, must take the placement examination (http://www.marquette.edu/fola/webcape.shtml) to determine placement in the appropriate course.
3. SPAN 1001 Elementary Spanish 1 is limited to new language learners or those who have studied the language less than two years. Even if placed in SPAN 1001 Elementary Spanish 1, students that have studied two or more years of the language at the high school level, must register for the SPAN 1003 Intensive Elementary Spanish, if they plan to continue study in that language. Students can register for a higher level class if they choose. If CheckMarq does not allow access to a higher level class contact the Department of Foreign Languages and Literature (http://www.marquette.edu/fola).
4. Students who have completed two years or less of Arabic, Chinese, Classical Greek, Latin or Italian in high school, and who plan to continue with the study of one of those languages, should register for the Elementary Language course numbered 1001. Students with three years or more of high school study in Arabic, Classical Greek, Latin or Italian must complete a language survey (http://www.marquette.edu/fola/webcape.shtml) and register for the Intermediate Language course numbered 2001. Students should consult with the Department of Foreign Languages and Literatures (http://www.marquette.edu/fola) if they have any questions regarding the placement in these levels.
5. Students who are native or near-native speakers of Arabic, Chinese, French, German, Italian or Spanish are not eligible to register in the elementary or intermediate levels of their native language for credit. Registration in these courses may result in no credit being awarded for the course. Students should consult with the Department of Foreign Languages and Literatures (http://www.marquette.edu/fola) before registering for an advanced foreign language course. Native speakers of other languages should consult with the records office in their college regarding possible exemption from the foreign language requirement.
6. Students who are native or near-native speakers of Chinese, French, German or Spanish, and who plan to continue advanced study of that language, must first take the placement examination (http://www.marquette.edu/fola/webcape.shtml) in that language to determine the level of proficiency. After taking the examination, students must consult with the Department of Foreign Languages and Literatures (http://www.marquette.edu/fola) before registering for an advanced foreign language course. Native speakers of other languages should consult with the records office in their college regarding possible exemption from the foreign language requirement.
7. Students who have spent six weeks or more studying in a Chinese-, French-, German- or Spanish-speaking country must take the placement examination (http://www.marquette.edu/fola/webcape.shtml) and consult with the Department of Foreign Languages and Literatures before registering for a foreign language course.
8. Students who have college credit for a foreign language course from another university (including Cooperative Academic Partnership Program (CAPP) courses in high school) must have their transcripts sent to the Office of Undergraduate Admissions (http://www.marquette.edu/explore) and should consult with the Registrar (http://www.marquette.edu/mucentral) and their College office regarding the transfer of foreign language credit and the Department of Foreign Languages and Literatures (http://www.marquette.edu/fola) before registering for a foreign language course. Students with college credit in a foreign language should not take the placement examination since placement will be determined by the college credit transferred.
9. Students who have taken the Advanced Placement Exam or the International Baccalaureate Exam and have received credit for a course in a foreign language or literature should refer to the Department of Foreign Languages and Literatures’ website (http://www.marquette.edu/fola) for recommendations on the appropriate course for which to register.

The Department of Foreign Languages and Literatures will review the results of the placement examination in conjunction with other information, such as number of years that the language was studied, grades earned, etc. The department reserves the right to change the student’s placement in a course if it believes that the student has not been placed at the appropriate level, or in the most appropriate course based on the student’s exposure to the language. Students who believe they were misplaced on the basis of the placement test score should consult the Department of Foreign Languages and Literatures. Students may not place themselves, or change their placement without departmental approval. Registration in a course lower than the
approved level may result in no credit being awarded for the course. Further information on the procedures and instructions regarding the Placement Examination can be found on the Department of Foreign Languages and Literatures’ website (http://www.marquette.edu/fola).

Placement Credit in Foreign Languages

A student placed in an intensive intermediate course, 2003 in French, German or Spanish, and who completes the course with a grade of B or better, may be eligible for three hours of placement credit. A student placed in French, German or Spanish 3001, and who completes the course with a grade of B or better, may be eligible for six hours of placement credit.

Placement credits are awarded in addition to the credits earned in the course. The grade awarded for the placement credit is an S (Satisfactory) which is noted on the student’s transcript. These credits only count toward the total hours needed for graduation from Marquette, and cannot be used toward the completion of a major or minor in the language. If the student is awarded the placement credits, they are noted on his or her transcript at the end of the semester after the course was completed.

Course 2003 = 3 placement credits in addition to the 4 credits earned in the course
Course 3001 = 6 placement credits in addition to the 3 credits earned in the course

Eligibility Requirements for Placement Credit:

1. The student must have earned the high school credits for the language in question from a U.S. high school.
2. The student may not be a native speaker or equivalent of the language, nor have resided in a country where the language is spoken for more than six months.
3. The student may not have college credit in the language (including Advanced Placement (AP) credit, credit by examination, or transfer credit from another institution).
4. The student may not have previously audited a college course in the language or enrolled in, and then withdrawn from, a course in the language after the third week of the term.
5. This must be the first language course taken at Marquette.

Grade Appeals

Undergraduate students may appeal any final course grade that the student believes to be in significant violation of clearly established written policies, a result of improper procedures or discriminatory. Before initiating a formal grade appeal, the student must consult with the instructor assigning the grade and present evidence why the student believes the grade to be in error. If this does not lead to resolution, the student may initiate, in writing, a formal grade appeal. To be considered, the written appeal must be submitted no later than the deadline for the removal of incompletes, as noted in the Academic Calendar (p. 824). However, it may be in the student’s best interest to appeal earlier than this deadline if his/her academic progress is dependent on the outcome of the appeal. In addition, the student should consult with the college or school offering the course for which the grade is being appealed to determine if other requirements for the written appeal are in force.

The written appeal must be submitted to the chair of the department offering the course or, in schools or colleges with no departmental structure, to the associate dean. The written appeal must provide the reason(s) the student believes the recorded grade is incorrect. The student may present evidence of his/her performance and may also request that all other pertinent materials be supplied by the instructor. The chair, or associate dean, will collect and analyze the evidence in a timely manner. Evidence will be gathered through consultations with the instructor, the student and any witnesses. These consultations may be in person, by phone or by electronic means. Hard copies of relevant documents may also be requested. The chair, or associate dean, will evaluate the appeal or choose to designate an ad hoc committee for this purpose. The chair, associate dean, or ad hoc committee will consider the appeal and evidence and make one of the following decisions: the assigned grade should remain, the course instructor is asked to reconsider the grade in light of information collected and the reconsidered grade will stand, or a grade change is warranted. The decision will be communicated in writing within thirty days to the student and the instructor with copies of the formal response placed in the student’s file and forwarded to the dean and any indicated grade changes filed with the registrar.

The student has the right to appeal the decision of the chair, associate dean, or ad hoc committee, to the dean. This appeal must be submitted in writing no later than fourteen days from the date of the formal response. The dean will review the procedural evidence, which now includes all the evidence previously gathered, the student’s appeal letters and the formal response from the chair, associate dean or ad hoc committee, and will render the final decision on the grade appeal. The decision will be communicated in writing within thirty days to the student and the instructor with copies of the formal response place in the student’s file and any indicated grade changes filed with the registrar. The decision of the dean is final.

Grading System

Marquette uses the grade point system to determine a student’s academic grade point average, academic censure and his/her eligibility to graduate (see Graduation Requirements section of this bulletin.) Each grade (A through F) earned in a course carries a specified number of grade points. The grade points earned in any given course equal the grade point value of the grade multiplied by the total number of semester hours credited. A student’s grade point average is found by dividing the total number of grade points earned by the total number of semester hours credited in those courses for which grade points have been assigned. The official Marquette GPA of all students is calculated by the student information system and this GPA will not be rounded up or down for any reason.
All undergraduate students must maintain a cumulative grade point average, as outlined in the Undergraduate Academic Censure policy in this bulletin.

Letter grades with or without grade points are used, by Marquette faculty to evaluate a student’s performance in a course. All grades described below, with the exception of the I, IC and IE grades are permanent grades. No additional work may be submitted by the student once permanent grades are assigned during final grading for the session in which the class is offered. Likewise, no additional work may be submitted once the deadline to change the temporary grades of I, IC or IE has passed.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Achievement</th>
<th>Grade Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Superior</td>
<td>4.0</td>
</tr>
<tr>
<td>AB</td>
<td></td>
<td>3.5</td>
</tr>
<tr>
<td>B</td>
<td>Good</td>
<td>3.0</td>
</tr>
<tr>
<td>BC</td>
<td>Satisfactory</td>
<td>2.5</td>
</tr>
<tr>
<td>C</td>
<td></td>
<td>2.0</td>
</tr>
<tr>
<td>CD</td>
<td></td>
<td>1.5</td>
</tr>
<tr>
<td>D</td>
<td></td>
<td>1.0</td>
</tr>
<tr>
<td>F</td>
<td>Failing</td>
<td>0.0</td>
</tr>
</tbody>
</table>

The following letter grades do not have associated grade points:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Defined</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADW</td>
<td>Administrative Withdrawal; a permanent grade indicating student was withdrawn from the course by the university for administrative reasons.</td>
</tr>
<tr>
<td>AU</td>
<td>Audit; a permanent grade indicating course is excluded from attempted credits.</td>
</tr>
<tr>
<td>AUA</td>
<td>Audit; a permanent grade indicating course is included in attempted credits for Satisfactory Academic Progress purposes.</td>
</tr>
<tr>
<td>CR</td>
<td>Credit; a permanent grade indicating equivalent work of C or better in the course.</td>
</tr>
<tr>
<td>I</td>
<td>Incomplete; a temporary grade indicating inability to complete the course and/or take the final exam, due to circumstances beyond the control of the student; and, therefore, completion of assignments/exam will be allowed after the term has ended.</td>
</tr>
<tr>
<td>IC</td>
<td>Course Incomplete; a temporary grade indicating the course is not completed by the end of the term in which the course is scheduled; assigned to all students enrolled in the course.</td>
</tr>
<tr>
<td>IE</td>
<td>Incomplete Extension; a temporary grade indicating an extension to the I grade removal deadline; assigned by the college office to those students who, due to circumstances beyond their control were unable to complete the required work by the I grade removal deadline.</td>
</tr>
<tr>
<td>NC</td>
<td>No Credit; a permanent grade indicating equivalent work of less than C in the course.</td>
</tr>
<tr>
<td>SNC</td>
<td>Unsatisfactory completion; a permanent grade indicating equivalent work of less than C in a course bearing no credit.</td>
</tr>
<tr>
<td>UNC</td>
<td>Unsatisfactory completion; a permanent grade indicating equivalent work of less than C in a course bearing no credit.</td>
</tr>
<tr>
<td>S</td>
<td>Satisfactory completion; a permanent grade indicating equivalent work of C or better in a credit bearing, competency-based course.</td>
</tr>
<tr>
<td>SY</td>
<td>Satisfactory completion; a permanent grade indicating equivalent work of C or better in the first term of a series of year-long courses, where grades are assigned only in the final course in the series.</td>
</tr>
<tr>
<td>U</td>
<td>Unsatisfactory completion; a permanent grade indicating equivalent work of less that C in a credit bearing, competency-based course.</td>
</tr>
<tr>
<td>UW</td>
<td>Unexcused withdrawal; a permanent grade indicating withdrawal initiated by the faculty or college office when a student registered for a course, never attended and failed to officially withdraw.</td>
</tr>
<tr>
<td>UY</td>
<td>Unsatisfactory completion; a permanent grade indicating equivalent work of less than C in the first term of a series of year-long courses, where grades are assigned only in the final course in the series.</td>
</tr>
<tr>
<td>W</td>
<td>Official Withdrawal; a permanent grade indicating withdrawal initiated by the student, with approval of the college office.</td>
</tr>
<tr>
<td>WA</td>
<td>Withdrawn-Excessive Absences; a permanent grade indicating withdrawal initiated by the faculty or college office due to excessive absences in the course.</td>
</tr>
</tbody>
</table>

**Clarification of Grades**

**ADW Grade**

The ADW grade indicates that the student was withdrawn from the course for administrative reasons, as determined by approved personnel of the university, including, but not limited to the dean, or members of a committee involved in a formal hearing and/or an appeal process.

Any student who is administratively withdrawn from the university will receive this grade in all classes for the term/session. Likewise, any student who is administratively withdrawn from a single class, will receive this grade in the class. Administrative withdrawal is an action normally taken by the university for disciplinary, conduct, lack of professional competence or academic reasons other than low grades or lack of degree progress. This grade is assigned by the college office or the Office of the Registrar depending on the reason and the office requesting the administrative withdrawal. This grade will take precedence over any other grade assigned to the student. Students assume responsibility for all consequences that ensue as a result of receiving any
withdrawal grade. These consequences may include, but are not limited to: a delay in graduation, denial of readmission, external institutions/entities viewing these grades as failing grades, loss of eligibility for certain scholarships and/or financial aid, loss of full-time status and/or loss of a refund.

**CD and D Grades**

The policy on CD and D grades earned in courses taken at Marquette University differs for students in the various colleges, schools and programs. See the pertinent sections of this bulletin for statements of individual policy.

**CR/NC Option**

For enrichment purposes, junior and senior students are given an option to elect one course per term (up to a maximum of four courses) for which only a CR or NC grade is assigned. This course must be a true elective in the individual’s program, the prerequisites for which the student has met. Courses excluded are those taken in fulfillment of the requirements for the Core of Common Studies, courses for the major or minor including teacher certification and the like or special courses excluded by the individual colleges or programs. Arrangements to take a course under the CR/NC option must be made no later than the end of registration in the session in which the course is offered, as published in the Academic Calendar (p. 824), by completing the Credit/No Credit Grading Option request form available online on the Marquette Central academic forms website (http://www.marquette.edu/mucentral/registrar/policy_forms.shtml).

**I Grade**

This grade must be approved by the instructor prior to the end of the term in which the class is offered and must be assigned by the instructor prior to the final grading deadline for the term/session in which the class is offered. The student must have a circumstance beyond his/her control in order to be assigned this grade. In addition, the student's performance in the course must merit this exception, otherwise, the instructor will assign a grade that reflects both the quality of the work completed and the significance of the work/exam that has not been completed. This grade is cleared through the college office of the college offering the course. If not cleared or changed to the grade of IE by the date specified in the Academic Calendar (p. 824) the grade will automatically become a permanent grade of F. Because these grades denote that the student did not fulfill all course requirements and/or the final exam, the university views these grades with the same seriousness as the grade of F. Any exception to the assignment of this grade must be approved by the college offering the course.

**IC Grade**

This grade is not the result of any action or inaction by the student. This grade will be changed to a permanent grade by the faculty at the time the course is completed and no initiation is needed by the student. The permanent grade must be assigned within one year of the assigned IC grade.

**IE Grade**

This grade must be approved and entered on the student's record prior to the deadline to remove the I grade, as indicated in the Academic Calendar. This grade is added by the college office of the college offering the course via the Grade Change form located in the Faculty Center of CheckMarq. (https://checkmarq.mu.edu/psp/sa9prod/EMPLOYEE/HRMS/?cmd=logout) The grade is cleared by that same office. If not cleared by the date specified in the notification provided to the student at the time of the extension, the grade will automatically become a permanent grade of F.

**UW Grade**

This withdrawal is initiated by the faculty or college office when a student registered for a course, never attended and failed to officially withdraw. The fact that a student did not attend class, does not relieve that student of the obligation to pay any tuition and/or fees that are due. Students assume responsibility for all consequences that ensue as a result of receiving any withdrawal grade. Theses consequences may include, but are not limited to: a delay in graduation, denial of readmission, external institutions/entities viewing these grades as failing grades loss of eligibility for certain scholarships and/or financial aid, loss of full-time status and/or loss of the 100% refund. Refund calculation for this grade will be based on the date the University is first informed of the non-attendance.

**W Grade**

Students who initiate this withdrawal assume responsibility for all consequences that ensue as a result of receiving any withdrawal grade. These consequences include, but are not limited to: a delay in graduation, denial of readmission, external institutions/entities viewing these grades as failing grades, loss of eligibility for certain scholarships and/or financial aid, loss of full-time status and/or loss of a refund.

**WA Grade**

The WA withdrawal is initiated by the faculty or college office and is assigned due to excessive absences in the course, or when the student is found to be in violation of the Undergraduate Attendance Policy section of this bulletin; once assigned, the WA grade cannot be overwritten by a W grade. The consequences of this grade may include, but are not limited to: a delay in graduation, denial of readmission, external institutions/entities viewing these grades as failing grades loss of eligibility for certain scholarships and/or financial aid, loss of full-time status and/or loss of a refund.
Graduation

Graduation Requirements

Students are required to graduate at the end of the term in which all degree requirements are completed. Undergraduate students must meet the graduation requirements which are stated in the Undergraduate Bulletin issued for the year in which they entered Marquette. Substitutions or waivers for specific courses required for degree completion may occur, as determined by the college.

Students whose enrollment is interrupted for two or more consecutive terms, excluding summer, must meet the requirements in the bulletin issued for the year in which they return to the university. Students are responsible for keeping themselves informed of the requirements which apply in their particular cases. Every student has faculty advisers available who will assist in planning and implementing the student’s plan of studies; however, it is ultimately each student’s responsibility to know and fulfill the requirements for graduation specified for the selected plan. This should be done not only by utilization of specific advisers, but also with Academic Advisement, the University’s online degree audit tool on CheckMarq provided to all undergraduates. With Academic Advisement, students can track their degree progress until graduation. It is the responsibility of the student to immediately bring any discrepancies found in Academic Advisement to the attention of the college.

A candidate for a baccalaureate degree must meet the following graduation requirements:

1. In all undergraduate colleges and programs a minimum of 120 credits and a cumulative grade point average of 2.000 must be earned for graduation.

2. For additional college requirements, see individual colleges, as indicated below:

   - College of Arts and Sciences (p. 100)
   - College of Business Administration (p. 369)
   - College of Communication (p. 417)
   - College of Education (p. 473)
   - College of Engineering (p. 496)
   - College of Health Sciences (p. 567)
   - College of Nursing (p. 632)

3. A minimum of 60 Marquette credits are required to earn a Marquette undergraduate degree.

4. For students admitted in Summer 2010 or beyond, the final 30 credits needed to complete a Marquette undergraduate degree must be earned as Marquette credits, unless those credits are earned in an approved study abroad program; for students admitted prior to Summer 2010, 30 of the final 36 requirements needed to complete a Marquette undergraduate degree must be Marquette credits, unless these credits are earned in an approved study abroad program.

5. A minimum of 32 upper-division Marquette credits are required to earn a Marquette undergraduate degree.

6. A minimum of 15 Marquette credits in the major are required to earn a Marquette undergraduate degree.

7. The student must attend any course, lectures, or any other exercises which may be required, even though such activities receive no recognition in terms of credit hours.

8. The student must file a formal application for a degree by the deadline published in the Academic Calendar (p. 824); however, because students are required to graduate at the end of the term in which all degree requirements are complete, the University reserves the right to graduate a student without a graduation application on file.

9. Commencement is held in May, after the spring term. Participation in commencement does not mean the student has graduated. See the Commencement Policy (p. 60) in this section for further details.

10. Exceptions to this Graduation Requirements policy must be approved by the Office of the Provost, except:

   - the course and bulletin year exceptions listed in paragraph 1 (approved by the college)
   - number 7 (approved by the college)

Graduation Honors

The grade point average is used to compute graduation honors. The computation is made by dividing the total number of grade points earned at Marquette University by the total number of grade point hours earned. The official Marquette GPA of all students is calculated by the student information system and this GPA will not be rounded up or down for any reason. To graduate with honors, a candidate must be pursuing his/her first bachelor's degree, have earned at least 60 grade point hours and 60 degree hours at Marquette University, normally as a junior and senior.
A graduate whose average is 3.500 graduates cum laude (Latin for ‘with honor’); one whose average is 3.700 magna cum laude (Latin for ‘with great honor’); and one whose average is 3.900 summa cum laude (Latin for ‘with highest honor’). Graduation honors are recorded on diplomas, noted in the published lists of graduates at Commencement and recorded on the student’s transcript.

**Major Declaration**

Only degree-seeking students may declare a major. All degree-seeking students must have declared at least one major that is in the college from which the student is seeking the degree. This major associated with the degree is called the primary major. Students officially declare a major by means of the application for admission when they matriculate to the university in the Colleges of Communication, Education, Health Sciences and Nursing. Students in the colleges of Arts and Sciences, Business Administration and Engineering must officially declare a major before their junior year in the college and/or academic department that offers the desired major. All students who enter the university as an undeclared major, must officially declare a major within their college and/or academic department before their junior year. All students who wish to change a major, must do so by following the procedures in place in the college they currently reside and in the college and/or academic department that offers the desired major. No major may be declared that is not in active status at the time of the declaration. Upon declaration of the major, the student shall be required to follow the current curriculum requirements in place at the time of the declaration, rather than those in effect at the time of admission. A minimum of 9 credits in the major must be taken at Marquette.

**Minor Declaration**

Students officially declare or change a minor after enrolling in the university by means of a Minor Request/Update form located on the Marquette Central academic forms website (http://www.marquette.edu/mucentral/registrar/policy_forms.shtml). In order to receive appropriate advising and complete the requirements, the minor should be declared by the junior year. No minor may be added to a student’s record unless the student is degree-seeking and until a student has first declared a primary major in his/her college. In addition, a minor that is not in active status at the time of the declaration may not be added to a student’s record. Upon declaration of the minor, the student normally would be required to follow the current curriculum requirements in place at the time of the declaration, rather than those in effect at the time of admission. A minimum of 9 credits in the minor must be taken at Marquette.

**Medical Withdrawal**

The Medical Withdrawal policy is effective for all undergraduate and health science professional students. The Dental School, Graduate School, Graduate School of Management and Law School have independent policies. Marquette University students may apply for a medical withdrawal for health reasons. A medical withdrawal is recommended when a student’s health condition significantly impairs his/her ability to function successfully or safely as a student. The following conditions may warrant a medical withdrawal:

- A terminal condition.
- A traumatic victimization.
- A medical/psychological condition that requires intensive treatment or an extended hospital stay.

**Process**

A student who wishes to withdraw for health related reasons must complete the Medical Withdrawal Request and Healthcare Provider Release forms located on the Marquette Central academic forms website (http://www.marquette.edu/mucentral/registrar/policy_forms.shtml). This must be done by the standard withdrawal deadline published in the Academic Calendar (http://www.marquette.edu/mucentral/registrar/cal_index.shtml). In addition, a licensed healthcare provider must submit a letter substantiating the condition and supporting the withdrawal. These forms must be submitted within the term of illness/injury. If the student is unable to participate in the medical withdrawal process and an official medical withdrawal is needed, the student’s college office, parent, spouse, partner, or other designee may do so on behalf of the student, once the incapacitation of the student is documented or power of attorney is provided. The university will not grant retroactive medical withdrawals of any kind for previous sessions/terms. In addition, all previously graded courses at the time of the request will remain on the student’s record, regardless of the session/term in which the courses were taken. A student who takes a standard withdrawal during the term may not convert that standard withdrawal to a medical withdrawal at any time.

A student who withdraws for medical reasons prior to the end of registration for the term/session in which the class is scheduled, will have no courses reflected on the academic record for the term of withdrawal. A student who withdraws for medical reasons after the end of registration for the term/session in which the class is scheduled, will receive final grades of W in all courses for the term of the withdrawal, except when courses have already been graded, or when grades of ADW (administrative withdrawal) are warranted. A medical withdrawal does not appear as a specific reason for withdrawal on the student’s official transcript.

Federal financial aid regulations require the University to submit notification of all changes in status (full-time to half-time, etc.), to the U.S. Department of Education via the National Student Loan Data System within a certain period of time. The University therefore reserves the right to withdraw a student from a class or classes when it is evident the student did not start the class (grade of UW); stopped attending the class (grade of WA); or, due to incapacity must be withdrawn from the class (grade of W). This policy is in effect for all students, regardless of any financial aid award.

The completed Medical Withdrawal Request forms are to be submitted per the instructions on the form by the student, the student’s designee, or the student’s college office, and must include all relevant documentation as described on the form. The form and all documentation will be confidentially forwarded to the Medical Withdrawal Committee for review. All documents must be received within 20 days of the initial request, or the request will be denied and converted to a standard withdrawal.
Because a medical withdrawal can affect so many aspects of academic progress at Marquette University, the student is encouraged to first consider other options that might enable the student to remain enrolled. Each student is encouraged to consult his/her college office, the Office of Student Financial Aid, the Office of International Education and other offices as appropriate. It is also recommended each student consult his/her health insurance company and other service providers as appropriate.

It is expected the time a student takes away from the university for a medical withdrawal be used for treatment and recovery. To that end, a student may not return to the university the term immediately following a medical withdrawal. A student who withdraws during the fall term may appeal for return the following summer term, or any term thereafter. A student who withdraws during the spring term may appeal for return the following fall term, or any term thereafter. A student who withdraws during the summer term may appeal for return the following spring term, or any term thereafter.

Medical Withdrawal Committee

The Medical Withdrawal Committee is comprised of five to six members. Permanent voting members include representatives from the Counseling Center, Student Health Services, Marquette University Medical Center, an undergraduate college representative from the Committee on Academic Procedures and a Health Sciences Professional representative, as needed. In addition, there are two ex-officio members on the committee; a representative form the Office of Student Financial Aid and the Office of the Registrar. The Medical Withdrawal Committee reserves the right to consult with individuals from the student's college office, as well as additional personnel, the Counseling Center, Marquette University Medical Center and/or Student Affairs on a case by case basis. The Medical Withdrawal Committee will carefully review each request for medical withdrawal and determine the action to be taken, including any refund, if appropriate. An approved medical withdrawal will exempt a student from academic censure, though a student may still be subject to review by the Office of Student Financial Aid as required by federal financial aid regulations. It should be noted a medical withdrawal will result in a registration hold placed on the student's record until such time he/she is cleared to return. (See the Return to the University after Medical Withdrawal section below).

Medical Withdrawal Committee's Determination

If a student's request for an official medical withdrawal is completed before the deadline to withdraw in the session/term in which the class is scheduled and is denied, a standard and the student withdrawn from all classes with a grade of W, except when courses have already been graded, or when grades of ADW (administrative withdrawal) are warranted. The student will also be refunded tuition per the Office of the Bursar's standard refund schedule (http://www.marquette.edu/mucentral/bursar/withdrawal_index.shtml).

If a student's request for an official medical withdrawal is completed after the deadline to withdraw in the session/term in which the class is scheduled, the committee may consider the request, depending on the gravity of the situation as outlined in the documents provided. If this request is denied, the W grade will not be given, but rather the student should consult the faculty of each course to determine if an incomplete grade is warranted.

Medical Withdrawal Appeal

A student has the right to appeal the Medical Withdrawal Committee's determination by writing to the Office of Student Affairs within five business days of the date of the committee's letter. The student must state one of the following specific bases for the appeal, followed by an explanation:

a. The Medical Withdrawal was not fairly followed.

b. There is new information available that was not available at the time of the submitted request which could affect the committee's decision.

An appeal cannot be based solely on the fact that a Medical Withdrawal was submitted after the published deadline, or the student disagrees with the refund determination by the committee. The Office of Student Affairs will notify the student when the appeal is received. The administrator hearing the appeal will, at his/her discretion, consult with the student's college office, the Office of the Registrar, members of the Medical Withdrawal Committee, other university offices and/or the student submitting the appeal, as appropriate. The administrator hearing the appeal will typically reply to the student within five business days of receipt of the appeal. Possible appeal outcomes include: upholding the committee's decision; overturning the committee's decision; modifying the committee's decision; or returning the case to the committee with new information for re-consideration. The determination of the Office of Student Affairs is final.

Return to the University after Medical Withdrawal

The Medical Withdrawal Committee must approve a student's return to the university and the student's college must subsequently approve readmission to the college (if applicable). Approval to return to the university following a medical withdrawal is not guaranteed. Because of the documentation required, and the various decisions that must be made by university officials, it is necessary that the process to return, as outlined above, begin well in advance of the session/term in which the student wishes to re-enroll. At a minimum all required forms and documentation must be submitted no later than 30 days prior to the start of the session/term in which the student desires to return to the university. Failure to meet the 30 day deadline may result in deferment of medical clearance and readmission.
### Standard University Withdrawal*  
Withdrawal (W) grades for each course in the semester with the exception of any courses in which final grades have already been posted, or the grade of ADW (administrative withdrawal) is warranted.

### Medical Withdrawal*  
Withdrawal (W) grades for each course in the semester with the exception of any courses in which final grades have already been posted, or the grade of ADW (administrative withdrawal) is warranted.

<table>
<thead>
<tr>
<th>Grade(s) Issues</th>
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<tbody>
<tr>
<td>No notation on the transcript</td>
<td>No notation on the transcript</td>
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<table>
<thead>
<tr>
<th>Tuition Refund</th>
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</thead>
<tbody>
<tr>
<td>Follows normal withdrawal schedule, as posted on the Marquette Central website.</td>
<td>Slightly extended refund schedule.; No refund provided after the tenth week of the term.</td>
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<thead>
<tr>
<th>Academic Censure</th>
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<tbody>
<tr>
<td>Student is subject to the university censure (RWAR) and college academic censure (probation and CAA).</td>
<td>Student is not subject to university academic censure (RWAR) or college academic alert censure (CAA).</td>
</tr>
</tbody>
</table>

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<tr>
<th>Financial Aid</th>
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<tbody>
<tr>
<td>Student is subject to financial aid satisfactory academic progress (SAP) requirements.; Any additional financial aid implications (loan repayment, scholarship eligibility, etc.) are based on the student's aid package and should be confirmed through Marquette Central.</td>
<td>Student is subject to financial aid satisfactory academic progress (SAP) requirements.; Any additional financial aid implications (loan repayment, scholarship eligibility, etc.) are based on the student's aid package and should be confirmed through Marquette Central.</td>
</tr>
</tbody>
</table>

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<tr>
<th>Withdrawal Paperwork</th>
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</thead>
<tbody>
<tr>
<td>Withdrawal from All Courses and/or the University form.</td>
<td>Medical Withdrawal form, which includes: student's personal statement outlining the rationale for the request; and a licensed health care provider's statement on letter head confirming the need for withdrawal and dates of the medical condition.; Medical Withdrawal-Healthcare Provider Release information form.</td>
</tr>
</tbody>
</table>

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<tr>
<th>Eligibility for return to MU</th>
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<tbody>
<tr>
<td>Student is eligible to enroll in the term immediately following, unless he/she is subject to academic or other censure.; No paperwork is required.; If student stops out more than 2 terms, excluding summer, see the Readmission section of this bulletin.</td>
<td>Student is not eligible to return to the university in the term immediately following the medical withdrawal (including summer).; Submission of required paperwork at least 30 days prior to return. Paperwork includes the Medical Withdrawal Return to Marquette University form, Healthcare Provider Report forms, and Request for Readmission.</td>
</tr>
</tbody>
</table>

* After close of registration.

All forms, withdrawal refund schedule and the academic calendar can be located on the Marquette Central website at: http://www.mu.edu/mucentral

### Non-degree Students

1. Non-degree students may register for a maximum of seven credits each term. Written authorization from the student's dean/director must be acquired for exception to this policy. When requesting an exception, non-degree students may be required to present transcripts and other documents for evaluation.

2. Ordinarily, non-degree students may accumulate a maximum of 24 credits at Marquette. Authorization from the student's college dean is required before students may exceed this limit. However, twenty-four credit hours earned at Marquette University on non-degree status is the maximum that may be applied toward a degree in all disciplines with the exception of nursing, in which only 12 credit hours may be applied.

3. The university's policy and procedures governing academic censure outlined in this bulletin apply to non-degree students and are exercised as necessary by the University and/or colleges. Non-degree students are expected to maintain satisfactory academic progress at Marquette University. The student's progress in these areas is monitored regularly by the Academic Censure Committee of the University and/or the office of the dean/director.

4. Students who wish to apply for student financial aid and/or transfer credits/courses into Marquette must seek degree status and apply for admission as a freshman, a transfer student or an additional degree-seeking student.

5. Non-degree students who wish to become degree seeking, must apply via the Undergraduate Office of Admissions and are held to all of the requirements outlined in the Admission and Readmission to the University (p. 19) section of this bulletin.

6. Normally, students who are accepted and enroll with non-degree status must complete at least 12 credits before applying for degree status.

7. A 2.00 grade point average in Marquette University course work is a minimum requirement to be considered for degree status.

8. The university's academic regulations in this bulletin, including, but not limited to academic censure, applies to all non-degree undergraduate students.
Readmission

Readmission to Marquette University is required for any former student who wishes to return to the university to complete a first bachelor’s degree, pursue an additional bachelor’s degree or take courses for professional development. Readmission will not be considered for any former student with an outstanding balance of $3,000 or more already owed the university, or who has an active Student Affairs/Development or Office of the Registrar registration hold on his or her record. In all cases the student must be fully readmitted to the university prior to the term/session in which he/she wishes to register (see the Academic Calendar (p. 824) for published deadlines).

For more information, see the complete Readmission policy in the Admission and Readmission to the Undergraduate Colleges (p. 26) section of this bulletin.

Registration

Normally, advising is required for all students prior to registration each term. Students who register for course work without adviser approval assume full responsibility for their registration. Courses that do not satisfy the requirements of their plans of study will not be applied toward the degree.

Students complete class online registration via Marquette’s CheckMarq (http://checkmarq.mu.edu) system. Students are responsible to ensure that their course schedule for each term/session accurately reflects the classes he/she plan to attend. Students may not attend classes in which they are not officially registered. Students must be registered by the deadline to register for each session, as outlined in the Academic Calendar (p. 824). The university does not retroactively register students for courses after the deadline to register for a session, or after a term is completed and reserves the right to deny credit to any student who fails to officially register in any course within these time limitations. All courses for which the student is registered are subject to tuition and in some cases, additional fees. The student is responsible for any payment due for all officially registered courses, regardless of attendance.

Students who do not plan to attend the university are responsible for dropping classes through CheckMarq, before the end of registration for the session/term and notifying their respective college office. All courses for which a student is officially registered as of the close of registration are subject to fee assessment and payment and as such, will appear as part of the student’s permanent record even if the student does not attend any sessions of the class. To avoid unnecessary fee charges and unnecessary courses with punitive grades on the student’s permanent record, it is the student’s responsibility to review his/her official registration prior to the end of registration to ensure it accurately reflects the courses the student plans to be enrolled in.

A 50 percent discount on tuition (only) is available to individuals 62 years of age and older taking undergraduate and graduate courses for credit and/or audit. This opportunity is offered to students who have the proper background and prerequisite of the course(s) in question.

Registration in Graduate Courses

An undergraduate senior may register for a graduate course if the student has a B (3.000) or better average, his/her current program is such as to allow for involvement in graduate level work and the Graduate School approves of the registration. To register for a graduate course, an undergraduate student must complete the Permission to Enroll in a Graduate Course form, available on the Graduate School forms website (http://www.marquette.edu/grad/forms_index.shtml). The student is responsible for securing the necessary signatures (including the dean of his/her undergraduate college or school and the course instructor), returning the completed form to the department offering the course, then registering for the course using the CheckMarq system and the permission number provided.

Undergraduate students taking graduate level courses or cross-listed (5000 numbered) courses with the intention of transferring the credits to a graduate program must be graded according to Graduate School standards. Courses may not be graded using the CR/NC, S/U, SNC/UNC or AU (audit) unless that is the only grading option available for the course.

There is no limit to the number of graduate courses/credits an undergraduate student may take, with his/her college approval; however, there are limitations on how many credits can be double-counted and how many credits will be accepted into a Marquette graduate program. For information on transferring credits to a Marquette graduate program see the Graduate Bulletin.

Reinstatement to the University

A student who is academically dismissed (RWAR - required to withdraw for academic reasons) at the end of a term may appeal the decision in writing to the original college or, if desired to a new college. If the appeal is granted for the term immediately following the dismissal (or, in the case of the spring term, for the fall term), the student is not required to apply for readmission. The student will be automatically reinstated to the university on probation status. The official transcript will reflect both the academic dismissal and the reinstatement on probation. A student who is academically dismissed at the end of a term and leaves the university for one or more terms must apply for readmission and, as part of the readmission application, request reinstatement to the university via the Academic Censure appeal process. If the return to the university is approved, the official transcript will reflect both the academic dismissal and the reinstatement on probation.

Repeated Courses

Undergraduate students who repeat a course, may do so under certain conditions:
1. Courses in which a passing grade is earned may be repeated only once.
2. The repeated course is taken at Marquette.
3. The repeated course is identical to the original course in subject, catalog number, title, subtitle and credits.
4. The repeated course is graded with the same grading options as the original, e.g., students may not exercise the CR/NC option for a repeated course, unless it was originally taken with this option.
5. The course has not been used toward the degree requirements of a Marquette degree that is already posted to the student's record.
6. Courses in which a grade of ADW, AU, AUA, NC, W, WA, UW, U, UNC, UY or F has been earned may be repeated until a passing grade is assigned; once the passing grade has been assigned, that course may be repeated only one more time, regardless of the grade earned.
7. A passing grade is determined as the minimum grade required by the university grading policy, in order to earn credit for a course, or considered satisfactory work. That is D or above, CR, S, SNC or SY are passing grades at Marquette (See Grading System in this bulletin).
8. As an exception to the regulation, these courses allow unlimited repeats: colloquiums, continuation placeholder, co-ops, independent study/research, internships, practicums/clinicals/field work experience, seminar/reading, studio/workshops, study abroad and variable title courses (e.g., topics).

Credit hours earned in a repeated course are only awarded once; however, all previous courses and grades remain on the student’s permanent academic record. The last grade earned is included in the cumulative GPA and the grade in the original course is excluded from the cumulative GPA calculation. The cumulative GPA is adjusted at the time the repeated course is graded. If a student receives an ADW, AU, AUA, W, WA or UW in the repeated course, the earlier grade will remain in the cumulative GPA. If a student repeats a course that was transferred to Marquette, only the Marquette course/grade will be reflected in the total credits earned and the cumulative GPA.

At the time of registration, the repeat process in CheckMarq will allow the repeat of a course only once, unless the course is an unlimited repeat course (see #8 above). If a student needs to repeat a course, and that course is allowed under the policy, he/she must petition via the Request to Repeat a Course form located on the Marquette Central academic forms website (http://www.marquette.edu/mucentral/registrar/policy_forms.shtml). This petition will be granted only if the request is in adherence to all the repeat criteria listed above.

Residency at Marquette

Residency is defined as the number of courses or credits a student must earn at an institution in order to be awarded a degree from that institution. Residency at Marquette for all undergraduate students is this: 1) a minimum of 60 Marquette credits are required to earn a Marquette undergraduate degree; 2) for students admitted in Summer 2010 or beyond, the final 30 credits needed to complete a Marquette undergraduate degree must be Marquette credits, unless these credits are earned in an approved study abroad program; for students admitted prior to Summer 2010, 30 of the final 36 requirements needed to complete a Marquette undergraduate degree must be Marquette credits, unless these credits are earned in an approved study abroad program; 3) a minimum of 32 upper-division Marquette credits are required to earn a Marquette undergraduate degree; 4) a minimum of 15 Marquette credits in the major are required to earn a Marquette undergraduate degree. Any exception to this policy must be approved by the Office of the Provost.

Second/Additional Bachelor Degree

Students with a baccalaureate degree who wish to further their education are strongly encouraged to consider the option of graduate school, rather than pursuing an additional baccalaureate degree.

Additional bachelor degree students who have earned a bachelor's degree at Marquette must be readmitted to the university to pursue another baccalaureate degree (See the Readmission to the University (p. 26) section of this bulletin).

Students who have earned their baccalaureate degree at an institution other than Marquette and wish to pursue an additional baccalaureate degree from Marquette are admitted via the Undergraduate admissions process (p. 19).

Students who are currently pursuing a first bachelor's degree, may, with the written approval of the college of the student and the college offering the degree, concurrently enroll in courses that will count toward another Marquette baccalaureate degree. If approved a degree plan must be provided by the college to the Office of the Registrar. The plan must delineate clearly which courses will apply to the first degree and which apply to the second degree and all other conditions specified in the Additional Bachelor's Degree admission section (p. 22) of this bulletin apply. For these students, both degrees must be posted at the same time. If the student decides to graduate with one degree before the second degree is completed, the first degree will be posted to the permanent record and then the student must readmit as a second bachelor degree student, (See the Readmission (p. 72) section of this bulletin.).

It is important to note that completing an additional major may or may not constitute the completion of a second degree. Consult the college that offers the degree for further clarification.

Student Data Use and Privacy

The University has strict requirements for the protection of the student record and all data relating to the student experience, as outlined in the Student Educational Data Use and Privacy policy (http://www.marquette.edu/mucentral/registrar/faculty/StudentEducationDataUsePrivacy.shtml).
Study at Other Institutions

Students who plan to study at another institution must obtain written approval for each course prior to enrollment in the course. If prior approval is not obtained, the university reserves the right to not accept the credits earned at the other institution. Course approval forms may be obtained from the student's college office.

Credit for courses pursued at another institution while simultaneously enrolled at Marquette (concurrent registration) will not be allowed unless specifically authorized by the dean/dean designee of the college of the student's degree.

Upon completion of the approved course work, it is the student's responsibility to have an official transcript sent directly from the institution to the Office of the Registrar. Transcripts routed by the student will not be accepted. Transfer credits will not be reviewed or posted to the student's Marquette academic record until the official transcript from the external institution has been recorded in the Office of the Registrar.

Transfer to another Undergraduate college within the University (Internal Transfer)

The various colleges of Marquette University operate under the jurisdiction of separate deans. Therefore, enrolled students wishing to transfer from one college to another must submit a formal Application for Internal Transfer located on the Marquette Central academic forms website (http://www.marquette.edu/mucentral/registrar/policy_forms.shtml). Various criteria may be considered by the colleges during review of the student's request to transfer colleges, including, but not limited to: current Grade Point Average, cumulative Grade Point Average, prior academic record and prior academic misconduct issues. This internal transfer decision is at the discretion of the dean/dean designee and the decision of the dean/dean designee is final. If the application for internal transfer is approved, the student will be governed by the degree requirements of the college into which the transfer is made and normally the degree requirements in effect at the time of the internal transfer. Because Marquette conducts an early registration which begins several months prior to the start of each term, it is to the student's advantage to apply and be admitted to the transfer college as early as possible. A completed application must be submitted, as per the instructions on the form, no later than one week before the start of the session for which the student wishes to enroll. The College of Nursing has alternative deadlines. The internal transfer deadlines are found on the Academic Calendar. (p. 824)

Note: A student who is academically dismissed at the end of the spring term and seeks to transfer to another college within the university for the immediate fall term, must appeal the dismissal to the new college. For more information see the Academic Censure (p. 55) policy in this bulletin.

Transfer Course/Credit Policy

Marquette students who wish to take classes at another institution must have the courses approved by their home college office prior to attending that institution. If prior approval is not obtained, the university reserves the right to determine a course award based on the current established course equivalent, or to deny the credit altogether. Failure to obtain pre-approval, as outlined by the policy, also means that any appeal of the award given will not be reviewed. Without this pre-approval there is no guarantee that the courses/credits will be accepted toward the Marquette degree requirements. Students taking courses/credits at another institution with the plan to transfer those courses/credits into Marquette are bound by the University Transfer Course/Credit Policy (p. 55) in the Admissions section of this bulletin.

Transcripts-Official

A transcript is a complete and unabridged copy of all academic work attempted while matriculated at Marquette, with the exception of transfer credit taken elsewhere. Transfer and test credits accepted toward a Marquette degree are recorded on the student record; however, the grades earned are not displayed on the Marquette transcript and are not calculated into the Marquette GPA. Course and grade information contained on the transcript is released only upon written consent from the student, as required by the federal Family Educational Rights and Privacy Act of 1974, or as required by law. Further information can be found in Marquette’s FERPA policy on the Marquette Central academic policies page (http://www.marquette.edu/mucentral/registrar/policy_ferpa.shtml).

The University accepts only official transcripts for the purposes of posting transfer credit or courses to the Marquette record and/or verification of a degree, diploma or certificate completed at another institution.

Official transcripts are delivered in two ways and are sent directly from another institutions’ record/registrar office to Marquette's Office of the Registrar, or the appropriate admissions offices of the University, as part of the application process:

1. Printed on security paper and arrive via U.S. Mail.
2. Delivered electronically via a secured third party method that has been verified by the sending institution.

All other transcripts are considered unofficial and will not be accepted or processed. When an official transcript is received for a continuing student by the Office of the Registrar, the transcript will be submitted for review to determine if the courses and/or credits are transferable to Marquette. The appropriate admissions offices will determine if any degree, diploma and/or certificate or transfer credit is applicable to the program in which the student has applied.

The following notations will appear on the permanent academic record of the student, including the official transcripts of the University:
1. **Required to Withdraw for Academic Misconduct**: Student was dismissed due to academic dishonesty. "Required to Withdraw for Academic Misconduct" appears on both unofficial and official transcripts. If the student is allowed to return after this dismissal, “Reinstated to University” will permanently appear on both the official and unofficial transcript.

2. **Required to Withdraw for Academic Reasons**: Student was dismissed due to academic performance. "Required to Withdraw for Academic Reasons" appears on both unofficial and official transcripts. If the student is allowed to return after this dismissal, "Reinstated on College Probation" will permanently appear on both the unofficial transcript.

3. **Required to Withdraw for Non-Academic Reasons-Expulsion**: Student was dismissed due to student conduct violation. "Required to Withdraw for Non-Academic Reasons: Expulsion" appears on both unofficial and official transcripts. Expulsion is the most serious university disciplinary action and involves the permanent exclusion of the student from the university.

4. **Required to Withdraw for Non-Academic Reasons-Suspension**: Student was dismissed due to student conduct violation. "Required to Withdraw for Non-Academic Reasons: Suspension" appears on both unofficial and official transcripts. If the student is allowed to return after this dismissal, “Reinstated to University” will permanently appear on transcript.

5. **Required to Withdraw for Professional Integrity Reasons**: Student was dismissed due to lack of integrity in a professional setting, such as a clinical or field placement. "Required to Withdraw for Professional Integrity" appears on both unofficial and official transcripts. If the student is allowed to return after this dismissal, “Reinstated to University” will permanently appear on transcript.

6. **Required to Withdraw for Professional Performance Reasons**: Student was dismissed due to poor performance in a professional setting, such as a clinical or field placement. "Required to Withdraw for Professional Performance" appears on both unofficial and official transcripts. If the student is allowed to return after this dismissal, “Reinstated to University” will permanently appear on transcript.

7. **Required to Withdraw for Unsatisfactory Degree Progress**: Student was dismissed due to lack of degree progress. "Required to Withdraw for Unsatisfactory Degree Progress" appears both unofficial and official transcripts. If the student is allowed to return after this dismissal, “Reinstated to University” will permanently appear on transcript.

**Withdrawals**

This section applies to three of the sections below: From Classes, From the University and Unexcused.

A student who drops any class before the end of the last day to register for the session in which the class is scheduled, will have the class removed from the academic record. Once the last day to register for the session has passed, as published in the Academic Calendar (p. 824), classes will remain permanently on the record and may not be removed. Once a permanent grade is assigned, it will not be changed except for institutional error or policy.

Students assume responsibility for the consequences that ensue as a result of any withdrawal grade. These consequences may include but are not limited to: a delay in graduation, denial of readmission, external institutions/entities viewing these grades as failing, loss of eligibility for certain scholarships and/or financial aid, loss of full-time or part-time status and/or loss of a refund.

Federal financial aid regulations require that the University submit notification of all changes in status by students (full-time to half-time, etc.) to the U.S. Department of Education via the National Student Loan Data System within a certain period of time. The University therefore reserves the right to withdraw a student from any class when it is evident the student did not start the class (grade of UW); stopped attending the class (grade of WA); or, due to incapacity, must be withdrawn from the class (grade of W). **This policy is in effect for all students, regardless of any financial aid award.**

Failure to officially withdraw from classes, or the University, according to established deadlines in the Academic Calendar, (p. 824) the procedures referenced below and the timelines, as published by the Bursar's Office (http://www.marquette.edu/mucentral/bursar/withdrawal_index.shtml), will not relieve the student of responsibility to pay for any tuition/fees owed for such classes. In addition, the student's financial aid may be adjusted as required by federal and state refund calculations and institutional policy based on the official withdrawal date. The student's withdrawal will be reported to the National Student Loan Data System should any loan deferments need to be canceled at the time of withdrawal. Finally, the date on which all withdrawal forms are submitted to the University will be the date used for any refund calculations.

The period for withdrawing from classes, or the term, if registered, is the day after the end of registration until the withdrawal deadline for each session, as specified in the Academic Calendar (p. 824). **After this deadline, a student will no longer be given permission to withdraw from classes.**

**From Classes**

A student who wishes to withdraw from one or more classes, but still attend at least one other class during the term, must officially withdraw from classes using the Undergraduate Single Course Withdrawal Form located on the Marquette Central academic forms website (http://www.marquette.edu/mucentral/registrard/policy_forms.shtml). The student is not officially withdrawn from any class until the completed withdrawal form is submitted to the office of the academic dean.

Additionally, as indicated in the Withdrawal section above, failure to follow the outlined procedures and timelines and to officially withdraw from classes, will not relieve the student of responsibility to pay for any tuition/fees owed for such classes. It is the student's responsibility to determine, prior to the withdrawal from any class, if there will be financial aid and/or scholarship consequences to this withdrawal.

If a student, at any time, fails to manifest those qualities judged to be appropriate and necessary to the professional field for which he or she is preparing, withdrawal from the program may be initiated by the college and grades of ADW will be assigned if the administrative withdrawal action is taken during the term.
From the University

A student who is enrolled for one or more classes and decides to withdraw from all of them in a given term (even if enrolled in just one class), or decides to discontinue his/her study at Marquette after a term is complete, must formally withdraw from the university. The withdrawal process is accomplished via the Withdrawal for All Students form or the official Medical Withdrawal (p. 69) forms and process, depending on the circumstance necessitating the withdrawal. These forms are located on the Marquette Central academic forms website (http://www.marquette.edu/mucentral/registrar/policy_forms.shtml).

A complete term withdrawal will not be processed by the university or considered official until the completed withdrawal form is submitted to the college office. In addition, as indicated in the Withdrawal section above, failure to follow the outlined procedures and timelines and to officially withdraw from classes will not relieve the student of responsibility to pay for any tuition/fees owed for such classes. It is the student’s responsibility to determine, prior to the withdrawal from a term, if there will be financial aid and/or scholarship consequences to this withdrawal.

Unexcused

Students who register, never attend and fail to officially withdraw from a class, will be withdrawn because of non-attendance. This action results in a permanent grade of UW on the academic record that may not be replaced with any other grade. The date that the college office or other university official first learns of the non-attendance will be the date used by the University to calculate all necessary actions. In addition, failure to follow the outlined procedures and timelines as listed in the Withdrawal section above and to officially withdraw from classes, will not relieve the student of responsibility to pay for any tuition/fees owed for such classes. It is the student’s responsibility to determine if there will be financial aid and/or scholarship consequences to the grade of UW.

Medical

Refer to the Medical Withdrawal Policy (p. 69) in this bulletin.
The University Core of Common Studies (UCCS) is the foundation of each student’s Marquette educational experience. The Core comprises courses in nine knowledge areas (listed below), and provides students with the knowledge, skills, values and dispositions they will need, wherever their career and personal choices lead. It fosters life-long learning and promotes the values of faith, leadership, excellence and service — values central to the Jesuit educational tradition.

Each of the nine knowledge areas is characterized by student learning outcomes. Students are expected to achieve these outcomes at the completion of their Core studies. Core courses in each knowledge area enable students to achieve Core learning outcomes. To learn more, consult the Core of Common Studies website (http://www.marquette.edu/programs/core).

Students are required to complete a minimum of 36-credit hours of core courses. College curricula may require additional courses. Each student may count one dual application course toward the 36-credit hour Core requirement. A dual application core course satisfies core course requirements in two knowledge areas. For example, HIST 1301 Survey of Latin America, would satisfy three credit hours in both the Histories of Cultures and Societies knowledge area and the Diverse Cultures knowledge area. A student who takes the dual application core course satisfies the 36 credit hours of core requirements by taking 33 credits of core courses. Dual application courses are not offered in the knowledge areas of Human Nature and Ethics or Theology, unless approved as an exception by the UCCS Core Committee.

It is recommended that students experience the core courses in a tiered fashion, if possible:

**Examining the World:**

<table>
<thead>
<tr>
<th>Rhetoric (R)</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematical Reasoning (MR)</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td>9</td>
</tr>
</tbody>
</table>

**Engaging the World:**

| Individual and Social Behavior (ISB) | 3 |
| Diverse Cultures (DC)                | 3 |
| Literature/Performing Arts (LPA)     | 3 |
| Histories of Cultures and Societies (HCS) | 3 |
| Science and Nature (SN)              | 3 |
| **Total Credit Hours**               | 15 |

**Evaluating the World:**

| Human Nature and Ethics (HNE) | 6 |
| Theology (T)                  | 6 |
| **Total Credit Hours**        | 12 |

Rhetoric and Mathematical Reasoning foster foundational skills in thinking, writing, speaking, computing and analyzing. Individual and Social Behavior, Diverse Cultures, Literature/Performing Arts, Histories of Cultures and Societies and Science and Nature invite students to explore people, nature and societies. Human Nature and Ethics and Theology challenge students to reflect critically on fundamental human aspirations and values. At each step of his or her college career, a student’s perspective broadens and his or her knowledge deepens.

Though core courses foster foundational knowledge, skills and values across the nine knowledge areas, they are fully integrated with the rest of each student’s Marquette experience. Each college has a distinctive curriculum, which builds on the University Core of Common Studies. A variety of undergraduate majors and minors also amplify and deepen each student’s educational experience as he or she moves further ahead in pursuit of a specialized degree. The University Core of Common Studies, college curriculum requirements and majors and minors are all integral parts of each student’s Marquette educational experience.

UCCS designated courses are reviewed and approved annually and are reflected in the list below. The UCCS current designation applies to all students as of the date they become effective, regardless of whether they were in effect at the time the student initially enrolled at Marquette.

Unless noted as a dual application course, each course satisfies a three-credit hour requirement in the knowledge area under which it is listed.

**Note:** For more detailed information, consult the Core of Common Studies website (http://www.marquette.edu/programs/core/list.shtml).
# Core of Common Studies Courses:

## Rhetoric (R) (6 credit hours):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 1100</td>
<td>Contemporary Presentation</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1001</td>
<td>Rhetoric and Composition 1</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1002</td>
<td>Rhetoric and Composition 2</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1301H</td>
<td>Honors English 1</td>
<td>3</td>
</tr>
</tbody>
</table>

## Mathematical Reasoning (MR) (3 credit hours):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COSC 1000</td>
<td>Introduction to Computer Science</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1300</td>
<td>The Nature of Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1390</td>
<td>Finite Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1400</td>
<td>Elements of Calculus</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1410</td>
<td>Calculus for the Biological Sciences</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1450</td>
<td>Calculus 1</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1451</td>
<td>Calculus 2</td>
<td>4</td>
</tr>
<tr>
<td>MATH 1700</td>
<td>Modern Elementary Statistics</td>
<td>3</td>
</tr>
<tr>
<td>MATH 2030</td>
<td>Problem Solving and Reasoning for Teachers</td>
<td>3</td>
</tr>
<tr>
<td>PRST 2140</td>
<td>Research and Statistical Methods</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 2001</td>
<td>Psychological Measurements and Statistics</td>
<td>4</td>
</tr>
<tr>
<td>SOCI 2060</td>
<td>Social Statistics</td>
<td>3</td>
</tr>
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</table>

## Individual and Social Behavior (ISB) (3 credit hours):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
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<tbody>
<tr>
<td>AFAS 3131</td>
<td>Air Force Leadership Studies 1</td>
<td>3</td>
</tr>
<tr>
<td>COMM 1200</td>
<td>Media in Society</td>
<td>3</td>
</tr>
<tr>
<td>CRLS 1001</td>
<td>Introduction to Criminology</td>
<td>3</td>
</tr>
<tr>
<td>CRLS 4130</td>
<td>Women, Crime, and Criminal Justice</td>
<td>3</td>
</tr>
<tr>
<td>ECON 1001</td>
<td>Introduction to Economics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 1103</td>
<td>Principles of Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>NASC 2185</td>
<td>Leadership and Management</td>
<td>3</td>
</tr>
<tr>
<td>POSC 2201</td>
<td>American Politics</td>
<td>3</td>
</tr>
<tr>
<td>POSC 2401</td>
<td>Comparative Politics</td>
<td>3</td>
</tr>
<tr>
<td>POSC 2601</td>
<td>International Politics</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 1001</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 4330</td>
<td>Human Factors Engineering</td>
<td>3</td>
</tr>
<tr>
<td>SOCI 1001</td>
<td>Principles of Sociology</td>
<td>3</td>
</tr>
<tr>
<td>SOCI 2200</td>
<td>The Family</td>
<td>3</td>
</tr>
<tr>
<td>SOWJ 1001</td>
<td>Introduction to Social Welfare and Justice</td>
<td>3</td>
</tr>
<tr>
<td>WGST 1001</td>
<td>Introduction to Women's and Gender Studies</td>
<td>3</td>
</tr>
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</table>

## Diverse Cultures (DC) (3 credit hours):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADPR 4600</td>
<td>International Advertising and Public Relations</td>
<td>3</td>
</tr>
<tr>
<td>ANTH 1001</td>
<td>Introductory Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>COMM 4500</td>
<td>Race and Gender Issues in Mass Media</td>
<td>3</td>
</tr>
<tr>
<td>COMM 4550</td>
<td>Media and the &quot;Other&quot;</td>
<td>3</td>
</tr>
<tr>
<td>COMM 4650</td>
<td>Cultural Identity, Media and World Religions</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 1210</td>
<td>Introduction to Schooling in a Diverse Society</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 4240</td>
<td>Critical Inquiry into Contemporary Issues</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 4810</td>
<td>Comparative Race and Ethnic Studies</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 4820</td>
<td>Studies in Critical Race and Ethnic Studies</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 4825</td>
<td>Native American / Indigenous Literatures</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 4830</td>
<td>Africana Literatures</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 4840</td>
<td>Postcolonial Literatures</td>
<td>3</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
</tr>
<tr>
<td>-------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>ENGL 4850</td>
<td>Global Literatures</td>
<td>3</td>
</tr>
<tr>
<td>HEAL 1025</td>
<td>Culture and Health</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1301</td>
<td>Survey of Latin America (Dual Application course: Also Histories of Cultures and Societies)</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1401</td>
<td>Africa (Dual Application course: Also Histories of Cultures and Societies)</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1501</td>
<td>East Asia (Dual Application course: Also Histories of Cultures and Societies)</td>
<td>3</td>
</tr>
<tr>
<td>HIST 4120</td>
<td>American Immigration</td>
<td>3</td>
</tr>
<tr>
<td>HIST 4135</td>
<td>African-American History</td>
<td>3</td>
</tr>
<tr>
<td>INPS 2010</td>
<td>Introduction to Peace Studies</td>
<td>3</td>
</tr>
<tr>
<td>ITAL 3210</td>
<td>Italian Literature in English Translation</td>
<td>3</td>
</tr>
<tr>
<td>LEOR 3150</td>
<td>Leadership and Diversity in Organizations</td>
<td>3</td>
</tr>
<tr>
<td>MANA 3035</td>
<td>Diversity in Organizations</td>
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<tr>
<td>MARQ 1954</td>
<td>The Dynamics of Cross-Cultural Engagement 1</td>
<td>1.5</td>
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<tr>
<td>MARQ 1955</td>
<td>The Dynamics of Cross-Cultural Engagement 2</td>
<td>1.5</td>
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<tr>
<td>PHTH 4512</td>
<td>Culture and Disability</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 3210</td>
<td>The Psychology of Prejudice (Dual Application course: Also Individual and Social Behavior)</td>
<td>3</td>
</tr>
<tr>
<td>SOCI 3250</td>
<td>Race and Ethnic Relations</td>
<td>3</td>
</tr>
<tr>
<td>SOCI 3280</td>
<td>Race and Family</td>
<td>3</td>
</tr>
<tr>
<td>SOCI 4400</td>
<td>Social Inequality</td>
<td>3</td>
</tr>
<tr>
<td>SOWJ 2150</td>
<td>Immigrants and their Communities</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 3300</td>
<td>Peoples and Cultures of Spain</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 3310</td>
<td>Peoples and Cultures of Spanish America</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 4320</td>
<td>Contemporary Issues in the Hispanic World</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 4400</td>
<td>U.S. Latino/a Literature</td>
<td>3</td>
</tr>
<tr>
<td>THEO 3420</td>
<td>Bridging the Racial Divide (Dual Application course: Also Theology)</td>
<td>3</td>
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<tr>
<td>THEO 4020</td>
<td>The Bible in the Jewish Community</td>
<td>3</td>
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</table>

**Literature/Performing Arts (LPA) (3 credit hours):**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARSC 3370</td>
<td>Arts in a Democratic Society</td>
<td>3</td>
</tr>
<tr>
<td>CLAS 3025</td>
<td>Classical Mythology</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1302H</td>
<td>Honors English 2</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 2000</td>
<td>Literature, History, and Culture</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 2010</td>
<td>Literature and Genre</td>
<td>3</td>
</tr>
<tr>
<td>FREN 3500</td>
<td>Introduction to Textual Analysis in French</td>
<td>3</td>
</tr>
<tr>
<td>GRMN 3210</td>
<td>German Literature in English Translation</td>
<td>3</td>
</tr>
<tr>
<td>GRMN 3500</td>
<td>The Modern German Short Story</td>
<td>3</td>
</tr>
<tr>
<td>ITAL 3210</td>
<td>Italian Literature in English Translation</td>
<td>3</td>
</tr>
<tr>
<td>MUSI 1020</td>
<td>Appreciation of Music</td>
<td>3</td>
</tr>
<tr>
<td>MUSI 2420</td>
<td>History of the Musical in America</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 3500</td>
<td>Introduction to Literary Analysis in Spanish</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 3505</td>
<td>Introduction to Literary Analysis in Spanish for Heritage and Native Speakers</td>
<td>3</td>
</tr>
<tr>
<td>THAR 1020</td>
<td>Theatre Appreciation</td>
<td>3</td>
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**Histories of Cultures and Societies (HCS) (3 credit hours):**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 1001</td>
<td>Growth of Western Civilization to 1715</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1002</td>
<td>Growth of Western Civilization since 1715</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1101</td>
<td>Introduction to American History</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1301</td>
<td>Survey of Latin America (Dual Application course: Also Diverse Cultures)</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1401</td>
<td>Africa (Dual Application course: Also Diverse Cultures)</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1501</td>
<td>East Asia (Dual Application course: Also Diverse Cultures)</td>
<td>3</td>
</tr>
<tr>
<td>HIST 2001H</td>
<td>Honors The World and the West</td>
<td>3</td>
</tr>
<tr>
<td>MISL 1800</td>
<td>American Crucible: The Military and the Development of the United States</td>
<td>3</td>
</tr>
<tr>
<td>NASC 1022</td>
<td>Sea Power and Maritime Affairs</td>
<td>3</td>
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</table>
### Science and Nature (SN) (3 credit hours):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ARSC 1020</td>
<td>Major Concepts in Modern Science 1</td>
<td>4</td>
</tr>
<tr>
<td>ARSC 1021</td>
<td>Major Concepts in Modern Science 2</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 1001</td>
<td>General Biology 1</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 1009</td>
<td>Biology for Non-Science Majors</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 1406</td>
<td>Plants, Pathogens and People</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 1410</td>
<td>Biology of Human Disease</td>
<td>3</td>
</tr>
<tr>
<td>BISC 1010</td>
<td>Contemporary Issues in Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>BISC 1015</td>
<td>Principles of Human Anatomy and Physiology</td>
<td>5</td>
</tr>
<tr>
<td>BISC 2015</td>
<td>Anatomy and Physiology for the Health Sciences 1</td>
<td>3</td>
</tr>
<tr>
<td>&amp; BISC 2016</td>
<td>Anatomy and Physiology for the Health Sciences 2</td>
<td></td>
</tr>
<tr>
<td>CHEM 1001</td>
<td>General Chemistry 1</td>
<td>4</td>
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<tr>
<td>CHEM 1002</td>
<td>General Chemistry 2</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 1014</td>
<td>General Chemistry 2 for Majors</td>
<td>4</td>
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<tr>
<td>CHEM 1080</td>
<td>Chemistry in the World</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 1001</td>
<td>General Physics 1</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 1002</td>
<td>General Physics 2</td>
<td>4</td>
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<tr>
<td>PHYS 1003</td>
<td>General Physics with Introductory Calculus 1</td>
<td>4</td>
</tr>
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<td>PHYS 1004</td>
<td>General Physics with Introductory Calculus 2</td>
<td>4</td>
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<tr>
<td>PHYS 1007</td>
<td>Survey of Meteorology</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 1008</td>
<td>Astronomy and Space Physics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 1009</td>
<td>Earth and Environmental Physics</td>
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</tr>
<tr>
<td>PHYS 1013</td>
<td>Classical and Modern Physics with Calculus 1</td>
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<tr>
<td>PHYS 1014</td>
<td>Classical and Modern Physics with Calculus 2</td>
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<tr>
<td>PRST 1120</td>
<td>Aspects of Modern Science</td>
<td>3</td>
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### Human Nature and Ethics (HNE) (6 credit hours):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 1001</td>
<td>Philosophy of Human Nature</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 2310</td>
<td>Theory of Ethics</td>
<td>3</td>
</tr>
</tbody>
</table>

### Theology (T) (6 credit hours):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>THEO 1001</td>
<td>Introduction to Theology</td>
<td>3</td>
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<tr>
<td>THEO 2000</td>
<td>Hebrew Scriptures: Old Testament Overview</td>
<td>3</td>
</tr>
<tr>
<td>THEO 2100</td>
<td>New Testament Overview</td>
<td>3</td>
</tr>
<tr>
<td>THEO 2200</td>
<td>The Bible Through the Ages</td>
<td>3</td>
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<tr>
<td>THEO 2210</td>
<td>Great Moments in Christian Theology</td>
<td>3</td>
</tr>
<tr>
<td>THEO 2250</td>
<td>Spiritual Exercises of St. Ignatius</td>
<td>3</td>
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<tr>
<td>THEO 2300</td>
<td>Quests for God, Paths of Revelation</td>
<td>3</td>
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<tr>
<td>THEO 2310</td>
<td>Explorations in Christian Theology</td>
<td>3</td>
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<tr>
<td>THEO 2400</td>
<td>Christian Discipleship</td>
<td>3</td>
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<tr>
<td>THEO 2410</td>
<td>Christian Faith in Cultural Contexts</td>
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</tr>
<tr>
<td>THEO 2500</td>
<td>Theology, Violence, and Nonviolence</td>
<td>3</td>
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<tr>
<td>THEO 3010</td>
<td>Hebrew Scriptures/Old Testament Selected Books:</td>
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<tr>
<td>THEO 3100</td>
<td>A Faith Worth Dying For? Martyrs, Saints and Theology</td>
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<tr>
<td>THEO 3110</td>
<td>New Testament Selected Books:</td>
<td>3</td>
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<tr>
<td>THEO 3230</td>
<td>Theology in the Writings of C. S. Lewis</td>
<td>3</td>
</tr>
<tr>
<td>THEO 3320</td>
<td>The Event and Meaning of Vatican II</td>
<td>3</td>
</tr>
<tr>
<td>THEO 3420</td>
<td>Bridging the Racial Divide (Dual Application course: Also Diverse Cultures)</td>
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</tr>
<tr>
<td>THEO 3530</td>
<td>Theology and Economics</td>
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</tbody>
</table>
University Sponsored Courses (MARQ)

These courses are sponsored by the Office of the Provost. The courses offer a broad array of experiences to the student and concentrate on the growth of the student in areas not normally offered by an academic college, school or department.

Courses

MARQ 1000. Transfer Students and the Marquette Experience. 1 cr. hr.
Although recommended for all transfer students, this course is especially useful for transfer students who enter Marquette with fewer than 24 credit hours. Introduces already-experienced college students to the resources and skills necessary to attain academic success in Marquette’s rigorous academic programs. Through classroom instruction, speakers, activities, assignments, and assessments, students are well positioned to take advantage of the transformational academic opportunities, social and service activities, programs and resources offered at Marquette University and ultimately graduate in a timely fashion.

MARQ 1001. Enhancing First Year Student Success. 1 cr. hr.
Designed to help new students make a successful transition to the university, both academically and personally. Fosters a sense of belonging, promotes engagement in the curricular and co-curricular life of the university, articulates to students the expectations of the university and its faculty, helps students develop and apply critical thinking skills, and helps students continue to clarify their purpose, meaning and direction.

MARQ 1005. Cross-Cultural Issues in Study Abroad. 1 cr. hr.
Course is specifically designed to prepare students who are planning to study and intern abroad as a component of their college career. Course prepares students for the challenges involved with cross-cultural interactions and the acculturation process. Students gain the skills necessary to understand and interact with individuals from different cultural backgrounds as well as recognize themselves as cultural beings. Through interaction with staff from the Office of International Education, students obtain the skills and knowledge which are needed to maximize their study abroad, internship or international service-learning experience.

MARQ 1040. Career Exploration. 1 cr. hr.
As career planning is an important step toward academic success and job satisfaction, this course is designed to help students assess their interests, skills, values, personality characteristics, investigate career possibilities, and learn how to use a wide variety of resources in their career search. Students will participate in self-discovery activities and learn about sound career decision making strategies as well as the world of work. The course stresses the value of liberal arts education and places an emphasis on exploring Arts and Sciences academic majors. This course is directed at freshmen and sophomores who are deciding a major and exploring careers.

MARQ 1050. Job Search Strategies. 1 cr. hr.
Introduces students to the fundamentals of planning and organizing job search strategies. Emphasis is placed on identification of individual goals, assessment of talents, exploration of career options, analysis of the job market, effective use of job search materials (cover letters, resumes) and tools (interviewing, career fairs, networking), and management of career direction. Stresses the value of the Arts and Sciences degree in the labor market and develops job search skills that will be useful throughout lifelong career management. Primarily for juniors and seniors.

MARQ 1054. The Dynamics of Cross-Cultural Engagement 1. 1.5 cr. hr.
Seminar provides an academic component for the cross-cultural residence hall experience, Inclusive Leadership CommUNITY. Residence hall brings together majority and minority first year students selected because of their interest in being engaged in cross-cultural encounters in and out of the classroom. Requires attendance at designated extramural cultural events such as movies, plays, lectures or community outings, including a weekend retreat on diversity issues. Students read and discuss articles and books, keep journals, and reflect in cross-cultural experiences. Written assignments provide opportunities to demonstrate achievement of course goals. Prereq: Enrollment in the residence hall Inclusive Leadership CommUNITY program.

MARQ 1055. The Dynamics of Cross-Cultural Engagement 2. 1.5 cr. hr.
Seminar, building on MARQ 1054, provides an academic component for the cross-cultural residence hall experience, Inclusive Leadership CommUNITY. Requires attendance at designated extramural cultural events such as movies, plays, lectures or community outings, including a weekend retreat on diversity issues. Students read and discuss articles and books, keep journals, and reflect in cross-cultural experiences. Written assignments provide opportunities to demonstrate achievement of course goals. Prereq: Enrollment in the residence hall Inclusive Leadership CommUNITY program.

MARQ 1060. First Year Seminar: International Student Experience in the U.S. 1 cr. hr.
Introduces new, undergraduate international students to a range of topics, skills and resources critical to successful study and cultural adaptation at a U.S. university. Readings, class room discussion and presentations, written and oral reflection and engagement with a Cultural Informant will engage students in reflection on their culture of origin and research into key manifestations of U.S. culture. This reflection and research will serve as the basis for exploring how interaction of these two cultures influence the students' university experience. Presentations by various campus personnel will build familiarity with particular learning and teaching styles, study and test taking skills, physical and mental health issues, U.S. academic norms and Marquette campus resources. S/U grade assessment. Limited to first year international students. Prereq: Cons. of Office of International Education.

MARQ 3005. Bridging the Local and Global: Unpacking your Study Abroad Experience. 2 cr. hrs.
Designed specifically for students who have returned from an overseas academic experience and are looking to reflect upon and discern the impact of that experience. Through an interactive learning environment and a service-learning requirement in the local international community, student share their cross-cultural experiences, understand the different transformational moments of those experiences, and determine how they would like to integrate that transformation into the remainder of their undergraduate studies and future vocational choices.
MARQ 9707. Professional Concurrent Required Component: Less than Half-Time. 0 cr. hrs.
A less than half-time equivalent course, used for those Marquette professional program students who are participating in a program that requires a concurrent zero credit component of a course, such as a tutorial, a colloquium, D2L module, etc. SNC/UNC grading. Prereq: Cons. of dept. ch.
Student Resources and Facilities

Student Resources

Academic Advisement

Academic Advisement is a degree audit tool that is fully integrated within the Student Center of the CheckMarq (http://checkmarq.mu.edu) student information system and is available to all undergraduate students who entered Marquette in the Fall 2005 or later. The following are key features available in Academic Advisement.

1. Provides a single source document that incorporates the applicable university, college and major/minor/concentration requirements specific to a student's degree plan.
2. Plan courses by requirements to create a term-by-term academic plan.
3. Create What-if scenarios to explore the changes to degree requirements should a student wish to change his/her degree, major or minor.
4. Review academic progress toward graduation by using an interactive on-line report or two more condensed PDF reports.

Disability Services

Marquette University strives to integrate qualified students with disabilities as fully as possible into all aspects of university life. The Office of Disability Services, has been designated to coordinate this process in accordance with the university's compliance responsibilities under the law. Accommodation determinations for all students with identified and documented disabilities will be made on a case-by-case basis. Examples of possible accommodations or services provided to students with disabilities include: lecture notes, testing arrangements, texts in alternative formats, interpreting, self-advocacy guidance, etc.

More detailed information about accessibility for all students at Marquette can be found at the Disability Services website (http://www.marquette.edu/disability-services). The Office of Disability Services is located in the 707 building, Room 503; P.O. Box 1881, Milwaukee, WI 53201-1881; P (414)288-1645; F (414) 288-5799.

Email Policy

Marquette University utilizes email as one of the official means of communication with students to keep them informed of important information such as financial aid and billing data; college deadlines, events and updates; and important campus news. Each student is issued an official eMarq email account for use while he or she is enrolled. For more information, see the university's email policy (http://www.marquette.edu/its/about/official.shtml).

Honor Societies

Alpha Sigma Nu

Founded in 1915 at Marquette University, Alpha Sigma Nu honors students who distinguish themselves in scholarship, loyalty to the ideals of Jesuit education and service to campus and community. Membership requirements include junior/senior standing and a grade point average placing in the top 15 percent of the class. Graduate students who have completed one-half of their credit requirements are eligible and subject to the same criteria. Of the pool of eligible students, only four percent from each class will be invited to membership. Alpha Sigma Nu has 28 student Chapters in the United States, two in Canada, one in South Korea and one in Andalucia, Europe. There are over 74,000 student and alumni members.

The only honor society permitted to bear the name Jesuit, ### encourages its members to a lifetime pursuit of intellectual development, deepening Ignatian spirituality, service to others, and a commitment to the core principles of Jesuit education. The 32 Student Chapters and Alpha Sigma Nu Alumni Clubs in 14 cities across the country sponsor Ignatian spirituality series, service projects, academic programs and speaker events.

Alpha Sigma Nu funds scholarships at all of its member institutions and sponsors the Alpha Sigma Nu Book Awards, honoring outstanding scholarly writing by faculty and administrators at Jesuit colleges and universities.

The Alpha Sigma Nu headquarters remains at Marquette University. For information, contact the office at (414) 288-7542 or visit Alpha Sigma Nu (http://www.AlphaSigmaNu.org).

Phi Beta Kappa

Phi Beta Kappa, chartered at William and Mary in 1776, is the oldest and one of the most prestigious of the academic honor societies in the United States. Its purpose is to distinguish superior academic character and achievement in liberal studies and, through lectureships, scholarships, and publication of The American Scholar, to promote liberal education throughout the country. There are only 280 chapters, and Marquette’s Zeta chapter dates from 1971. Membership requirements typically include good (faculty-attested) academic character and a GPA in liberal studies courses within the top ten percent of the graduating class. Students need not apply to be considered for membership. For further details, consult the Phi Beta Kappa Web page (http://www.marquette.edu/phi-beta-kappa).
**Marquette Central**

This office is the primary source for student enrollment and financial services information and assistance. Once a student is admitted to the university, this office is available to help students through Marquette processes and serves as a resource for questions about registration, student financial aid and student accounts. For more information, visit the Marquette Central website (http://www.marquette.edu/mucentral).

**Marquette University Police Department**

With the Marquette community located in downtown Milwaukee, students need to be aware of the realities of city living. Recognizing this, the university strives to educate students about personal safety and crime prevention through a wide variety of safety programs and services.

Marquette operates its own commissioned police department (http://www.marquette.edu/mupd/about.php), which works closely with the Milwaukee Police Department to ensure the security and safety of the university community. Located on the first floor of the 16th Street Parking Structure, 749 N. 16th St. (between Wisconsin Avenue and Wells Street), the department houses its administration, officer operations, the Command Information Center, preventive services and Student Safety Programs. MUPD operates 24 hours a day, every day. Services can be obtained by calling (414) 288-6800. In cases of emergency, students and employees should contact MUPD’s emergency line by dialing (414) 288-1911 from any campus extension or (414) 288-1911 from any off-campus phone.

MUPD employs police, public safety and university service officers. The police officers’ primary role is to prevent crime and the breach of public order. Primary responsibilities include protecting students, faculty, staff, campus visitors, property and facilities from accidents, bodily harm, fire, theft, vandalism and illegal entry; enforcing laws and traffic and parking regulations; apprehending violators; providing general information and assistance to the public; conducting criminal investigations; and participating in community-oriented policing efforts. Public safety officers are responsible for preventing and suppressing crime, protecting life and property, and preserving peace throughout the Marquette community. University service officers are responsible for protecting the Marquette community and securing Marquette's property. They conduct walking patrols of campus buildings and grounds, provide authorized after-hours access to buildings, and assist public safety officers, as well as campus community members, who have locked keys in cars, need jump-starts or require other assistance.

To provide members of the Marquette and surrounding community with a direct means of contacting MUPD, the university maintains Blue Light and Service phones, as well as a Blue Light smartphone app (http://marquette.edu/apps). Blue Light Phones, most frequently recognized by blue lights on the top of the phones, and Service Phones, most frequently recognized by red labels, are placed in university buildings, apartments, parking areas and near-off-campus areas. Video cameras are located throughout campus and in the near-campus neighborhood. They are linked to the Command Information Center in MUPD and are used to help monitor suspicious behavior and document activity in a given area.

A wide variety of crime prevention and safety awareness programs (http://www.marquette.edu/mupd/safety-tips.php) are made available to groups that are interested in promoting safety. Popular topics include self-defense, personal safety, sexual assault prevention and alcohol awareness. Numerous brochures, a newsletter and crime statistics are readily available to provide information.

Any member of the Marquette community who becomes involved in a crisis situation can receive the benefits of the Victim/Witness Services program. The program provides resources for those in need of counseling or support services in addition to providing escorts to and from all necessary court-related appearances.


**Schedule of Classes (Snapshot)**

Snapshot (http://www.marquette.edu/mucentral/registrar/snapshot) is an online schedule of classes students access to determine what courses to take each term. In addition, Snapshot will provide a list of those classes that meet certain degree requirements or are of special interest, such as: University Core of Common Studies (UCCS) courses, Interdisciplinary courses or online courses.

**Student Educational Services**

The Office of Student Educational Services (OSES) offers a range of academic support services at no charge to students. Services include tutoring, college success strategies, time management and workshops to campus groups. OSES sponsors two special programs: The Urban Scholars Program, a four-year scholarship program providing ongoing mentoring, leadership development and service opportunities for high achieving low-income, first generation college students and the Freshman Frontier Program which provides interested freshmen with a five-week summer program and specialized advising during the first year of college. OSES also provides ongoing personal and academic support for students experiencing academic challenges.

For more information, visit the Student Educational Services website (http://www.marquette.edu/oses).

**Student Handbook**

The Student Handbook, is online (http://www.marquette.edu/osd/policies/index.shtml) and issued annually. It contains information and regulations on housing, conduct and student activities. Rules governing eligibility for membership and participation in student organizations, as well as descriptions of all recognized student organizations, also are contained in the Student Handbook.
Many colleges and departments issue a student handbook unique to their majors. Students in these majors are also governed by the rules and regulations of their individual college handbook.

**Student Information System (CheckMarq)**

Marquette students obtain up-to-the moment information, monitor their academic record, view courses, register, run a degree progress report and update their address/phone numbers online by using the CheckMarq system (https://checkmarq.mu.edu). Students can access CheckMarq from any computer with Internet access. CheckMarq requires both a user name and password. Information Technology Services assigns user names and passwords to all new students for the duration of their studies at Marquette.

**Transcript of Academic Record**

A Marquette University transcript (http://bulletin.marquette.edu/undergrad/academicregulations/#transcripts-official) is the complete and unabridged copy of all academic work attempted while matriculated at Marquette, with the exception of transfer credit taken elsewhere. Partial transcripts are never produced. Course and grade information contained on the transcript are released pursuant to the Family Educational Rights and Privacy Act of 1974 (as amended).

Students may obtain a transcript of their Marquette record by completing a Transcript Request form available on the Marquette Central academic forms website (http://www.marquette.edu/mucentral/registrar/policy_forms.shtml) and submitting it as indicated on the form, or submitting an online request via the National Student Clearinghouse (http://www.studentclearinghouse.org). Current students may request a transcript online via their CheckMarq account. Submit all transcript requests a minimum of one week in advance of the date the transcript is needed.

The fee for regular transcript service is $7.00 per transcript (3 business days). The fee for expedited transcript service is $30.00 per transcript (same day service). Additional FedEx fees apply. All transcript fees are due at the time of the request.

Every transcript that is issued directly to a student is clearly marked. Because most institutions do not accept a transcript that has been in the student’s possession, it is strongly recommended the students request the Office of the Registrar mail a transcript directly to the institution involved. Students who fail to follow this recommendation are liable for any further charges when additional transcripts are needed.

**Veterans Benefits**

The Office of the Registrar acts as liaison between the student and the Veterans Administration, the Wisconsin Department of Military Affairs and the Wisconsin Department of Veterans Affairs. Any student eligible to receive educational benefits under one of the various federal Veterans Administration programs must, at the beginning of each term for which he or she is registered, complete and/or submit the Marquette Application for Certification of VA Educational Benefits. First time VA benefit applicants or transfer students may need to furnish additional documentation. For more information on how to apply for Veterans’ educational benefits, visit the Marquette Central Veteran’s Benefits website (http://www.marquette.edu/mucentral/registrar/vet_index.shtml). Information or consultation regarding Veterans educational benefits is available at any time during regular Marquette Central (http://www.marquette.edu/mucentral) office hours.

Marquette participates in the Yellow Ribbon Program (http://www.marquette.edu/mucentral/registrar/vet_yellowribbon.shtml); which is a Post-9/11 GI Bill enhancement program for students who qualify for 100% of the Post-9/11 GI Bill. This program allows institutions of higher learning in the United States to voluntarily enter into an agreement with the VA to fund some or part of the tuition expenses of these students.

Federal Law requires that educational assistance benefits to Veterans and other eligible students be discontinued when these students cease to make satisfactory progress toward their degree objective. Individuals who wish to receive veterans’ educational benefits must qualify and meet the published academic standards and requirements of the university in order to be certified for Veterans educational benefits. Only courses that apply to a degree program may be certified for VA Educational benefits; and students must inform the Office of the Registrar of changes to their enrollment after certification is submitted for the term.

**Facilities**

**Haggerty Museum of Art**

Opened in 1984, the Haggerty Museum of Art serves as a laboratory for learning focused on the visual arts by collecting, exhibiting and interpreting works of art in the context of Marquette University and Milwaukee. The museum’s exhibitions and educational programs are designed to contribute to transformational lifelong learning and enjoyment of the arts.

The Haggerty features approximately eight to nine exhibitions each year. Representing the diversity of work in the permanent collection of over 4,500 objects, the museum has offered exhibitions celebrating the contributions of the Italian Renaissance “Petite Masters”, American self-taught artists, works addressing social change issues, modern American printmaking and photography, and contemporary art by regional, national and international artists.

The Haggerty seeks to enhance the undergraduate educational experience by engaging students in various disciplines to think about the world and their subject matter through the lenses of the visual arts. The museum also works collaboratively with elementary and middle school teachers, local artists, and College of Education faculty and students to design programs that engage children and youth in educational activities. Additional educational opportunities for the campus and community include free tours, lectures, workshops and performances. For more information, visit the Haggerty Museum of Art website (http://www.marquette.edu/haggerty/permanent_collection.shtml).
Hartman Literacy and Learning Center

The Hartman Literacy and Learning Center is a facility within the College of Education, which supports undergraduate literacy-related programs. The center library houses a children’s literature collection, which is used by College of Education students as well as children participating in the center’s after school tutoring program, collaborations between the university and neighborhood elementary schools. Students enrolled in EDUC 4964 (Practicum in Reading) participate by tutoring small groups of children in reading and writing after school. The Hartman Literacy and Learning Center provides faculty and staff to support and conduct research. For more information, visit the Hartman Center website (http://www.marquette.edu/education/centersclinics/hlc.shtml).

Libraries Overview

The University’s libraries support the teaching, research and service mission of Marquette University by providing access to recorded knowledge through collections, services, cooperative programs and connections to worldwide resources. The libraries combine state-of-the-art technologies with a repository of information in an atmosphere of service and learning. A full description of resources, hours, news and services is found at the Raynor Memorial Libraries website (http://www.marquette.edu/library).

Collections of more than 2 million volumes and more than 2,170 print subscriptions are housed in the John P. Raynor, S.J., Library and the adjoining Memorial Library; the Law Library is separately described below. The libraries’ shared online catalog, MARQCAT, includes all book and periodical holdings, locations and circulation status.

Raynor Memorial Libraries

The Raynor Library, built in 2003, holds a commanding position at the physical and intellectual center of the campus. Raynor Library, seating 1,100, is designed around the needs of its users, preserving the university’s extensive traditional collections, while expanding its capacity for incorporating digital technology into access and delivery of information. The library offers over 578,000 books in digital format, an ever-growing (over 44,000 titles) collection of full-text online newspapers, journals and magazines, as well as an expanding collection of unique digital materials produced by Marquette’s own scholarly community. The primary service point in Raynor is the two-level Learning Commons, with over 240 networked PCs and Macs, multimedia hardware and software and comfortable small group study spaces.

The Information Desk is open 100 hours weekly and, in addition, offers research consultations by appointment, and phone, IM, email and 24/7 “chat” assistance through its AskUs! services. The Digital Media Studio offers equipment, software, and basic instruction for digital media projects. Video cameras, iPads, laptops, sound recorders, digital cameras and tripods are available for checkout.

Raynor’s first and second level and the bridge are open 24/7 when classes are in session, offering access to workstations and comfortable, safe late-night study space. Library hours during the summer, intercessions and holidays are posted and updated regularly on the library website.

Additional features of Raynor Library include: Class Reserves and Media Services Desk, the Funding Information Center, as well as reference, browsing, spirituality, and local music collections. Group study rooms are available for collaborative projects and can be reserved via an online reservation system. All rooms feature whiteboards and many have large LED panels to better facilitate group work. A conference center accommodating large groups and video conferencing, the Writing Center and the Center for Teaching and Learning are also located in the facility. The second-level bridge entrance to Memorial Library features a 4,800 square foot café with casual seating, popular reading materials and wired and wireless network connections.

Memorial Library, renovated top-to-bottom in 2004 and entered via the 2nd level bridge, houses the majority of the book and journal collections. The library is open 100 hours weekly and offers a variety of seating choices for over 1,050 students. An open stack arrangement presents over six linear miles of compact shelving for bound journals on the lower level, plus book shelving on five floors. The facilities in this library include a circulation desk, a cluster of PCs, and assigned research carrels for faculty and graduate students.

Most library services and online research databases are available to students 24/7 from both on- and off-campus locations. Class reserve readings are digitized for online access whenever possible. Interlibrary Loan provides both books and journal articles from other libraries on request and a variety of other cooperative programs assure library privileges for Marquette students at other libraries in Southeastern Wisconsin. The Milwaukee County Federated Library System, including the Central Library just four blocks from campus, also lends to Marquette students. Above all, service-oriented staff members are committed to guiding and teaching users throughout the research process.

Special Collections and University Archives

Raynor Library also houses the Department of Special Collections and University Archives and its research/exhibit area on the third floor. Its archival and manuscript collections and over 7,000 rare books include the archives of Marquette University; the papers of faculty, students, staff, and alumni; and major collections relating to Christianity among Native Americans and 20th-century Catholic social action. These include research collections for the following individuals and organizations: the Bureau of Catholic Indian Missions, Dorothy Day and the Catholic Worker movement, the National Catholic Conference for Interracial Justice, and the National Catholic Rural Life Conference. J.R.R. Tolkien’s original manuscripts form a unique and notable research collection.

For more information on Raynor Memorial Libraries:
- Campus map (http://www.marquette.edu/contact/documents/CampusMap.pdf) showing campus libraries.
Law Library
The primary mission of the Marquette University Law Library is to support the research activities of the Marquette University Law School students and faculty. The law librarians who hold both a law degree and a library degree teach a variety of law-related research courses within the law school and a number of legal research sessions for various departments on campus.

The Law Library is located in Eckstein Hall. The Law Library maintains a comprehensive electronic and a selective print collection of primary legal materials from all federal and state jurisdictions as well as a collection of selected international and comparative legal materials. In addition, the Law Library provides the entire campus with electronic subscriptions to Proquest federal legislative history materials, to HeinOnline, and to CCH Intelliconnect. The Law Library is a selective depository of federal government law-related resources. In addition, the Law Library subscribes to a number of electronic subscriptions on legal research related topics that are available to anyone using the Law Library. Law Library users may also access the comprehensive collection of both print and electronic Wisconsin legal research resources while in the law building.

Research Centers and Institutes
In order to foster and enhance research and study at Marquette University, a number of units on campus have established thematic research centers and institutes. These centers and institutes offer the opportunity for active collaboration and research in a variety of categorical areas.

The centers generally are designed to bring an interdisciplinary focus to the study of complex problems and involve the participation of several faculty members. Opportunities are available for student participation in the programs of several of the centers and institutes.

The Office of the Provost maintains a list of currently active centers and institutes (http://www.marquette.edu/research/centers.php).

Residence Halls
Living in a residence hall provides students with welcoming, living-learning communities that enhance their out-of-classroom experiences and their sense of belonging within the university.

The university accommodates students in men’s, women’s and coeducational residence halls and in university-owned apartments. Each residence hall and university-owned apartment provides easy access to classes, comfortable furnishings, 24-hour desk security and a chance to get involved through events and residence hall and apartment councils. The residence halls employ qualified students as resident assistants for each floor or wing, while full-time, professionally trained staff direct each hall and university apartment. For more information, visit the Residence Life website (http://www.marquette.edu/orl).
Student Financial Aid

Financial aid is monetary assistance to help students meet the expenses of going to college. Financial aid is not intended to cover all of a student's expenses. The primary financial responsibility belongs to the student and his/her family. The Office of Student Financial Aid at Marquette University attempts to help bridge the gap between the costs of attending the university and the ability of a student and his/her family to meet those costs.

A student's financial aid award may include one or a combination of scholarships, grants, loans and student employment. It is important to apply early since these resources are limited.

The most current and accurate information can be obtained by visiting the Marquette Central website (http://www.marquette.edu/mucentral/financialaid/index.shtml). Marquette Central professional staff is available for assistance Monday through Friday, 8:00 a.m. to 4:30 p.m. at (414) 288-4000. Although care is taken to ensure the accuracy and timeliness of information contained in this bulletin, the information is subject to change and/or deletion without notice due to unintended error and/or ongoing changes in federal and state legislation.

Eligibility Requirements

To receive financial aid from federal and state programs students must meet the following requirements:

- Be a U.S. citizen or an eligible non-citizen. Students with F1, F2, J1, or J2 visas are not eligible.
- Be registered with Selective Service (https://www.sss.gov/default.htm), if required.
- Be working toward a degree or certificate.
- Be enrolled at least half-time. Audit, repeat and other non-credit classes do not apply.
- Half-time: 6 credits per semester for undergraduates.
- Be making Satisfactory Academic Progress (http://www.marquette.edu/mucentral/financialaid/resources_elig_standards.shtml).
- Demonstrate financial need, if applying for need-based aid.
- Not be in default on any loan or owe a refund on any grant made under Title IV or the Higher Education Act of 1965, as amended, at any institution.

Application Procedures

The first step a prospective student must take is to complete the Marquette University online application for admission. A student needs to be formally admitted into the university before they are considered for financial aid assistance. Students may apply for financial aid if they are currently enrolled or are applying for admission to Marquette University.

To apply for financial aid a student must complete the Free Application for Federal Student Aid (FAFSA). The FAFSA website is www.fafsa.gov (https://fafsa.ed.gov) and Marquette's Title IV School code is 003863. It is important for a student to file their FAFSA between October 1 and January 15 in order to receive consideration of all types of financial aid. FAFSAs received February 1 or later for continuing students will result in a reduced financial aid award. The student’s Expected Family Contribution (EFC) is calculated from information provided on the FAFSA and is listed on the Student Aid Report (SAR). The EFC is an indicator of the family’s financial strength and is used along with the Cost of Attendance (COA) to determine a student's eligibility for financial aid.

During the application process, students may be asked to verify the information reported on the FAFSA. Any aid offer is contingent upon completion of the verification process.

Satisfactory Academic Progress policy

Marquette University is required by federal regulations to apply qualitative and quantitative standards in measuring academic progress for financial aid purposes. The complete Satisfactory Academic Progress Policy can be found on the Office of Student Financial Aid website (http://www.marquette.edu/mucentral/financialaid/resources_elig_standards.shtml).

Office of Student Financial Aid - Available Programs

Scholarship Assistance

Marquette University Scholarships

Marquette University scholarships are funded through gifts and endowments provided by private donors in addition to funds set aside by the University. All applicants meeting the December 1 admission application deadline are considered for the Père Marquette Award. The Père Marquette Award is awarded on a competitive basis and takes the entire application into consideration.
Marquette University also offers competitive scholarships, athletic scholarships and ROTC scholarships. For information about selection criteria, application procedures, deadlines and renewal requirements for all Marquette scholarships consult the Office of Undergraduate Admissions website (http://www.marquette.edu/explore/scholarships.php).

Private Scholarship Opportunities

Information on Private Scholarship Opportunities can be found on the Office of Student Financial Aid website (http://www.marquette.edu/mucentral/financialaid/resources_pvt_scholar.shtml).

Grant Assistance

A grant is a type of need-based financial aid that does not have to be repaid. Grants can be awarded from federal, state, institutional and private sources. Every student's application is reviewed for grant eligibility. All grant assistance is automatically accepted for students on CheckMarq. Additional information about grants can be found on the Office of Student Financial Aid website (http://www.marquette.edu/mucentral/financialaid/ugrad_grants_index.shtml).

Loan Assistance

A loan is a type of financial aid that has to be repaid upon graduation or when no longer enrolled in school on a full- or half-time basis (depending upon the terms of the individual loan program). A promissory note (legal agreement to repay) must be signed before a loan is disbursed. The promissory note contains detailed information about terms, responsibilities and repayment of the loan. There are no penalties for prepaying principal or interest in any student loan program. Federal regulations require all first-time Stafford Loan borrowers to participate in loan counseling before disbursement of the loan.

Federal Loan Programs

The principal loan programs administered by Marquette for Undergraduate students are the William D. Ford Federal Direct Stafford Loans, the William D. Ford Federal Direct PLUS loan, the Federal Perkins Loan, and the Federal Nursing Loan.

Additional information about loans can be found on the Office of Student Financial Aid website (http://www.marquette.edu/mucentral/financialaid/ugrad_loans_index.shtml).

Truth in Lending Act Disclosures

Students borrowing any non-federal loans (e.g., institutional or private loans) must sign and acknowledge disclosure forms acknowledging the specific terms of each loan and stating that the student is aware of the lower cost Federal loan alternatives. The disclosure forms are sent out by the lending institution when appropriate. Each disclosure form clearly states what steps the student must take next and in what timeframe those steps must be made.

Private Alternative Loans

Alternative loans are non-federal educational loans available from a variety of national lending institutions. Minimums and maximums vary for these loan programs, but all require a satisfactory credit history. The Alternative Loan Lender Chart (http://www.marquette.edu/mucentral/financialaid/ugrad_loans_alt.shtml) provides an alphabetical list of all lenders that Marquette students have used in the past five years. This is in no way exclusive or exhaustive of all existing lenders. The Office of Student Financial Aid honors requests to certify other alternative educational loans that do not appear on this chart.

Student Employment Assistance

The primary function of Student Employment Services, located within the Office of Student Financial Aid, is to assist students in securing employment on campus or off campus within businesses in the area. Many students help finance their education through part-time employment.

Marquette lists part-time on and off campus positions on the web-based job posting site, JobConnection (https://jobconnection.mu.edu/interfase.htm). Students wishing to work must comply with the Immigration Reform and Control Act of 1986. This means that new student employees need to complete an I-9 form with the Office of Student Employment on their first day of employment. Students must provide original documents (i.e., Social Security card and driver's license or U.S. Passport); copies or faxes of documents are not acceptable. Be sure to check the last page of the I-9 form for a list of acceptable documents to complete the I-9 process. Students may view the I-9 requirements on the Student Employment Services website (http://www.marquette.edu/mucentral/financialaid/ses_i9.shtml). Contact Student Employment at studentemployment@marquette.edu with questions.

Additional Information

For more information please visit our Marquette Central website (http://www.marquette.edu/mucentral/index.shtml). Contact us with questions at marquettexternal@marquette.edu, (414) 288-4000, or visit Zilber Hall, Suite 121. When contacting Marquette Central please provide student's Marquette University ID (MUID) and four-digit Marquette Central Access Number (MCAN) (http://www.marquette.edu/mucentral/mcan.shtml). Marquette Central's office hours are 8:00 a.m. to 4:30 p.m. Monday through Friday CST.
Tuition Fees and Housing

The staff in Marquette Central is dedicated to providing service to our students and families in a professional and friendly manner while following the policies and procedures set forth by the university. The office provides accurate and timely information about each student's bursar account while encouraging our students to be active participants in managing their account.

Marquette University sends a monthly electronic billing statement to each student while the student has an account balance. A student may also view his/her e-bill via CheckMarq. Payment due dates are available on the Marquette Central website (http://www.marquette.edu/mucentral). The final step to complete a student’s registration is payment in full of all fees for the term. It is the student’s responsibility to pay tuition, fees and housing by the published due date whether he/she receives a bill or not.

Students who do not plan to attend the university are responsible for dropping classes through CheckMarq and notifying their respective college office. All courses for which a student is officially registered as of the close of registration are subject to tuition, fee assessment and payment, and as such will appear as part of the student’s permanent record even if the student does not attend any class periods. To avoid unnecessary charges and permanent failing or withdrawn grades on the student’s permanent record, it is the student’s responsibility to review his/her official registration prior to the end of registration for the session in which the course is scheduled and ensure it accurately reflects the courses in which the student plans to be enrolled. Students assume responsibility for the consequences that ensue as a result of any failed or withdrawal grade. These consequences include, but are not limited to: a delay in graduation, dismissal from the degree program, denial of readmission, external institutions/entities viewing these grades as failing grades, loss of eligibility for certain scholarships and/or financial aid, loss of full-time status and/or loss of a refund.

A student’s registration is not considered complete until all tuition and fees are paid, enrolls in the Marquette Month Payment Plan (http://www.marquette.edu/mucentral/bursar/payment_plans_index.shtml), or submits a billing authorization from an approved sponsor. Students whose accounts reflect that the payment has not been made, or that are otherwise delinquent will have a registration block, transcript block and diploma block placed on their accounts. There will be a $100 fee for the removal of the block. Failure to pay any balance when due may result in the cancellation of a student’s registration for the current academic term, referral of the account to a collection agency, legal action to collect any balance due or any combination thereof. If the university must take legal action to collect any unpaid balance, the student will be responsible for all fees and costs incurred by the university to collect the unpaid balance.

Tuition Discount

A 50% discount on tuition is applied to per credit charges for courses taken as audit (no credits earned). If the audit course(s) credit(s) puts the total credit load to full time, the student is charged the per credit hour rate for the credits earned and the 50% discount rate for the audit course credits thru the close of late registration. After that time the flat tuition rate is charged for students enrolled in at least 12 credit hours. There is no discount for audit course credits taken within a full time course load for credit. Audit is offered on a space available basis to students who have the proper background and prerequisites for the specific course(s). Audit discount cannot be combined with the Senior Citizen Discount. A 50 percent discount on tuition (only) is available to individuals 62 years of age and older taking undergraduate and graduate courses for credit and/or audit. This opportunity is offered to students who have the proper background and prerequisite of the course(s) in question.

Payment Options

Traditional Semester Payment

Payment of all tuition and other billed charges is due in full prior to the beginning of each term.

- Cash and checks are acceptable methods of payment.
- Electronic payment (direct debit from checking or savings account) may be made by accessing the link on the Marquette Central website (http://www.marquette.edu/mucentral/bursar/index.shtml).
- Credit card payment is available through a third party provider. The service fee for using this service is variable depending on the amount of the charge. This service may be accessed through the link on our website (http://www.marquette.edu/mucentral/bursar/index.shtml) or by calling (866) 893-4518.

Marquette Monthly Payment Plan

Marquette offers a payment plan administered by Tuition Management Systems Inc. The Marquette Monthly Payment Plan allows students and their families to pay tuition, fees, university housing and/or meal charges in five equal monthly installments. There is a $35 semester enrollment fee, but there are no interest charges involved.

Payment by a University Approved Third Party Sponsor

The Office of the Bursar works with students who receive tuition assistance through a third party. The third party will be billed for all or part of a student’s financial account charges after the university registration add/drop date. Note: If your employer requires grades prior to paying for a class, we cannot set them up as a third party sponsor.
# 2016-17 Tuition and Housing Fees

## Full-Time Tuition Rates

<table>
<thead>
<tr>
<th>Program</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts and Sciences (12 or more credit hours)</td>
<td>$19,000</td>
</tr>
<tr>
<td>Business Administration (12 or more credit hours)</td>
<td>$19,000</td>
</tr>
<tr>
<td>Communication (12 or more credit hours)</td>
<td>$19,000</td>
</tr>
<tr>
<td>Education (12 or more credit hours)</td>
<td>$19,000</td>
</tr>
<tr>
<td>Engineering (12 or more credit hours)</td>
<td>$19,000</td>
</tr>
<tr>
<td>Health Sciences (12 or more credit hours)</td>
<td>$19,000</td>
</tr>
<tr>
<td>Nursing (12 or more credit hours)</td>
<td>$19,000</td>
</tr>
</tbody>
</table>

## Student Fees

The following required fees are charged to all full-time undergraduate students per semester:

<table>
<thead>
<tr>
<th>Program</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Activity Fee</td>
<td>$30</td>
</tr>
<tr>
<td>Marquette Health Clinic Fee</td>
<td>$160</td>
</tr>
<tr>
<td>UPASS Fee</td>
<td>$45</td>
</tr>
<tr>
<td>Total Student Fees</td>
<td>$235</td>
</tr>
</tbody>
</table>

## Room and Board Rates Per Term

For 2016-17 Room and Board rates please visit the Marquette Central website (http://www.marquette.edu/mucentral/bursar/index.shtml).

<table>
<thead>
<tr>
<th>Hall</th>
<th>Room Type</th>
<th>Single Meal Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abbotsford</td>
<td>Triple</td>
<td>$5,075</td>
</tr>
<tr>
<td>Carpentser</td>
<td>Single</td>
<td>$6,520</td>
</tr>
<tr>
<td></td>
<td>Double</td>
<td>$5,755</td>
</tr>
<tr>
<td>Cobeen</td>
<td>Single</td>
<td>$6,465</td>
</tr>
<tr>
<td></td>
<td>Double</td>
<td>$5,720</td>
</tr>
<tr>
<td></td>
<td>Triple</td>
<td>$4,925</td>
</tr>
<tr>
<td></td>
<td>Quad</td>
<td>$5,725</td>
</tr>
<tr>
<td>Mashuda</td>
<td>Single</td>
<td>$6,520</td>
</tr>
<tr>
<td></td>
<td>Double</td>
<td>$5,990</td>
</tr>
<tr>
<td></td>
<td>Large Double</td>
<td>$6,015</td>
</tr>
<tr>
<td></td>
<td>Triple</td>
<td>$4,955</td>
</tr>
<tr>
<td></td>
<td>Quad</td>
<td>$5,515</td>
</tr>
<tr>
<td>Humphrey</td>
<td>Large Double</td>
<td>$6,135</td>
</tr>
<tr>
<td></td>
<td>Quad</td>
<td>$5,725</td>
</tr>
<tr>
<td>McCormick</td>
<td>Double</td>
<td>$5,720</td>
</tr>
<tr>
<td></td>
<td>Triple</td>
<td>$4,925</td>
</tr>
<tr>
<td>Schroeder</td>
<td>Double</td>
<td>$5,755</td>
</tr>
<tr>
<td></td>
<td>Triple</td>
<td>$5,075</td>
</tr>
<tr>
<td>Straz</td>
<td>Double</td>
<td>$6,135</td>
</tr>
<tr>
<td></td>
<td>Quad</td>
<td>$5,515</td>
</tr>
</tbody>
</table>

## Meal Plan Only

<table>
<thead>
<tr>
<th>Meal</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anytime Dining</td>
<td>$2,010</td>
</tr>
</tbody>
</table>

## Refunds and Adjustments

Students who have prepaid charges but do not register for classes are given a full refund, less applicable non-refundable deposits. Students who register for classes and subsequently change their course load through either a partial withdrawal from courses or a complete withdrawal from the
university have adjustments made to their student accounts. The date on which the Withdrawal form is submitted to the university is the date used for any refund calculation. Students assume the responsibility for the consequences that ensue as a result of any withdrawal grade. These consequences may include, but are not limited to: a delay in graduation, dismissal from the degree program, external institutions/entities viewing these grades as failing grades, loss of eligibility for certain scholarships and/or financial aid, loss of full-time status and/or loss of a refund. If an adjustment results in a refund due to the student, proper application must be made with Marquette Central to obtain the refund. See this bulletin for a full description of withdrawal procedures.

After the first class, laboratory and special course fees are non-refundable. Tuition deposits are non-refundable but are applied toward first term tuition charges.

Refunds for tuition and board will be given based on the following schedules:

<table>
<thead>
<tr>
<th>Refund</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>100%</td>
<td>Through registration</td>
</tr>
<tr>
<td>80%</td>
<td>During the second week</td>
</tr>
<tr>
<td>60%</td>
<td>During the third week</td>
</tr>
<tr>
<td>40%</td>
<td>During the fourth week</td>
</tr>
<tr>
<td>20%</td>
<td>During the fifth week</td>
</tr>
<tr>
<td>No Refund</td>
<td>After the fifth week</td>
</tr>
</tbody>
</table>
College of Arts and Sciences

From the Dean

Klingler College of Arts and Sciences website (http://www.marquette.edu/as/index.shtml)

Welcome! The Helen Way Klingler College of Arts and Sciences is truly the heart and soul of Marquette University. It’s here that you will experience the rich heritage of a Catholic, Jesuit education, which promises to provide you with a transformative educational experience based on academic excellence, social justice, faith, and service. This promise is grounded in Ignation teaching methods, which challenge you to think critically, experience, and reflect on what you have learned so that you can put your knowledge into action. We are delighted that you have chosen Marquette and the College of Arts and Sciences as your new home.

The large variety of majors and minors available in the College of Arts and Sciences is among its central strengths. This is a place where the rich world of human experience can be examined and each discipline – from biology to sociology and math to theology – can respond to the questions of “how,” “what,” “where,” and “why.” Your learning experiences in the classroom and laboratory, participation in extracurricular activities, and community service opportunities will prepare you not only for your career, but for a lifetime of achievement. This requires critical thinking, creative imagination and communication skills that lie at the heart of a liberal arts education.

The College is continually looking for ways to provide a transformative educational experience to our students and many new and exciting areas are emerging at the cross-roads of traditional disciplines. We have established four new majors this fall: Bioinformatics, Data Science, Environmental Studies, Latin American Studies and five new minors: Arabic Language Studies and Cultures, Culture, Health and Illness, Latin American Studies, Law and Society and Environmental Studies. These innovative degree programs arose from current employment data, student survey data and faculty input.

It is an exciting time to be at Marquette and in the College of Arts and Science! There are many opportunities for you to become engaged in high-impact learning experiences such as internships and faculty mentored research projects. For example, the Global Water Center is complete; Marquette occupies the sixth floor and faculty and student led projects are underway. The future of the University is bright, and our students are the heart of that future.

I invite you to explore the individual departments, as well as the College’s section, to learn more about the educational offerings of each program and to choose a career path from the broad range of opportunities available in the Klingler College of Arts and Sciences.

Sincerely,

Richard C. Holz, Ph.D.
Dean, Klingler College of Arts and Sciences

College Mission Statement

As the heart and soul of Marquette University, the College of Arts and Sciences explores and advances understandings of human meaning and value, the structures and dynamics of human societies, and the composition and function of the natural world.

College Vision Statement

The College aspires to recruit and retain outstanding students and faculty and to equip them to accomplish significant research and scholarship, transformative teaching and learning, and committed and compassionate leadership in their professional fields and larger communities. In this way, we seek the serious intellectual engagement of faith and reason, and the education of the whole person – the rigorous, holistic exploration of the intellectual, moral and spiritual dimension of human life.

College Introduction

The Helen Way Klingler College of Arts and Sciences is home to over 30 undergraduate majors offered in 13 academic departments (Biological Sciences; Chemistry; Economics, which is housed jointly in the Colleges of Arts & Sciences and the College of Business Administration; English; Foreign Languages and Literatures; History; Mathematics, Statistics and Computer Science; Philosophy; Physics; Political Science; Psychology; Social and Cultural Sciences; and Theology). Doctoral and/or masters programs are also offered by many departments, further enriching the research and educational activities of the college.

The bachelor of arts and the bachelor of science college curriculum requirements expose students to the major disciplines as well as the knowledge areas of rhetoric, foreign languages, mathematical reasoning, English and foreign literatures, science and nature, histories of cultures and societies, individual and social behavior, philosophy and theology.

Specialization in one or more of our majors or minors delivers technical skills and competencies on which to prepare for one’s life-work. Students have the opportunity to study with the award-winning teacher/scholars in the classroom and laboratory; engage in state-of-the-art research through
undergraduate research opportunities; participate in extracurricular activities offered by a wide variety of student organizations; grapple with contemporary issues through programs offered by the Center for Ethics, the Center for Peacemaking, or the Center for Translational Justice and use their academic knowledge to interact with the community and to benefit it.

Arts and Sciences students may also wish to apply to the Honors Program (p. 47) which serves a select group of academically talented students from all divisions of the university. Participants in the program are provided with distinctively challenging and enriching learning experiences.

Students in the Klingler College of Arts and Sciences are encouraged to incorporate service learning and international study with their curriculum at Marquette. These opportunities challenge students to find new ways to engage the community and the world with their liberal education. Study abroad (p. 44) programs, in particular, offer students an opportunity to integrate academic course work with firsthand knowledge of other cultures.

Taken altogether, the programs and education provided by the Klingler College of Arts and Sciences embodies the values of Marquette’s mission — excellence, faith, leadership and service. In this way the college seeks to develop students who have the ability and desire to work effectively for a more just and more humane society.
Degrees Offered

Marquette University confers the degrees of Bachelor of Arts in the humanities and social sciences, and Bachelor of Science in the natural sciences, mathematics and computer science and leadership and organizations on those students who have satisfactorily completed one of the regularly prescribed programs in the Klingler College of Arts and Sciences. Students who successfully complete the Comprehensive Honors (p. 47) curriculum may earn a degree of honors bachelor of arts or honors bachelor of science.

A student holding a bachelor’s degree in one discipline may be admitted for work toward a bachelor’s degree in another discipline, with approval from the college office (bachelor of arts to bachelor of science or vice versa). This option is useful for a student who wishes to change his or her field of concentration for graduate or professional study.

A candidate for a second baccalaureate degree must complete at least 32 additional upper division credits in residence and satisfy all current degree requirements. Students should see the university section of this bulletin for second degree requirements and procedures.
Majors and Minors Overview

Majors, Minors, and Accelerated Degree Programs by Departments

DEPARTMENT OF BIOLOGICAL SCIENCES

Majors:

• Biological Sciences (BS)
• Biology for the Professions (Available only to College of Education students) (BA)
• Physiological Sciences (Special curricula available for pre-dentistry students and to students admitted into Physical Therapy) (BS)
• Biochemistry and Molecular Biology (BS)

Minor:

• Biological Sciences

Accelerated Degree Program:

• BS MBA

DEPARTMENT OF CHEMISTRY

Majors:

• Chemistry (BS)
• Chemistry for the Professions (Available only to College of Education students) (BA)
• Biochemistry and Molecular Biology (BS)

Minor:

• Chemistry

Accelerated Degree Program:

• BS MS
• BS MBA

DEPARTMENT OF ECONOMICS

Major:

• Economics (BA)

Minor:

• Economics

Accelerated Degree Program:

• BA MSAE

DEPARTMENT OF ENGLISH

Majors:

• English Language Arts - (Available only to College of Education students)(BA)
• Literature (BA)
• Writing-Intensive English (BA)

Minors:

• Literature
• Literatures of Diverse Cultures
• Writing-Intensive English

DEPARTMENT OF FOREIGN LANGUAGES AND LITERATURES

Majors:
• Classics (BA)
• French (BA)
• German (BA)
• Spanish Language, Literature and Culture (BA)
• Spanish for the Professions (BA)

Minors:
• Classical Languages
• Classical Studies
• French
• German
• Spanish Language, Literature and Culture
• Spanish for the Professions

DEPARTMENT OF HISTORY

Majors:
• History
  • American Military History

Minor:
• History
  • Public History

DEPARTMENT OF MATHEMATICS, STATISTICS AND COMPUTER SCIENCE

Majors:
• Mathematics (BS)
• Mathematics for Elementary School Teachers (Available only to College of Education students) (BA)
• Computer Science (BS)
• Computational Mathematics (BS)
• Data Science (BS)

Minors:
• Mathematics
• Computer Science
• Software Development

Accelerated Degree Program:
• BS MBA

DEPARTMENT OF PHILOSOPHY

Major:
• Philosophy (BA)

Minor:
• Philosophy

Accelerated Degree Program:
• BA MA

DEPARTMENT OF PHYSICS

Major:
• Physics (BS)
• Biophysics (BS)

Minors:
• Physics
• Astronomy
• Biophysics

Accelerated Degree Program:
• BS MBA

DEPARTMENT OF POLITICAL SCIENCE

Major:
• Political Science (BA)

Minor:
• Political Science

Accelerated Degree Program:
• BA MA

DEPARTMENT OF PSYCHOLOGY

Major:
• Psychology (BA)

Minor:
• Psychology

Accelerated Degree Program:
• BA MSHR

DEPARTMENT OF SOCIAL AND CULTURAL SCIENCES

Majors:
• Anthropology (p. 335) (BA)
• Criminology and Law Studies (p. 339) (BA)
• Social Welfare and Justice (p. 349) (BA)
• Sociology (p. 343) (BA)

Minors:
• Anthropology
• Criminology and Law Studies
• Social Welfare and Justice
• Sociology

DEPARTMENT OF THEOLOGY

Majors:
• Theology and Religion (BA)

Minor:
• Theology and Religion

RESERVE OFFICER’S TRAINING CORPS

Minors:
• Air Force Aerospace Studies (p. 325)
• Military Science and Leadership (p. 327)
• Naval Science (p. 331)
INTERDISCIPLINARY PROGRAMS

Majors:

• Africana Studies (p. 213) (BA)
• Applied Mathematical Economics (p. 216) (BS)
• Bioinformatics (BS)
• Broad Field Science (Available only to College of Education students) (p. 222) (BS)
• Environmental Studies (BA)
• International Affairs (p. 236) (BA)
• Latin American Studies (BA)
• Leadership and Organizations (Non-Traditional Evening/Weekend Degree Program) (BS)
• Peace Studies (p. 259) (BA)
• Women's and Gender Studies (p. 266) (BA)

Minors:

• Africana Studies
• Arabic Language Studies and Culture
• Asian Studies
• Broad Field Social Science (Available only to College of Education students)
• Culture, Health and Illness
• Environmental Ethics
• Environmental Studies
• Ethics
• Family Studies
• International Affairs
• Latin American Studies
• Law and Society
• Medieval Studies
• Peace Studies
• Public History
• Urban Affairs
• Women's and Gender Studies
Graduation Requirements

Undergraduate students must meet the graduation requirements that are outlined in the Undergraduate Bulletin in effect the year in which they enter Marquette. Substitutions or waivers for specific courses that are required for degree completion may occur, as determined by the Klingler College of Arts and Sciences.

Students whose enrollment is interrupted for two or more consecutive terms must meet the requirements outlined in the Undergraduate Bulletin in effect the year of their readmission to the university. In rare cases, the college may determine that a readmitted student falls under a different set of degree requirements than the academic year in which he/she is readmitted.

It is the student’s responsibility to know and fulfill the requirements for graduation specified for the selected plan. Students are encouraged to use the Student Center/Academic Advisement system which tracks courses that have been completed, as well as the UCCS, college foreign language requirement, and major/minor requirements toward degree completion.

A candidate for a baccalaureate degree must meet the following graduation requirements to earn a Marquette undergraduate degree:

Curricular Requirements

• Complete at least one major from the College of Arts and Sciences.
• Complete the College of Arts and Sciences Curriculum.
• Complete the University of Common Studies Requirements.

Note: a further explanation of the Curricular Requirements can be found under Degree Requirements.

Grade Point

• Earn a minimum grade point average of 2.000 for graduation.
• Achieve a 2.000 grade point average in all courses in the major or minor.

Credit Hours

• Earn 120 credit hours.
• Complete a minimum of 60 Marquette credits.
• Complete the final 30 credit hours needed with Marquette credits, unless those credits are earned in an approved study abroad program.
• For B.S. degree: Complete a minimum of 32 credit hours in upper-division Marquette courses (lower-division courses are numbered 1000 to 2999; upper-division courses are numbered 3000 and above).
• For B.A. degree: Complete a minimum of 42 credit hours in upper-division courses, ten of these credits may be non-Marquette credits (lower-division courses are numbered 1000 to 2999; upper-division courses are numbered 3000 and above).
• Earn a minimum of 15 Marquette credit hours in the major (for a minor, a minimum of 9 credits must be Marquette credits).

Other Requirements for Graduation

• Complete the formal online application for graduation available in the CheckMarq Student Center (https://checkmarq.mu.edu), by the specific term deadlines for application, as published in the Academic Calendar (p. 824).
• The college adheres to the University Commencement Policy (p. 60).
• The college also adheres to the University Graduation Policy (p. 68).

Although most students can fulfill the University Core of Common Studies requirements, the B.A. or B.S. College foreign language requirement, their major requirements, and take elective courses within 120 credits, certain combinations of major and minor fields may require more than the minimum. Students are urged, therefore, to consult an adviser before selecting a major and an optional minor.

It is the responsibility of students to know and to fulfill all university, Klingler College of Arts and Sciences and major department requirements (See the corresponding sections of this bulletin for additional information regarding the University Core of Common Studies, university graduation and residency requirements, College foreign language requirement and department major and minor requirements).
Academic Regulations

Academic Regulations and General Information

Students in the Klingler College of Arts and Sciences are expected to comply with the academic requirements and regulations listed in the university section of this bulletin and must fulfill the graduation requirements stated in the bulletin in effect the year they entered Marquette.

Students who have interrupted their enrollment for two or more consecutive terms, follow the requirements and regulations listed in the bulletin in effect during the academic year of their return. (Exception is made for students who interrupted enrollment to serve in the Armed Forces.)

It is the responsibility of students to know and fulfill all university, Klingler College of Arts and Sciences, and major department requirements.

While the principal policies and procedures of the college are contained in this section of the bulletin, questions concerning other regulations should be directed to the college or relevant department office.

Academic Integrity

The Klingler College of Arts and Sciences adheres to the University Academic Integrity Policy (p. 50). We believe in prevention through education; accordingly, the faculty of the college takes measures to educate students about the foundational principles of academic integrity.

In instances where academic dishonesty is suspected, instructors are responsible for initiating investigations into the alleged violation and students are responsible for cooperating fully with the investigatory process. Students and faculty should refer to the University Academic Integrity Policy (p. 50) in this bulletin for specific details.

If the college comes to know that a student has committed a substantiated act of academic dishonesty in a course offered by the college, and if that student withdraws from that course, the college will assign the student a grade of ADW for that course.

Absences from Final Examinations

An Arts and Sciences student who misses a final examination in any course must contact their course instructor immediately. For more information, refer to the University Attendance Policy (p. 58).

Academic Dismissal/Probation/Academic Alert (CAA)

Academic Dismissal

The Klingler College of Arts and Sciences adheres to the University Academic Censure Policy (http://bulletin.marquette.edu/undergrad/academicregulations/#AcademicCensure), as outlined in the Academic Regulations section of this bulletin.

In addition, any internal transfer student who has his/her ‘Required to Withdraw for Academic Reasons’ appeal approved by the college will be reinstated or readmitted as an undeclared major on probation for a minimum of one semester and special conditions will be prescribed in writing at the time of the student’s transfer into the college. The internal transfer student who fails to fulfill the specified terms of the conditions, will be required to withdraw for academic reasons at the end of the semester and there is no guarantee any future appeal will be upheld.

College Academic Probation

Undergraduate students in the Klingler College of Arts and Sciences are expected to maintain a cumulative and term grade point average of 2.000. Students who do not make the progress necessary to meet university and college graduation requirements are subject to academic censure. Students may be placed on academic probation or are continued on academic probation for the following:

- A term grade point average (GPA) below 2.000
- Inadequate progress toward the major
- Inadequate progress toward B.A./B.S. degree requirements
- One or more grades of SD, D, F, I, W, WA, UW or ADW
- A complete term withdrawal
- The violation of special conditions

College Academic Alert (CAA)

Students admitted to the Klingler College of Arts and Sciences are expected to meet college academic standards and maintain good academic standing. Academic performance is monitored carefully by the Committee on Scholastic Actions, and students either not maintaining steady progress or not demonstrating adequate achievement will be barred from future registration by a College Academic Alert (CAA) registration hold.

The bases for committee review are:
• grade point average (GPA) deficiency
• inadequate progress
• grades of CD, D, F, I, W, WA, UW or ADW
• the number of semesters on college probation
• the violation of special conditions

Therefore, it is possible that a student will be barred from registration by a CAA even though the student’s cumulative GPA exceeds 2.000. Students concerned about their academic progress should consult the college office.

Students placed on CAA status will be notified by letter or email of the committee’s decision and of the appeal process. If an appeal is approved, special conditions may be prescribed in writing at the time of the student’s reinstatement or readmission into the college. Conditions may also be prescribed in writing in the case of a student whose course performance or failure to follow academic advice warrants such action. All students to whom conditions have been specified will be subject to committee review and possible CAA restriction should they fail to fulfill the specified terms. In addition, any internal transfer student who has his/her CAA appeal approved by the college will be reinstated or readmitted as an undeclared major on probation for a minimum of one semester and special conditions will be prescribed in writing at the time of the transfer into the college. The internal transfer student who fails to fulfill the specified terms of the conditions, will be subject to CAA restriction at the end of the semester and there is no guarantee any future appeal will be upheld.

If a student's appeal is denied, the student may request to enroll in another college via the process outlined in the University Academic Censure Policy (http://bulletin.marquette.edu/undergrad/academicregulations/#AcademicCensure) of this bulletin, and if accepted, the CAA hold will be removed after transfer into the new college.

Unless the CAA is removed via the individual colleges’ appeal process, the student may not register for courses at Marquette and may be dropped from any classes for future terms in which he/she is registered.

Advisers/Advising

Upon entering the Klingler College of Arts and Sciences, a student is assigned a pre-major adviser. The student must consult with this adviser (or the Arts and Sciences Advising Center (http://www.marquette.edu/as/advising_index.shtml)) at least once before registering for their first term and at least once every term thereafter.

Upon declaring a major, the student will be assigned a major adviser with whom the student must consult at least once each term before registering for classes. Students with more than one major are strongly encouraged to also consult with their second major advisers.

Advisers are available during each registration period as well as by appointment throughout the academic year.

Refer to the University Academic Advising Policy (p. 53) for additional information on Academic Advising: the University’s Advising Philosophy; Goals for Advising; and Adviser and Student Expectations.

Attendance

Because absence from class will prevent a student from getting the full benefit of a course and because in many courses, each student’s involvement contributes to the learning process for all other students in the class, the college has adopted the University Attendance Policy (p. 58) for all of its undergraduate courses.

Background Checks, Drug Testing

Some degrees, majors and/or courses may require a student to submit a criminal background check and/or drug testing. The results of those checks and/or tests may affect the student’s eligibility to continue in that degree, major and/or course.

CD or D Grades

Courses completed with a grade of CD or D do not count toward the total hour requirement for a major or minor but do fulfill the subject matter requirement and do count toward the total 120 credit hours required for graduation. Courses in which a CD or D grade was earned initially may be repeated once. In such cases, only the grade earned in the repeated course will be counted in the cumulative grade point average, but both grades will appear on the official transcript; credit will be given only once. See the University Repeated Courses Policy (p. 72). Cognate requirements can be completed at a CD or D grade.

Credit Overload

Students may register for up to 20 credit hours in a fall or spring semester. Registering for more than 20 credit hours requires the permission of the college office. To seek this permission, a student must fill out and hand in to the college office the Credit Overload Request form available at Marquette Central academic forms website. (http://www.marquette.edu/mucentral/registrar/policy_forms.shtml)
Elective Courses

Of the 120 credit hours required for a degree, those not fulfilling the University Core of Common Studies, the College of Arts and Sciences B.A. or B.S. curriculum requirements and the major requirements are deemed electives. Courses in other divisions of the university may also be taken for elective credit.

Independent Study (4995) Courses

Independent Study (4995) courses offer students the opportunity to engage with increased intensity the study of special topics under the supervision of a faculty member.

These courses may be used to grant students credit for serving as researchers in faculty labs or on faculty research projects when:

- The student is conducting independent research under the supervision of the faculty member.
- The type of work done by the student clearly advances his/her educational objectives.

Faculty and students arranging an Independent Study course must adhere to the following guidelines for all 4995 courses:

1. These courses are intended for students conducting independent research or interpreting or analyzing research data, under the supervision of a faculty member. (A 4995 course is not to be used to grant a student credit for serving merely as a lab assistant or for awarding credit for an internship.)
2. All 4995 courses must be described by a complete syllabus, or a written course or project plan, which contains a clearly articulated set of instructional goals and a detailed plan for assessing whether those goals are achieved.
3. The syllabus must also include a calendar of meetings between faculty and student (including dates and times), the dates for assignment deadlines, as well as assessment and grading methods (including percentages of the total grade represented by each assignment, exam or research paper).
4. The course must include a culminating writing or research project reflecting the knowledge gained in the course.
5. All 4995 courses must include face-to-face meetings with faculty, in addition to individual reading and research. Distance learning is not acceptable for 4995 courses.
6. These courses are available only to juniors and seniors (exceptions will be granted only in extraordinary circumstances and must be approved by the department chairperson and the associate dean of the college).
7. A 4995 course is available only to a student who has declared a major or minor in the subject area of the course proposed, and who has completed at least 12 credit hours in that department.
8. These courses are not to be used as substitutes for regularly scheduled courses or for fulfillment of requirement of either the University Core of Common Studies or the Klingler College of Arts and Sciences B.A. or B.S. Curriculum.
9. All 4995 courses are to be taught only by regular full-time faculty. If this is not the case (for example, where a student’s work is done in a laboratory off campus), departments proposing 4995 credit must ensure academic quality by providing secondary student mentoring by a Marquette faculty member, by requiring a plan for the proposed research, and by requiring a written record of the research results.
10. Departments may establish the maximum number of credit hours (3-6 cr. hrs.) earned in 4995 courses which may be applied to a major or minor.
11. Departments may also establish a minimum grade point average for enrollment in 4995 courses (3.000 is recommended), as well as additional guidelines as appropriate.
12. An Independent Study course must involve a minimum workload of 170 minutes for each credit, during each week of the semester, as per the University Credit Policy (p. 62).
13. An Independent Study course may not be used to award additional credit(s) to a regular credit bearing course.

The Independent Study approval form is located on the Marquette Central academic forms website (http://www.marquette.edu/mucentral/registrar/policy_forms.shtml). The deadline for approval of 4995 courses by department chairpersons is the close of late registration for the session in which the course is to be offered. Refer to the Academic Calendar (p. 824) for deadlines. Late requests for 4995’s must be approved by the associate dean of the college and will be granted only in extraordinary circumstances.

Majors and Minors

Candidates for degrees are required to complete a major. Formal declaration of the major should be filed in the appropriate departmental office, usually during the sophomore year.

A minor is not required but is offered in most disciplines and some interdisciplinary fields. Students pursuing a minor must complete a declaration of minor form found on the Marquette Central academic forms website (http://www.marquette.edu/mucentral/registrar/policy_forms.shtml). Once completed, the form must be turned in to the student’s college records office.

The number of credit hours required for various majors and optional minors is listed in the departmental sections of the bulletin.
Overlap Limit: A minor requires 9 unique credits [credits not used to satisfy requirements for a different major/minor]. A major requires 15 unique credits [credits not used to satisfy requirements for a different major/minor]. Cognate requirements are not considered when examining overlap of majors or minors.

At least fifteen credit hours in the major and nine credit hours in the minor must be completed at Marquette.

Interdisciplinary Majors and Minors

The Klingler College of Arts and Sciences is committed to the fundamental goal of integrating diverse areas of learning into a coherent whole. This integration lies at the heart of the liberal arts education provided at Marquette University. Achieving this goal involves two steps. First, as part of the college curriculum, students are required to study material from the wide variety of disciplines comprising the arts and sciences. Second, by majoring and perhaps minoring in a specific discipline of their choice, students pursue learning in more depth and are then challenged to integrate this into their broader understanding of the world acquired through the college curriculum. For students whose interests go beyond the boundaries of traditional disciplines, the college offers the interdisciplinary majors and minors listed in the college section - Interdisciplinary Majors and Minors (p. 212).

Individualized Interdisciplinary Majors and Minors

In addition, students for whom particular interests may be better served by a flexible grouping of courses from several areas can create an individualized interdisciplinary major or minor. Examples of such self-designed majors or minors include Arabic Studies, Environmental Studies, Italian Studies, Latin American Studies, and Middle Eastern and North African Studies. Students should consult the college office regarding the creation of the individualized major or minor, and to acquire the guidelines and the form that must be submitted. The student must work with a faculty adviser in their area of interest. With this adviser, the student will write a proposal explaining the relationship between educational objectives and the choice of an interdisciplinary major or minor, a list of courses to be included, and the sequence in which they will be taken. Two letters of recommendation are required: one from the faculty adviser, and the second, from a faculty member that is familiar with the student's academic work. Such proposals, as well as any subsequent modifications, must be approved by the college’s associate dean.

Professional Minors

Professional minors are available in advertising and Fine Arts (Graphic Design, Motion Narrative, Photography, Studio Art) in the College of Communication, business administration, human resources management, information technology, and marketing in the College of Business Administration, biomedical sciences in the College of Health Sciences and health studies in the College of Nursing. See the appropriate sections of this bulletin for information.

Transfer Credit Policy

In accordance with the University Transfer Credit Policy (p. 20), the Klingler College of Arts and Sciences will grant credit for courses taken for a grade and completed at a C or better at a regionally accredited college or university. Only credit will transfer, not grades. Courses completed in a quarter-hour system will be converted to semester credits. A Marquette equivalent will be specified for each transferable course. Courses awarded as 9290-9299, (lower division) or 9390-9399 (upper division) indicate transferable credit for which there is no discernible Marquette equivalent. Courses awarded as 9290-9299 or 9390-9399 will count toward the degree and may fulfill UCCS, college curriculum or major/minor requirements; however, they will not fulfill any requirement where a specific course number (i.e. PHIL 1001 Philosophy of Human Nature or THEO 1001 Introduction to Theology) has been indicated. Contact the director of student records with any questions or concerns regarding transfer of credit.
Degree Requirements

Major Requirements

- To earn a Bachelor of Arts Degree or a Bachelor of Science Degree, students must fulfill all requirements for at least one major offered by the College of Arts and Sciences.
- The degree awarded (Bachelor of Arts Degree or a Bachelor of Science Degree) is determined by the student's primary major.

College Curricular Requirements and the University Core of Common Studies (http://bulletin.marquette.edu/undergrad/theuniversitycoreofcommonstudies)

- Fulfill the requirements in the nine knowledge areas:

<table>
<thead>
<tr>
<th>Area</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rhetoric (2 courses)</td>
<td>6</td>
</tr>
<tr>
<td>Mathematical Reasoning</td>
<td>3</td>
</tr>
<tr>
<td>Individual and Social Behavior</td>
<td>3</td>
</tr>
<tr>
<td>Diverse Cultures</td>
<td>3</td>
</tr>
<tr>
<td>Literature/Performing Arts</td>
<td>3</td>
</tr>
<tr>
<td>Histories of Cultures and Societies</td>
<td>3</td>
</tr>
<tr>
<td>Science and Nature</td>
<td>3</td>
</tr>
<tr>
<td>Human Nature and Ethics (2 courses)</td>
<td>6</td>
</tr>
<tr>
<td>Theology (2 courses)</td>
<td>6</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td>36</td>
</tr>
</tbody>
</table>

Foreign Language BA Requirement

- Total Credit Hours

Foreign Language BA Requirement

- Total Credit Hours

The Klingler College of Arts and Sciences builds on the University Core of Common Studies through the college foreign language requirement for the bachelor of arts and by crafting bachelor of arts and bachelor of science degrees that integrate traditional Jesuit principles and educational structures with the demands of an increasingly globalized and rapidly changing world.

The College of Arts and Sciences Curricula are organized around these essential components:

- The development of fundamental skills of critical inquiry, analysis and expression.
- The development of appreciation for the spiritual and creative dimensions of human life and culture.
- The development of a responsible commitment to the broader social and political communities in which they live.

The college challenges students to embrace, to understand and to engage actively in the complexities of the world in which they live. Courses in the University Core of Common Studies drawn from the different disciplines within the humanities, natural sciences and social sciences provide different perspectives and multiple methods of inquiry. The University Core of Common Studies serves as the foundation for the intellectual growth of our students as they pursue their majors and professional disciplines, and as they develop into men and women who will dedicate their lives to the service of others.

Note: Not all UCCS approved courses fulfill the College of Arts and Sciences curriculum requirements. Students should cross check the UCCS approved course list with the Arts and Sciences requirements to know whether a course fulfills requirements in both the UCCS and the college.

Diverse Cultures

Students must complete one course (3 cr. hrs.) in the area of Diverse Cultures. Students may select any course approved for the University Core of Common Studies.

The study of diverse cultures facilitates the understanding of the multiple perspectives from which humans experience the world.

Students will be able to:

- Identify differences and similarities in communication, values, practices, and beliefs between one's own culture and other cultures.
- Explain how categories of human diversity (such as race, gender, ethnicity, and disability) influence personal identities and can create structural and institutional inequity.
- Critically reflect upon one's personal and cultural presuppositions and how these affect one's values and relationships.
English Rhetoric

Students must complete two courses (6 cr. hrs.) in the area of English Rhetoric. Students are required to complete ENGL 1001 Rhetoric and Composition 1 and ENGL 1002 Rhetoric and Composition 2. Non-native speakers of English are required to take a placement test at Marquette during orientation. Although COMM 1100 Contemporary Presentation is an approved course in the University Core of Common Studies, it does not fulfill the English Rhetoric requirement in the College of Arts and Sciences B.A. and B.S. degree curriculum.

The study of English Rhetoric prepares students for written and oral engagement not only with the academic work ahead of them but with the multiple literacies of a complex world in which globalization both connects and separates us in unprecedented ways. Students learn to communicate clearly and persuasively by developing their critical reading, writing, speaking, listening and thinking skills. Students develop the ability to establish an authoritative ethos, to consider their own positions in relation to those of their audiences, and to treat opposing views fairly. They learn to consider how their language - spoken and written, heard and read - is shaped by and may shape the intentions and actions of others. As a result, they learn how to express ideas, values and beliefs persuasively in a variety of academic contexts as well as in life beyond the university. Thus, the study of English Rhetoric offers students ways of understanding the world and acting within their communities, via language, for the greater good of all.

Students will be able to:

- Use the strategies of exposition, analysis, argument, evaluation and interpretation to analyze and compose texts.
- Produce well-organized, well-reasoned and well-supported written, visual and oral texts, given diverse purposes, multiple genres and a variety of audiences and contexts (e.g., thesis-support academic essays, open form essays for public audiences, business documents and oral presentations).
- Explain the importance of ethics in academic, civic and professional applications of rhetoric.

Foreign Languages

Students in the College of Arts and Sciences who complete the Bachelor of Arts degree satisfy the foreign language requirement according to the language studied. Students are required to demonstrate proficiency in a foreign language at the Intermediate level, according to the standard of the American Council for the Teaching of Foreign Languages. Upon entering the university students with previous study of a foreign language are assessed using a placement test. Those earning a score at the Intermediate-Low level are considered to have satisfied the foreign language requirement. Those who do not achieve proficiency through the test satisfy the requirement as follows:

Students studying French, German or Spanish* complete courses 1003, and 2001 (or 2003), or 2001 (or 2003) only, depending on their score.

Students studying Arabic, Chinese, Greek, Latin or Italian complete courses 1001 and 1002.

Note: The University Core of Common Studies does not have a foreign language requirement.

Note: The Bachelor of Science degree does not have a foreign language requirement.

The study of languages is the starting point for exploration and understanding of diverse cultures and traditions. Contacts between cultures happen in our own lives every day, and more often than ever before, knowing a second language is essential for being part of a society that reaches around the world. Our language programs in Arabic, Chinese, French, German, Italian and Spanish prepare students to interact effectively and engage other people and cultures face-to-face in the most human way possible. Students of Classical languages encounter Greek and Roman civilization as something that is very much a living part of our culture today (philosophy, theatre, poetry, medicine, politics and much more).

Students will be able to:

- Converse with ease and confidence when dealing with most routine tasks and social situations.
- Handle successfully many uncomplicated tasks and social situations related to work, school, recreation and personal interests.
- Begin to narrate and describe in the past, present and future time frames.
- Begin to describe how culture shapes and sustains identity, society and tradition.

Histories of Cultures and Societies

The completion of any of the History (HIST) courses listed in the University Core of Common Studies fulfills the college requirement.

History illuminates every aspect of the human experience - politics, economics, religion, social issues, art and war. Consequently, the introductory history courses that are part of the college curriculum help students begin to understand society in a comprehensive way. The study of history mines the storehouse of information about the past and orders that knowledge in logical and meaningful ways. It thus shapes our human memory and so equips us to think critically and constructively about the present and our connections to the past.

Students will be able to:

- Demonstrate an understanding of the discipline of history, in particular the application of historical methodologies in the formulation of plausible interpretations of human behavior in past centuries.
• Demonstrate an understanding of how societies develop over centuries through the complex interaction of socio-economic, political, religious and other cultural forces including historical memories constructed by successive generations.
• Demonstrate an understanding of continuities and differences between the past and the present.

Individual and Social Behavior

In order to fulfill the Individual and Social Behavior (ISB) requirement (3 cr. hrs.) in the University Core of Common Studies, the course must be chosen from the list of approved courses in the ISB knowledge area of the University Core of Common Studies offered by the College of Arts and Sciences. This is limited to the courses with the subject acronyms of: AFAS, CRLS, ECON, NASC, POSC, PSYC, SOWJ, SOCI and WGST.

Studying individual and social behavior through courses in such disciplines as Anthropology, Criminology and Law Studies, Economics, Political Science, Psychology, Social Welfare and Justice, and Sociology helps us to understand ourselves and the societies in which we live. Self-identity is constructed through a dynamic interplay of social interactions and societal structures. In turn, societies are similarly influenced by individual behaviors and attitudes, creating evolving forces that continually influence individuals. Each domain of the social sciences brings unique perspectives and contributions to the study of and interventions into individual and social behaviors that inform the others.

Students will be able to:

• Understand central concepts, theories and methods used to explain individual and social behavior in one of the social and cultural disciplines.
• Use knowledge of quantitative and qualitative scientific methods to analyze examples of individual and social behavior.
• Evaluate the applicability of scientific knowledge for understanding individual and social behavior in particular contexts.

Literature

In order to fulfill the Literature/Performing Arts (LPA) requirement (3 cr. hrs.) in the University Core of Common Studies, the course must be chosen from the list of approved literature courses in the LPA knowledge area in the University Core of Common Studies. This is limited to an English (ENGL) course or a foreign language literature course with the subject acronyms of: CLAS, FREN, GRMN, ITAL, LATN and SPAN. Only literature courses fulfill the College of Arts and Sciences literature requirement.

The study of literature in English, a foreign language or in English translation allows a student to explore the global diversity of literary forms and genres, of understanding the importance of language, imagination and creation. It promotes an appreciation for how literary and cultural texts can transform one’s understanding of self, others and communities. Through exposure to different methods of interpreting texts, students develop critical thinking skills, which are applicable to every aspect of their lives.

Students will be able to:

• Produce oral and written assessments of literary and cultural texts using the language and concepts of this discipline.
• Articulate how literary and cultural texts can transform one’s understanding of self, others and communities.
• Apply the methodologies of literary criticism to representative works of literature.

Mathematical Reasoning

In order to fulfill the Mathematical Reasoning (MR) requirement (3 cr. hrs.) in the University Core of Common Studies the course must be chosen from the list of approved courses in the MR knowledge area in the University Core of Common Studies offered by the College of Arts and Sciences. This is limited to the courses with the subject acronyms of: COSC, MATH, PSYC and SOCI.

Mathematical and quantitative reasoning skills are essential to being an effective problem solver. This knowledge allows one to think logically by using mathematical and quantitative principles to evaluate and solve problems, as well as to predict possible outcomes and solutions to questions in everyday life.

Students will be able to:

• Evaluate the effectiveness of the mathematical sciences in describing the world.
• Analyze quantitative information symbolically, graphically, numerically and verbally for the purpose of solving problems or drawing conclusions.
• Construct logical arguments in support of mathematical assertions.

Philosophy

Philosophy strives to integrate the understanding of all aspects of life into a coherent, rational whole. As such, it plays a crucial role in the “education of the whole person.” Philosophy as an investigation of the enduring questions facing humanity -- What is the human being?, What should the human being do?, What is the relationship of the human being to the world around him/herself? and What is the relationship of the human being to the transcendent? -- enables the student to be reflective about his/her life. The UCCS requires a two course sequence. In PHIL 1001, students are introduced to philosophical reflections on the nature of the human person and in PHIL 2310 they are introduced to the discipline of ethics. Philosophy enhances analytical, critical and interpretive capacities that are applicable to any subject-matter and in any human context, and cultivates the capacities.
and appetite for self-expression and reflection, for exchange and debate of ideas, for life-long learning and for dealing with problems for which there are no easy answers.

Students will be able to:

• Assess views of human nature in various philosophical traditions, including classic Greek and Catholic philosophical traditions.
• Argue for one of the major ethical theories over another in terms of philosophical cogency and practical outcome.
• Use philosophical reasoning to develop their own position on central issues in human nature and ethics, for example; the relation between mind and body, the problem of freedom and determinism, the spiritual and affective dimensions of human life, the extent of human knowledge, the justification of moral judgments and the elucidation of moral norms.

Science and Nature
In order to fulfill the Science and Nature (SN) requirement (3 cr. hrs.) in the University Core of Common Studies as well, the course must be chosen from the list of approved courses in the SN knowledge area in the University Core of Common Studies offered by the College of Arts and Sciences. This is limited to the courses with the subject acronyms of: ARSC, BIOL, CHEM and PHYS.

The study of science and nature through the disciplines of Biology, Chemistry or Physics provides students with an understanding of the processes, limitations and ethics of scientific inquiry. Knowledge of the fundamental concepts, tools and methodologies is essential in today’s science and technology driven society. The use of scientific inquiry to evaluate and interpret information helps non-science majors contribute to the solution of complex societal problems, such as: promoting and maintaining a sustainable planet and understanding the prevention and treatment of illnesses.

Students will be able to:

• Demonstrate knowledge of major concepts, tools and methodologies in one of the natural sciences.
• Understand processes, limitations and ethics of scientific inquiry.
• Use scientific inquiry to solve problems and evaluate information.

Theology
The study of Theology increases the student's awareness of the mystery and religious dimensions of human life. It enables the discernment of the perennially significant in the complexity and conflicting values of modern life, “men and women for others,” intellectually prepared to “find God in all things.” The aim of a theological foundation is to encourage students to become responsible citizens drawn to the intellectual life, knowledgeable about their own religious traditions and appreciative of the religious beliefs and practices of others in the human community.

The two-course-sequence begins with THEO 1001 Introduction to Theology, which introduces key sources and questions of theology at the same time that it provides the student with a necessary knowledge base.

The second course has the objective of exploring theological texts and developing the skills to understand representations of God, the religious community and the human person or investigating particular theological topics with discipline-specific methods and develop in students the critical habit of seeing into the depth-dimension of reality in light of religious faith and its historical effects on human societies.

Students will be able to:

• Describe theologically the basic content of the Catholic faith in relation to other Christian and religious traditions as well as other worldviews.
• Interpret theological texts and frameworks in their historical contexts.
• Articulate implications of Christian faith for growth in holiness and promotion of justice in the contemporary world.

Typical Programs for Bachelor of Science Degrees can be found on the Individual Program sections of this bulletin.

Typical Program for Bachelor of Arts Degree - Majors in the Humanities and Social-Behavioral Sciences

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<tr>
<th>Freshman</th>
<th>First Term</th>
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<th>Second Term</th>
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<td>ENGL 1002</td>
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<tr>
<td>Foreign Language</td>
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<td>UCCS-Science &amp; Nature</td>
<td>3-4</td>
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<tr>
<td>UCCS-Indiv. &amp; Soc. Behav.</td>
<td>3</td>
<td>Foreign Language</td>
<td>3-4</td>
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</tr>
<tr>
<td>UCCS-Hist. of Cultures &amp; Soc.</td>
<td>3</td>
<td>THEO 1001</td>
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12-13 12-14
### Sophomore

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<td>UCCS-Mathematical Reasoning</td>
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<td>PHIL 2310</td>
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<tr>
<td>UCCS-Lit./Performing Arts</td>
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<td>UCCS-Theology</td>
<td>3</td>
</tr>
<tr>
<td>Foreign Language or elective</td>
<td>3-4</td>
<td>Major and electives</td>
<td>9</td>
</tr>
<tr>
<td>PHIL 1001</td>
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<td></td>
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<tr>
<td>Major or elective</td>
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### Junior

<table>
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<th>First Term</th>
<th>Hours</th>
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<th>Hours</th>
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<td>UCCS-Diverse Cultures</td>
<td>3</td>
<td>Major and electives</td>
<td>15</td>
</tr>
<tr>
<td>Major and electives</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>15</td>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>

### Senior

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major and electives</td>
<td>18</td>
<td>Major and electives</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>18</td>
<td></td>
<td>18</td>
</tr>
</tbody>
</table>

Total credit hours: 120-124

**Note:** The course sequencing option above should be used as a guide. UCCS classes may be taken in a different sequence depending on the chosen major and the availability of courses.

**Note:** A minimum of 120 credits is required for the degree.
Pre-Professional Studies

Pre-Professional Studies and Scholars Programs

The Office of Pre-Professional Studies, sponsored by the Klingler College of Arts and Sciences, provides advice and service to students who wish to enter dental, law, medical or other health-related professional schools. Interested students should register with the Office of Pre-Professional Studies, Sensenbrenner Hall, Room 005.

Pre-dentistry

Course Requirements

Although specific course requirements vary among dental schools, the common basic requirements typically include:

<table>
<thead>
<tr>
<th>Area</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology</td>
<td>8-12</td>
</tr>
<tr>
<td>English</td>
<td>6</td>
</tr>
<tr>
<td>General Chemistry</td>
<td>8</td>
</tr>
<tr>
<td>Organic Chemistry</td>
<td>8</td>
</tr>
<tr>
<td>Physics</td>
<td>8</td>
</tr>
</tbody>
</table>

All required courses in biology, chemistry and physics must include laboratory work.

Generally, dental schools require a minimum of three years (90 semester hours) of undergraduate study.

For specific requirements of particular dental schools, refer to ADEA Official Guide to Dental Schools at ADEA.org (http://www.adea.org/Pages/default.aspx).

Dental Admission Test

All candidates for dental school must take the Dental Admission Test (DAT). This test is only offered in computerized form. Registration applications are available online at ada.org (http://www.ada.org).

There are four sections on the DAT, including Survey of Natural Sciences, Perceptual Ability, Reading Comprehension and Quantitative Reasoning. Prior to taking the DAT, students should complete at least:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1001</td>
<td>General Biology 1 3</td>
</tr>
<tr>
<td>BIOL 1002</td>
<td>General Biology 2 3</td>
</tr>
<tr>
<td>CHEM 1001</td>
<td>General Chemistry 1 4</td>
</tr>
<tr>
<td>CHEM 1002</td>
<td>General Chemistry 2 4</td>
</tr>
<tr>
<td>CHEM 2111</td>
<td>Organic Chemistry 1 4</td>
</tr>
<tr>
<td>or CHEM 2113</td>
<td>Organic Chemistry for Majors 1 4</td>
</tr>
<tr>
<td>CHEM 2112</td>
<td>Organic Chemistry 2 4</td>
</tr>
<tr>
<td>or CHEM 2114</td>
<td>Organic Chemistry for Majors 2 4</td>
</tr>
</tbody>
</table>

Total Credit Hours 22

Completion of these courses prior to taking DAT is also recommended:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 2001</td>
<td>Principles of Biological Investigation 3</td>
</tr>
<tr>
<td>BIOL 4101</td>
<td>Biochemistry and the Molecular Basis of Biology 3-4</td>
</tr>
<tr>
<td>or BISC 3213</td>
<td>Biochemistry</td>
</tr>
</tbody>
</table>

Total Credit Hours 6-7

Most students take the DAT between June after their sophomore year and April of their junior year.

Application

Application is made through the American Association of Dental Schools Application Service (AADSAS). AADSAS applications are available online at adea.org/aadsas (http://www.adea.org/DENTAL_EDUCATION_PATHWAYS/AADSAS/Pages/default.aspx).

Timing of the dental school application is critical. Students need to apply 15 months before entering dental school. Most students apply in June of their junior year. Late applications significantly affect students’ chances of admission to dental school.
Pre-dental Scholars Program
The Klingler College of Arts and Sciences participates in the Pre-dental Scholars Program. More detailed information can be found in the university Special Programs (p. 35) section of this bulletin.

Pre-law
Course Requirements
Law schools do not require specific college courses or majors. The Law School Admission Council recommends that students take rigorous and demanding courses that develop basic intellectual skills: reading, writing, and speaking, critical and logical thinking.

For information, see the pre-law adviser in the Office of Pre-Professional Studies, Senzenbrenner Hall, 005.

Law School Admission Test
Almost all law schools require applicants to take the Law School Admission Test (LSAT). This test is offered four times a year, and should normally be taken at least one full year before entering law school.

Application
Almost all law schools require applicants to register with the Law School Admission Council’s (LSAC) Credential Assembly Service (CAS) via their website, www.lsac.org (http://www.lsac.org). The majority of law school applicants apply online. Although deadlines vary from school to school, it is generally advantageous to complete applications early. Application occurs within one year in advance of desired entrance.

Pre-law Scholars Program
The Klingler College of Arts and Sciences participates in the Pre-law Scholars Program. More detailed information can be found in the university Special Programs (p. 37) section of this bulletin.

Pre-medicine
Course Requirements
Although specific course requirements vary among medical schools, the common basic requirements typically include:

<table>
<thead>
<tr>
<th>Area</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biochemistry</td>
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</tr>
<tr>
<td>Biology</td>
<td>8-12</td>
</tr>
<tr>
<td>English</td>
<td>6</td>
</tr>
<tr>
<td>General Chemistry</td>
<td>8</td>
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<tr>
<td>Organic Chemistry</td>
<td>8</td>
</tr>
<tr>
<td>Physics</td>
<td>8</td>
</tr>
</tbody>
</table>

All required courses in biology, chemistry and physics must include laboratory work.

For requirements of specific medical schools, refer to the Medical School Admission Requirements in the “U.S. and Canadian Medical Schools” guide, which is available for purchase online at the Association of American Medical Colleges’ (AAMC) website at aamc.org (https://www.aamc.org). Most U.S. medical schools require a minimum of 90 semester hours of undergraduate work and most give preference to students who finish a bachelor’s degree before entering medical school.

Medical College Admission Test
Medical schools require the Medical College Admission Test (MCAT). This computer-based test is administered multiple times between January–September. Registration is online at the Association of American Medical Colleges’ website at aamc.org (https://www.aamc.org).

The MCAT is divided into four sections: Chemical and Physical Foundations of Biological Systems, Critical Analysis and Reasoning Skills, Biological and Biochemical Foundations of Living Systems and Psychological, Social and Biological Foundations of Behavior. Before taking the MCAT, students should complete:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1001 General Biology 1</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 1002 General Biology 2</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 4101 or BISC 3213 Biochemistry and the Molecular Basis of Biology</td>
<td>3-4</td>
</tr>
<tr>
<td>CHEM 1001 General Chemistry 1</td>
<td>4</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
</tr>
<tr>
<td>------------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td>CHEM 1002</td>
<td>General Chemistry 2</td>
</tr>
<tr>
<td>or CHEM 1014</td>
<td>General Chemistry 2 for Majors</td>
</tr>
<tr>
<td>CHEM 2111</td>
<td>Organic Chemistry 1</td>
</tr>
<tr>
<td>or CHEM 2113</td>
<td>Organic Chemistry for Majors 1</td>
</tr>
<tr>
<td>CHEM 2112</td>
<td>Organic Chemistry 2</td>
</tr>
<tr>
<td>or CHEM 2114</td>
<td>Organic Chemistry for Majors 2</td>
</tr>
<tr>
<td>PHYS 1001</td>
<td>General Physics 1</td>
</tr>
<tr>
<td>or PHYS 1003</td>
<td>General Physics with Introductory Calculus 1</td>
</tr>
<tr>
<td>PHYS 1002</td>
<td>General Physics 2</td>
</tr>
<tr>
<td>or PHYS 1004</td>
<td>General Physics with Introductory Calculus 2</td>
</tr>
<tr>
<td>PSYC 1001</td>
<td>General Psychology</td>
</tr>
<tr>
<td>SOCI 1001</td>
<td>Principles of Sociology</td>
</tr>
<tr>
<td></td>
<td><strong>Total Credit Hours</strong></td>
</tr>
</tbody>
</table>

A physiology course and BIOL 2001 Principles of Biological Investigation is also recommended for the MCAT. Most students at Marquette take the MCAT in May or June of their junior year.

**Application**

Application for most U.S. allopathic medical schools is made through the American Medical College Application Service (AMCAS). More information can be found at aamc.org/amcas (https://www.aamc.org/students/applying/amcas). Students applying to U.S. osteopathic medical schools use the American Association of Colleges of Osteopathic Medicine Application Service (AACOMAS). More information can be found at aacom.org (http://www.aacom.org/Pages/default.aspx).

Timing of medical school applications is critical. Students need to apply 15 months before entering medical school. Most students apply in June of their junior year. Late applications significantly affect students' chances of admission to medical school.
College Resources

The Klingler College of Arts and Sciences is by its very nature the heart of Marquette University. The tie that binds our more than 250 faculty and 30 majors of study is the opportunity for exploration. We challenge students to explore many ways of understanding, doing and succeeding – regardless of the major they decide to pursue.

We recognize that as our students are faced with many challenges and opportunities. To assist students in their transition from high school to their college academic career, we offer numerous resources, which we encourage students to use. They help to develop the academic skills that are needed to succeed, as well as introduce students to the many faculty members, advisers and staff members throughout the college that are available to guide them as they discover the value of a liberal arts education.

Academic Success Workshops

The Klingler College of Arts and Sciences Advising Center sponsors a series of workshops to help first-year students achieve academic success. These workshops are offered every semester and focus on such topics as: stress management, major exploration, study skills, test taking techniques and time management.

Advising Center (http://www.marquette.edu/as/advising_index.shtml)

The Klingler College of Arts and Sciences Advising Center is a team of professional academic advisers committed to serving students and helping them achieve success. This award-winning center offers comprehensive assistance for each student's development and is open five days a week all year long.

Students are assigned an adviser within days of arriving at Marquette and receive service and support in a wide variety of ways. The advisers can assist students in choosing a major, determining career and academic goals, developing study skills, selecting courses and class schedule, referring them to other campus resources and preparing them for professional school.

Explore the Majors Fair

The Klingler College of Arts and Sciences Advising Center sponsors the annual “Explore the Majors” Fair to encourage and assist freshmen and sophomores who are undecided about their areas of study to explore the many majors and minors in the College. The “Explore the Majors” Fair provides an excellent opportunity for students to discuss majors and minors with faculty representatives, upperclassmen and alumni from every major area in the Klingler College of Arts and Sciences.

First-Year English Program (http://www.marquette.edu/english/first-year/index.shtml)

This program is designed to help students learn to communicate effectively. To that end, the program develops students’ reading, writing, speaking and listening skills via critical literacy, which is the ability to express ideas, values and beliefs effectively in a variety of situations. To foster Critical Literacy, the FYE Program offers a two-course writing sequence: ENGL 1001 Rhetoric and Composition 1, Academic Literacy and ENGL 1002 Rhetoric and Composition 2, Public Sphere Literacy.

First-Year Seminar: Introduction to Inquiry

ARSC 1953 First-Year Seminar: Introduction to Inquiry is a one-credit seminar wherein a small group of students (typically 10) meet with their faculty adviser once a week for the first 12 weeks of the fall semester. Students benefit from the two components of the seminar. First, students are encouraged to deepen the intellectual skills required to be successful at the university level. Each course meeting centers on the discussion of a short text, using specific rules of inquiry and dialogue that emphasize argumentation, listening and finding evidence. The second component addresses issues of academic advising and adjustment to university life. Potential topics include course selection, time-management, test taking, life in the dorm, campus resources, socio-emotional adjustment to the move from home, choosing a major, etc. The faculty leader serves as each student's pre-major adviser.

Norman H. Ott Memorial Writing Center (http://www.marquette.edu/english/writingcenter)

The writing center offers one-to-one tutoring to all Marquette students, staff and faculty on all kinds of writing projects, from first year English papers to graduate theses, from history papers to personal statements for law school. The center is staffed with mix of graduate students who usually teach a section of ENGL 1001 Rhetoric and Composition 1 or ENGL 1002 Rhetoric and Composition 2 and undergraduate peer tutors.

Student Organizations and Honors Societies

The Helen Way Klingler College of Arts and Sciences offers students a wide array of co-curricular opportunities to extend the value of their education. Student organizations and honor societies affiliated with the college and/or advised by one of our faculty members include:

Student Organizations

- Air Force Power Booster Club
- Anthropology Club
- Arnold Air Society (Professional Air Force ROTC Service Organization)
• Arts and Sciences Student Council
• Association of Social Welfare and Justice Students
• Campus Crusade for Christ
• Classical Fencing Society
• Criminology & Law Society
• Economics Association
• Gay/Straight Alliance
• International Affairs Society
• Italian Club
• Jeannette Kapus Silver Wings Chapter (Professional Organization Supporting the U.S. AirForce)
• Knights of Columbus
• Kuk Sool Won of Marquette
• Le Cercle Francais (French Club)
• Linguistics Club
• Medieval Society
• Muslim Student Association
• Native American Student Association
• Navy Nurse Corps
• Philosophy Club
• Physics Club
• Pre-law Society
• Psychology Students for Diversity
• Writing Society

Honor Societies
• Alpha Epsilon Delta (Pre-health Professions Honor Society)
• Delta Phi Alpha (German Honor Society)
• Eta Sigma Phi (Classics Honor Society)
• Phi Alpha Theta (History Honor Society)
• Phi Sigma Tau (Philosophy Honor Society)
• Pi Delta Phi (French Honor Society)
• Pi Mu Epsilon (Mathematics Honor Society)
• Pi Sigma Alpha (Political Science Honor Society)
• Psi Chi (Psychology Honor Society)
• Sigma Delta Pi (Hispanic Honor Society)
• Sigma Tau Delta (English Honor Society)
• Theta Alpha Kappa (Theology Honor Society)
• Upsilon Pi Epsilon (International Honor Society for the Computing and Information Disciplines)
Biological Sciences

Chairperson: Edward Blumenthal, Ph.D.
Department of Biological Sciences website (http://www.marquette.edu/biology)

The Department of Biological Sciences offers or participates in six different majors, five of which lead to a B.S. degree and one which leads to a B.A. degree. The purpose of all of these degree programs is to provide instruction in the diverse disciplines that make up modern biology. A major emphasis of these degree programs is to familiarize students with the practice of designing, performing and analyzing biological experiments; toward this goal, stand-alone laboratory courses taught by faculty are a central component of the curriculum for each major. The degree programs teach students critical thinking skills and prepare them for a wide variety of careers including medicine, dentistry, research, biotechnology, pharmacy/pharmacology, public health, and environmental and sustainability studies.

The major in Biological Sciences (BSCI) provides a comprehensive education in biology, including courses in cell biology, genetics, evolutionary biology, physiology, neurobiology, biochemistry, molecular biology, immunobiology, ecology, microbiology and plant biology.

The Physiological Sciences major (PHSC) offers students a course of study that is more focused on human and animal structure and function. After introductory courses in cell biology and genetics, students in this major concentrate on physiology, neurobiology, and anatomy. Concentrations within this major are specifically designed for Direct-admit Physical Therapy (D.P.T.) students and for students in the Predental Scholars program.

The major in Biochemistry and Molecular Biology (BIMB) is offered jointly with the Department of Chemistry. Courses in biochemistry, cell biology, genetics, physical chemistry, and quantitative analysis allow students to understand both complex biological phenomena and the underlying chemical mechanisms.

Students in the College of Education with a desire to teach high school biology can earn a B.S. degree with a second major, Biology for the Professions.

Bioinformatics is a field that lies at the intersection of biology, statistics, and computer science, which is focused on the generation and analysis of large biological datasets. The interdisciplinary Bioinformatics major (INBI), offered jointly with the Department of Mathematics, Statistics & Computer Science, provides sufficient depth in both biology and computer science in order to approach problems in bioinformatics from the perspective of both parent fields Biology and Computer Science. The program is designed to prepare individuals to use the computational tools of bioinformatics to solve problems or analyze datasets in biological sciences. For more information about the interdisciplinary Bioinformatics major (INBI), visit the College of Arts and Sciences Interdisciplinary Majors and Minors section of the Undergraduate Bulletin.

The interdisciplinary major in Environmental Studies (INES), leads to a B.A. degree and prepares students to address pressing environmental issues using an interdisciplinary approach. The curriculum of this major allows students to understand the science of the environment and the political, social, economic, philosophical and ethical issues related to restoring and protecting the environment. This is an ideal major for students who intend to pursue a career that focuses on the environment (e.g., environmental management, restoration, mitigation, consulting, policy, economics), or who intend to pursue graduate or professional school in environmental science, law, business, policy, economics, philosophy, theology or ethics. For more information about the interdisciplinary Environmental Studies major (INES), visit the College of Arts and Sciences Interdisciplinary Majors and Minors section of the Undergraduate Bulletin.

In addition, together with the Graduate School of Management, the Department of Biological Science offers a five-year B.S./M.B.A. accelerated degree program.

Notes:

• BIOL 1003 Biology Matters is strongly recommended for all students who are considering a major in Biological Sciences, Biochemistry and Molecular Biology, and Physiological Sciences. This is a one credit survey course to introduce students to diverse career options in the area of Biological Sciences.

• With recent changes to the MCAT exam, pre-health majors are advised to take the following courses as part of their undergraduate program: BIOL 4101 Biochemistry and the Molecular Basis of Biology, MATH 4740 Biostatistical Methods and Models, PSYC 1001 General Psychology and SOCI 1001 Principles of Sociology.

Major in Biological Sciences

The major in Biological Sciences consists of four required courses (12 credits), three lab courses (8-9 credits) and five elective courses (15-16 credits) for a total of 35-37 credit hours as well as the cognate course requirements (30-32 credits) in chemistry, physics, and mathematics or computer science chosen from the lists below.

Notes:

• Majors are encouraged to take upper-division lab courses, although one lower-division lab course may be used to satisfy this requirement.

For elective courses*

• Selection can also be from any laboratory courses not previously taken, including BIOL 4987 or a second BIOL 4956.
- A maximum of one course from the Department of Biomedical Sciences in a subject that is not offered by the Department of Biological Sciences.
- By consent of instructor and departmental chairperson, any biological sciences graduate course.

### Required:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1001</td>
<td>General Biology 1</td>
</tr>
<tr>
<td>BIOL 1002</td>
<td>General Biology 2</td>
</tr>
<tr>
<td>BIOL 2201</td>
<td>Genetics</td>
</tr>
<tr>
<td>BIOL 2301</td>
<td>Cell Biology</td>
</tr>
</tbody>
</table>

### Lab Courses - Choose three of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1101</td>
<td>Foundations in Biological Inquiry</td>
</tr>
<tr>
<td>or BIOL 2001</td>
<td>Principles of Biological Investigation</td>
</tr>
<tr>
<td>BIOL 3202</td>
<td>Experimental Genetics</td>
</tr>
<tr>
<td>BIOL 3302</td>
<td>Experimental Cell Biology</td>
</tr>
<tr>
<td>BIOL 3402</td>
<td>Experimental Ecology and Field Biology</td>
</tr>
<tr>
<td>BIOL 3502</td>
<td>Experimental Neurobiology</td>
</tr>
<tr>
<td>BIOL 3602</td>
<td>Experimental Vertebrate Anatomy and Development</td>
</tr>
<tr>
<td>BIOL 3702</td>
<td>Experimental Physiology</td>
</tr>
<tr>
<td>BIOL 3802</td>
<td>Experimental Microbiology</td>
</tr>
<tr>
<td>BIOL 4102</td>
<td>Experimental Molecular Biology</td>
</tr>
<tr>
<td>BIOL 4956</td>
<td>Laboratory Research Project in Biological Sciences</td>
</tr>
<tr>
<td>or BIOL 4987</td>
<td>Applying the Internship Experience</td>
</tr>
</tbody>
</table>

*Electives - Choose five of the following:*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 2401</td>
<td>Ecology</td>
</tr>
<tr>
<td>BIOL 3401</td>
<td>Advanced Ecology</td>
</tr>
<tr>
<td>BIOL 3404</td>
<td>Evolutionary Biology</td>
</tr>
<tr>
<td>BIOL 3406</td>
<td>Plant Biology</td>
</tr>
<tr>
<td>BIOL 3501</td>
<td>Neurobiology</td>
</tr>
<tr>
<td>BIOL 3601</td>
<td>Animal Development</td>
</tr>
<tr>
<td>BIOL 3701</td>
<td>Human Physiology</td>
</tr>
<tr>
<td>BIOL 3801</td>
<td>Microbiology</td>
</tr>
<tr>
<td>BIOL 4101</td>
<td>Biochemistry and the Molecular Basis of Biology *</td>
</tr>
<tr>
<td>BIOL 4201</td>
<td>Genomics and Bioinformatics</td>
</tr>
<tr>
<td>BIOL 4703</td>
<td>Exercise Physiology</td>
</tr>
<tr>
<td>BIOL 4806</td>
<td>Immunobiology</td>
</tr>
<tr>
<td>BIOL 4995</td>
<td>Independent Study in Biology</td>
</tr>
</tbody>
</table>

### Total Credit Hours: 35-37

### Cognate Course Requirements:

#### Chemistry courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit</th>
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<tbody>
<tr>
<td>CHEM 1001</td>
<td>General Chemistry 1</td>
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</tr>
<tr>
<td>or CHEM 1013</td>
<td>General Chemistry 1 for Majors</td>
<td></td>
</tr>
<tr>
<td>CHEM 1002</td>
<td>General Chemistry 2</td>
<td>4</td>
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<tr>
<td>or CHEM 1014</td>
<td>General Chemistry 2 for Majors</td>
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</tr>
<tr>
<td>CHEM 2111</td>
<td>Organic Chemistry 1</td>
<td>4</td>
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<tr>
<td>or CHEM 2113</td>
<td>Organic Chemistry for Majors 1</td>
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</tr>
<tr>
<td>CHEM 2112</td>
<td>Organic Chemistry 2</td>
<td>4</td>
</tr>
<tr>
<td>or CHEM 2114</td>
<td>Organic Chemistry for Majors 2</td>
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#### Physics courses:

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<th>Course Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
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<td>PHYS 1001</td>
<td>General Physics 1</td>
<td>4</td>
</tr>
<tr>
<td>or PHYS 1003</td>
<td>General Physics with Introductory Calculus 1</td>
<td></td>
</tr>
<tr>
<td>PHYS 1002</td>
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<td>4</td>
</tr>
<tr>
<td>or PHYS 1004</td>
<td>General Physics with Introductory Calculus 2</td>
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</table>

#### Mathematics and Computer Science:
### Typical Program for Biological Science Majors

#### Freshman

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1001</td>
<td>3</td>
<td>BIOL 1002</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1001 or 1013</td>
<td>4</td>
<td>CHEM 1002 or 1014</td>
<td>4</td>
</tr>
<tr>
<td>ENGL 1001</td>
<td>3</td>
<td>ENGL 1002</td>
<td>3</td>
</tr>
<tr>
<td>UCCS-Indiv. Soc. Behavior*</td>
<td>3</td>
<td>MATH 1410#</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>BIOL 1101 (Optional)</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>BIOL 1003 (Recommended)</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
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<td></td>
<td><strong>16</strong></td>
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</tbody>
</table>

#### Sophomore

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 2001 (or elective)*</td>
<td>3</td>
<td>BIOL 2201</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 2301</td>
<td>3</td>
<td>CHEM 2112 or 2114</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 2111 or 2113</td>
<td>4</td>
<td>THEO 1001</td>
<td>3</td>
</tr>
<tr>
<td>MATH 4740**</td>
<td>3</td>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 1001</td>
<td>3</td>
<td>UCCS-Hist. of Cultures &amp; Soc.</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
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<td><strong>16</strong></td>
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</table>

#### Junior

<table>
<thead>
<tr>
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<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
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<tbody>
<tr>
<td>BIOL elective  ***</td>
<td>3</td>
<td>BIOL elective</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 1001 or 1003</td>
<td>4</td>
<td>BIOL lab</td>
<td>3</td>
</tr>
<tr>
<td>UCCS-Lit./Performing Arts</td>
<td>3</td>
<td>PHYS 1002 or 1004</td>
<td>4</td>
</tr>
<tr>
<td>PHIL 2310</td>
<td>3</td>
<td>UCCS-Theology</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
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<td><strong>16</strong></td>
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#### Senior

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL elective</td>
<td>3</td>
<td>BIOL elective</td>
<td>3</td>
</tr>
<tr>
<td>BIOL elective (or BIOL lab)</td>
<td>3</td>
<td>BIOL lab (or BIOL elective)</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>6</td>
<td>Electives</td>
<td>6</td>
</tr>
</tbody>
</table>

---

# For students applying to medical school, BIOL 4101 Biochemistry and the Molecular Basis of Biology is recommended as a Biological Sciences elective, MATH 4740 Biostatistical Methods and Models is recommended as a math elective, PSYC 1001 General Psychology is recommended to satisfy the University Core Individual and Social Behavior (ISB) requirement, and SOCI 1001 Principles of Sociology is recommended as a general elective.

## If choosing statistics as a MATH course, MATH 4740 Biostatistical Methods and Models is strongly recommended. PSYC 2001 Psychological Measurements and Statistics or SOCI 2060 Social Statistics may also fulfill this requirement.
Note: A minimum of 120 credits is required for the degree.

+ Students who take BIOL 1101 Foundations in Biological Inquiry cannot take BIOL 2001 Principles of Biological Investigation.
# Students wishing to take MATH 1450 instead of MATH 1410 are recommended to take Math in the fall term and a UCCS Ind. Soc. Behavior course in the spring term.
* PSYC 1001 General Psychology and SOCI 1001 Principles of Sociology both satisfy the University Core Individual and Social Behavior (ISB) requirement and are both recommended for students considering medical school.
** For students intending to apply to medical school, MATH 4740 Biostatistical Methods and Models is recommended as a math elective.
*** For students intending to apply to medical school, BIOL 4101 Biochemistry and the Molecular Basis of Biology is recommended as a Biological Sciences Elective.

Major in Biological Sciences: Pre-dental Scholars

This major in biological sciences is open to students who were directly admitted to the Pre-dental Scholars Program or students who were accepted into the program after their freshman year. In this program, students complete three years of courses in the College of Arts and Sciences for a minimum of 96-97 credits (depending on courses) by the end of the third year. The fourth year of the program consists of Dental School course requirements, which typically consist of approximately 44 credit hours.

The major consists of six required biology courses (17-18 credit hours), one laboratory course (3 credit hours) and the first year Dental School course requirements, as well as eight cognate course requirements (30-31 credit hours) in chemistry, mathematics and physics chosen from the lists below. Certain courses in the first year dental curriculum are counted toward completion of the major in Biological Sciences (BISC 7410 Microbiology, BISC 7514 General Histology, BISC 7515 Biomedical Systems 1, BISC 7516 Biomedical Systems 2 and DEIN 7121 Oral Biology); in addition, other courses (i.e. DEIN 7114 Introduction to Clinical Practice 1 DEIN 7118 Dental Rounds 1, DEIN 7124 Introduction to Clinical Practice 2, DEIN 7128 Dental Rounds 2, DEGD 7123 Dental Anatomy and Occlusion 1, DEGD 7123 Dental Anatomy and Occlusion 2) count toward the total credit hour requirement for the Bachelor of Science degree as well as for dental school requirements. After successful completion of these dental courses a B.S. degree is conferred.

Note:

• Dental curriculum for all dental students is determined by the Dental School and is subject to change.
• Students must achieve a grade of C or better in those courses in order to count them toward the B.S. completion.

Required Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1001</td>
<td>General Biology 1</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 1002</td>
<td>General Biology 2</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 2001</td>
<td>Principles of Biological Investigation</td>
<td>2-3</td>
</tr>
<tr>
<td>or BIOL 1101</td>
<td>Foundations in Biological Inquiry</td>
<td></td>
</tr>
<tr>
<td>BIOL 2201</td>
<td>Genetics</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 2301</td>
<td>Cell Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 4101</td>
<td>Biochemistry and the Molecular Basis of Biology</td>
<td>3</td>
</tr>
</tbody>
</table>

Laboratory Courses - Choose one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 3202</td>
<td>Experimental Genetics</td>
</tr>
<tr>
<td>BIOL 3302</td>
<td>Experimental Cell Biology</td>
</tr>
<tr>
<td>BIOL 3402</td>
<td>Experimental Ecology and Field Biology</td>
</tr>
<tr>
<td>BIOL 3502</td>
<td>Experimental Neurobiology</td>
</tr>
<tr>
<td>BIOL 3602</td>
<td>Experimental Vertebrate Anatomy and Development</td>
</tr>
<tr>
<td>BIOL 3702</td>
<td>Experimental Physiology</td>
</tr>
<tr>
<td>BIOL 3802</td>
<td>Experimental Microbiology</td>
</tr>
<tr>
<td>BIOL 4102</td>
<td>Experimental Molecular Biology</td>
</tr>
<tr>
<td>BIOL 4956</td>
<td>Laboratory Research Project in Biological Sciences</td>
</tr>
</tbody>
</table>
Cognate Course Requirements:

Chemistry Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>CHEM 1001</td>
<td>General Chemistry 1</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 1013</td>
<td>General Chemistry 1 for Majors</td>
<td></td>
</tr>
<tr>
<td>CHEM 1002</td>
<td>General Chemistry 2</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 1014</td>
<td>General Chemistry 2 for Majors</td>
<td></td>
</tr>
<tr>
<td>CHEM 2111</td>
<td>Organic Chemistry 1</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 2113</td>
<td>Organic Chemistry for Majors 1</td>
<td></td>
</tr>
<tr>
<td>CHEM 2112</td>
<td>Organic Chemistry 2</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 2114</td>
<td>Organic Chemistry for Majors 2</td>
<td></td>
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</table>

Mathematics Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>MATH 1410</td>
<td>Calculus for the Biological Sciences</td>
<td>3-4</td>
</tr>
<tr>
<td>MATH 1450</td>
<td>Calculus 1</td>
<td></td>
</tr>
<tr>
<td>MATH 4740</td>
<td>Biostatistical Methods and Models #²</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1700</td>
<td>Modern Elementary Statistics</td>
<td></td>
</tr>
</tbody>
</table>

Physics Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 1001</td>
<td>General Physics 1</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 1003</td>
<td>General Physics with Introductory Calculus 1</td>
<td></td>
</tr>
<tr>
<td>PHYS 1002</td>
<td>General Physics 2</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 1004</td>
<td>General Physics with Introductory Calculus 2</td>
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</tbody>
</table>

Total Credit Hours: 30-31

#² MATH 4740 Biostatistical Methods and Models is strongly recommended. PSYC 2001 Psychological Measurements and Statistics or SOCI 2060 Social Statistics are accepted.

Typical Program for Biological Sciences Major - Pre-dental Scholars Curriculum

**Freshman**

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1001</td>
<td>3</td>
<td>BIOL 1002</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1001 or 1013</td>
<td>4</td>
<td>CHEM 1002 or 1014</td>
<td>4</td>
</tr>
<tr>
<td>ENGL 1001</td>
<td>3</td>
<td>ENGL 1002</td>
<td>3</td>
</tr>
<tr>
<td>UCCS-Indiv. &amp; Soc. Behav.</td>
<td>3</td>
<td>MATH 1410*</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
<td>BIOL 1101 (Optional) or Elective*</td>
<td>2-3</td>
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<tr>
<td></td>
<td></td>
<td>BISC 1030 (Recommended)</td>
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<tr>
<td></td>
<td>16</td>
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</tr>
</tbody>
</table>

**Sophomore**

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 2001 (or elective)*</td>
<td>3</td>
<td>BIOL 2201</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 2301</td>
<td>3</td>
<td>CHEM 2112 or 2114</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 2111 or 2113</td>
<td>4</td>
<td>THEO 1001</td>
<td>3</td>
</tr>
<tr>
<td>MATH 4740</td>
<td>3</td>
<td>UCCS-Hist. of Cultures &amp; Soc.</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 1001</td>
<td>3</td>
<td>UCCS-Lit./Performing Arts</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td></td>
<td>16</td>
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</tbody>
</table>

**Junior**

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 4101</td>
<td>3</td>
<td>Biology lab (upper division)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
UCCS-Diverse Cultures 3 PHYS 1002 or 1004 4
PHYS 1001 or 1003 4 Elective 3
UCCS-Theology 3 Elective 3
Elective 3 PHIL 2310 3

Total credit hours: 16 16

* Must complete a minimum of 96 or 97 credits, depending on number of electives.

* Students wishing to take MATH 1450 instead of MATH 1410 are recommended to take Math in the fall term and a UCCS Ind. Soc. Behavior course in the spring term.

+ Students who take BIOL 1101 Foundations in Biological Inquiry cannot take BIOL 2001 Principles of Biological Investigation.

Year One - Dental Curriculum

<table>
<thead>
<tr>
<th>First Year</th>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>Year One - Dental Curriculum</td>
<td>BISC 7410</td>
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<td>BISC 7516</td>
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<td></td>
<td>BISC 7514</td>
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<td>BISC 7517</td>
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<td>BISC 7515</td>
<td>3</td>
<td>BISC 7518</td>
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<td></td>
<td>DEGD 7112</td>
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<td>DEGD 7122</td>
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<tr>
<td></td>
<td>DEGD 7113</td>
<td>2</td>
<td>DEGD 7123</td>
<td>2</td>
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<tr>
<td></td>
<td>DEIN 7110</td>
<td>3</td>
<td>DEIN 7120</td>
<td>3</td>
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<td></td>
<td>DEIN 7114</td>
<td>3</td>
<td>DEIN 7121</td>
<td>4</td>
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<td></td>
<td>DEIN 7118</td>
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<td>DEIN 7124</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>DEIN 7128</td>
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</tbody>
</table>

Total credit hours: 50

Note: Dental curriculum for all dental students is determined by the Dental School. This represents a sample year one schedule and is subject to change. The curriculum for years two through four are also the same as other dental students. Certain courses in the first year dental curriculum are counted toward completion of the bachelor of science degree as well as for dental school requirements. Students must achieve a grade of C or better in those courses in order to count them toward the B.S. completion.

Biological Sciences B.S. /M.B.A. Accelerated Degree Programs

The Department of Biological Sciences together with the Graduate School of Management offers an accelerated degree program which allow students to earn their B.S. in Biological Sciences, and a master of business administration (M.B.A.), all within in a five-year time period.

During the first four years of the program, students complete both their coursework requirements for their B.S. degree and the necessary prerequisite courses for the M.B.A. degree in the College of Business Administration. In addition, undergraduate students begin their M.B.A. graduate work in their senior year by taking two graduate level courses.

To be considered for admission to the B.S./M.B.A. five-year program, applicants must formally apply to the Graduate School of Management during their junior year at Marquette University. For more detailed information and details of a typical five-year coursework plan, please refer to the Graduate School of Management Bulletin and contact the Department of Biological Sciences or the Graduate School of Management.

Major in Biology for the Professions

Biology for the Professions is a second major for students in the College of Education who wish to teach biology at the high school level. The major consists of five required courses (14-15 credit hours), one additional Biology course (3-4 credit hours), one lab course (3 credit hours) and three elective courses (9 credit hours) for a total of 29-31 credit hours as well as the cognate course requirements in chemistry, physics, mathematics or computer science (22 credit hours) chosen from the lists below.
Required:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1001</td>
<td>General Biology 1</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 1002</td>
<td>General Biology 2</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 2001</td>
<td>Principles of Biological Investigation</td>
<td>2-3</td>
</tr>
<tr>
<td>or BIOL 1101</td>
<td>Foundations in Biological Inquiry</td>
<td></td>
</tr>
<tr>
<td>BIOL 2201</td>
<td>Genetics</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 2301</td>
<td>Cell Biology</td>
<td>3</td>
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</table>

Choose one additional course from the following: 3-4

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>BIOL 3406</td>
<td>Plant Biology</td>
</tr>
<tr>
<td>BIOL 3701</td>
<td>Human Physiology</td>
</tr>
<tr>
<td>BIOL 3801</td>
<td>Microbiology</td>
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</table>

Lab Courses - Choose one of the following: 3

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>BIOL 3202</td>
<td>Experimental Genetics</td>
</tr>
<tr>
<td>BIOL 3302</td>
<td>Experimental Cell Biology</td>
</tr>
<tr>
<td>BIOL 3402</td>
<td>Experimental Ecology and Field Biology</td>
</tr>
<tr>
<td>BIOL 3502</td>
<td>Experimental Neurobiology</td>
</tr>
<tr>
<td>BIOL 3602</td>
<td>Experimental Vertebrate Anatomy and Development</td>
</tr>
<tr>
<td>BIOL 3702</td>
<td>Experimental Physiology</td>
</tr>
<tr>
<td>BIOL 3802</td>
<td>Experimental Microbiology</td>
</tr>
<tr>
<td>BIOL 4102</td>
<td>Experimental Molecular Biology</td>
</tr>
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</table>

* Electives - Choose three of the following: 9

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1406</td>
<td>Plants, Pathogens and People</td>
</tr>
<tr>
<td>BIOL 1410</td>
<td>Biology of Human Disease</td>
</tr>
<tr>
<td>BIOL 2401</td>
<td>Ecology</td>
</tr>
<tr>
<td>BIOL 3401</td>
<td>Advanced Ecology</td>
</tr>
<tr>
<td>BIOL 3404</td>
<td>Evolutionary Biology</td>
</tr>
<tr>
<td>BIOL 3406</td>
<td>Plant Biology</td>
</tr>
<tr>
<td>BIOL 3501</td>
<td>Neurobiology</td>
</tr>
<tr>
<td>BIOL 3601</td>
<td>Animal Development</td>
</tr>
<tr>
<td>BIOL 3701</td>
<td>Human Physiology</td>
</tr>
<tr>
<td>BIOL 3801</td>
<td>Microbiology</td>
</tr>
<tr>
<td>BIOL 4101</td>
<td>Biochemistry and the Molecular Basis of Biology</td>
</tr>
<tr>
<td>&amp; CHEM 2112</td>
<td>and Organic Chemistry 2 (CHEM 2112 prerequisite taken concurrently)</td>
</tr>
<tr>
<td>BIOL 4201</td>
<td>Genomics and Bioinformatics</td>
</tr>
<tr>
<td>BIOL 4806</td>
<td>Immunobiology</td>
</tr>
</tbody>
</table>

Total Credit Hours 29-31

Notes: * Electives

- Any lab course from the lab course listing above not previously taken.
- With consent of instructor and department chairperson any Biological Sciences graduate course.
- One Biomedical Sciences course not offered by Biological Sciences.
- Courses offered by other departments with consent of department chairperson.

Cognate courses: six courses required:

Chemistry: three courses required

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 1001</td>
<td>General Chemistry 1</td>
<td>4</td>
</tr>
<tr>
<td>or CHEM 1013</td>
<td>General Chemistry 1 for Majors</td>
<td></td>
</tr>
<tr>
<td>CHEM 1002</td>
<td>General Chemistry 2</td>
<td>4</td>
</tr>
<tr>
<td>or CHEM 1014</td>
<td>General Chemistry 2 for Majors</td>
<td></td>
</tr>
<tr>
<td>CHEM 2111</td>
<td>Organic Chemistry 1</td>
<td>4</td>
</tr>
<tr>
<td>or CHEM 2113</td>
<td>Organic Chemistry for Majors</td>
<td></td>
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</tbody>
</table>

Mathematics: two courses required

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 4740</td>
<td>Biostatistical Methods and Models</td>
<td>3</td>
</tr>
</tbody>
</table>
MATH 1410  Calculus for the Biological Sciences (highly recommended)  3-4  
or MATH 1450  Calculus 1  

Physics: one course required  
PHYS 1001  General Physics 1  3-4  
or PHYS 1008  Astronomy and Space Physics  
or PHYS 1009  Earth and Environmental Physics  
or ARSC 1020  Major Concepts in Modern Science 1  

Total Credit Hours  21-23  

##  For MATH cognate course, MATH 4740 is strongly recommended, however MATH 1700, PSYC 2001, SOCI 2060, or equivalent will be accepted.  

**Typical Program for Biology for the Professions Majors**  

**Freshman**  

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1001</td>
<td>3</td>
<td>BIOL 1002</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1001 or 1013</td>
<td>4</td>
<td>CHEM 1002 or 1014</td>
<td>4</td>
</tr>
<tr>
<td>EDUC 1210</td>
<td>3</td>
<td>EDUC 1220</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1001</td>
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<td>ENGL 1002</td>
<td>3</td>
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<td>UCCS-Indiv. &amp; Soc. Behav.</td>
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</tbody>
</table>

16  16  

**Sophomore**  

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
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<tbody>
<tr>
<td>BIOL 2301</td>
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16  15  

**Junior**  

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<tr>
<td>MATH 4740</td>
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<td>PHYS 1001, 1008, 1009, or ARSC 1020</td>
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15-16  16  

**Senior**  

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<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
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<tbody>
<tr>
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<td>3-4</td>
<td>EDUC 4965</td>
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<tr>
<td>Biology elective</td>
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<td></td>
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</tr>
<tr>
<td>EDUC 4540</td>
<td>3</td>
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</table>
Major in Physiological Sciences

Provides students interested in physiology and neurobiology a strong foundation in biological sciences, cell biology and biochemistry and further studies in neurobiology, human physiology and anatomy, muscle and exercise physiology. The major consists of eight required courses (25 credit hours), one anatomy course (3-4 credit hours) and three elective courses (8-9 credit hours) for a total of 36-38 credit hours as well as the cognate course requirements (33-34 credit hours) in chemistry, physics, mathematics, and philosophy or theology chosen from the lists below.

Required:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>BIOL 1001</td>
<td>General Biology 1</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 1002</td>
<td>General Biology 2</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 2201</td>
<td>Genetics</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 2301</td>
<td>Cell Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 3501</td>
<td>Neurobiology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 3502</td>
<td>Experimental Neurobiology</td>
<td>3</td>
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<tr>
<td>BIOL 3701</td>
<td>Human Physiology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 3702</td>
<td>Experimental Physiology</td>
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One of these anatomy courses:

<table>
<thead>
<tr>
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<th>Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>BIOL 3602</td>
<td>Experimental Vertebrate Anatomy and Development</td>
<td>3-4</td>
</tr>
<tr>
<td>BISC 2135</td>
<td>Clinical Human Anatomy</td>
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</table>

Electives - Choose three courses from the following:

<table>
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<th>Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>BIOL 1101</td>
<td>Foundations in Biological Inquiry</td>
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<tr>
<td>or BIOL 2001</td>
<td>Principles of Biological Investigation</td>
<td></td>
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<tr>
<td>BIOL 3202</td>
<td>Experimental Genetics</td>
<td></td>
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<tr>
<td>BIOL 3302</td>
<td>Experimental Cell Biology</td>
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</tr>
<tr>
<td>BIOL 3401</td>
<td>Advanced Ecology</td>
<td></td>
</tr>
<tr>
<td>BIOL 3402</td>
<td>Experimental Ecology and Field Biology</td>
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</tr>
<tr>
<td>BIOL 3404</td>
<td>Evolutionary Biology</td>
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<td>BIOL 3406</td>
<td>Plant Biology</td>
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</tr>
<tr>
<td>BIOL 3601</td>
<td>Animal Development</td>
<td></td>
</tr>
<tr>
<td>BIOL 3602</td>
<td>Experimental Vertebrate Anatomy and Development</td>
<td></td>
</tr>
<tr>
<td>BIOL 3801</td>
<td>Microbiology</td>
<td></td>
</tr>
<tr>
<td>BIOL 3802</td>
<td>Experimental Microbiology</td>
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<tr>
<td>BIOL 4101</td>
<td>Biochemistry and the Molecular Basis of Biology</td>
<td></td>
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<tr>
<td>BIOL 4102</td>
<td>Experimental Molecular Biology</td>
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<tr>
<td>BIOL 4201</td>
<td>Genomics and Bioinformatics</td>
<td></td>
</tr>
<tr>
<td>BIOL 4703</td>
<td>Exercise Physiology</td>
<td></td>
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<tr>
<td>BIOL 4806</td>
<td>Immunobiology</td>
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</tr>
<tr>
<td>BIOL 4956</td>
<td>Laboratory Research Project in Biological Sciences</td>
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<tr>
<td>BIOL 4987</td>
<td>Applying the Internship Experience</td>
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<tr>
<td>BIOL 4995</td>
<td>Independent Study in Biology</td>
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</table>

Total Credit Hours: 36-38

# For students intending to apply to medical school: BIOL 4101 Biochemistry and the Molecular Basis of Biology is recommended as a Biological Sciences elective, MATH 4740 Biostatistical Methods and Models is recommended as a math elective, PSYC 1001 General Psychology is recommended to satisfy the University Core Individual and Social Behavior (ISB) requirement, and SOCI 1001 Principles of Sociology is recommended as a general elective.

Cognate Course Requirements:

Chemistry Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 1001</td>
<td>General Chemistry 1</td>
<td>4</td>
</tr>
</tbody>
</table>
or CHEM 1013 General Chemistry 1 for Majors
CHEM 1002 General Chemistry 2 4
or CHEM 1014 General Chemistry 2 for Majors
CHEM 2111 Organic Chemistry 1 4
or CHEM 2113 Organic Chemistry for Majors 1
CHEM 2112 Organic Chemistry 2 4
or CHEM 2114 Organic Chemistry for Majors 2

Mathematics Courses:
MATH 1410 Calculus for the Biological Sciences 3-4
or MATH 1450 Calculus 1
MATH 4740 Biostatistical Methods and Models ** 3

Philosophy or Theology courses:
PHIL 4335 Biomedical Ethics 3
or THEO 4450 Medical Ethics

Physics Courses:
PHYS 1001 General Physics 1 4
or PHYS 1003 General Physics with Introductory Calculus 1
PHYS 1002 General Physics 2 4
or PHYS 1004 General Physics with Introductory Calculus 2

Total Credit Hours 33-34

** For MATH cognate courses, MATH 4740 Biostatistical Methods and Models is the preferred statistics course, however MATH 1700 Modern Elementary Statistics, PSYC 2001 Psychological Measurements and Statistics, SOCI 2060 Social Statistics, or equivalent is accepted.

Typical Program for Physiological Sciences Majors

Freshman

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1001</td>
<td>3</td>
<td>BIOL 1002</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1001 or 1013</td>
<td>4</td>
<td>CHEM 1002 or 1014</td>
<td>4</td>
</tr>
<tr>
<td>ENGL 1001</td>
<td>3</td>
<td>ENGL 1002</td>
<td>3</td>
</tr>
<tr>
<td>UCCS-Indiv. &amp; Soc. Behav.*</td>
<td>3</td>
<td>MATH 1410**</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>BIOL 1101 (optional)*</td>
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<tr>
<td></td>
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<td>BIOL 1003 (Recommended)</td>
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 13 16

Sophomore

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
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<tr>
<td>BIOL 2301</td>
<td>3</td>
<td>BIOL 2201</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 2111 or 2113</td>
<td>4</td>
<td>CHEM 2112 or 2114</td>
<td>4</td>
</tr>
<tr>
<td>MATH 4740 ***</td>
<td>3</td>
<td>UCCS-Hist. of Cultures &amp; Soc.</td>
<td>3</td>
</tr>
<tr>
<td>UCCS-Lit./Performing Arts</td>
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<td>THEO 1001</td>
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</tr>
<tr>
<td>PHIL 1001</td>
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<td>Elective</td>
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 16 16

Junior

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
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<tbody>
<tr>
<td>BIOL 3701</td>
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<td>BIOL 3501</td>
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</tr>
<tr>
<td>BIOL 3702</td>
<td>3</td>
<td>BIOL 3502</td>
<td>3</td>
</tr>
<tr>
<td>Elective***</td>
<td>PHYS 1002 or 1004</td>
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<td></td>
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<tr>
<td>PHYS 1001 or 1003</td>
<td>PHIL 4335</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PHIL 2310</td>
<td>Elective</td>
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**Senior**

<table>
<thead>
<tr>
<th>First Term</th>
<th>Second Term</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hours</strong></td>
<td><strong>Hours</strong></td>
</tr>
<tr>
<td>Biology elective</td>
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</tr>
<tr>
<td>BISC 2135</td>
<td>4</td>
</tr>
<tr>
<td>UCCS-Diverse Cultures</td>
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</tr>
<tr>
<td>UCCS-Theology</td>
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</tr>
<tr>
<td>Elective</td>
<td>3</td>
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</tbody>
</table>

**Senior Total**

**17**

**16**

Total credit hours: **122**

* Students who take BIOL 1101 Foundations in Biological Inquiry cannot also take BIOL 2001 Principles of Biological Investigation.

** PSYC 1001 General Psychology and SOCI 1001 Principles of Sociology both satisfy the University Core Individual and Social Behavior (ISB) requirement and are both recommended for students considering medical school.

*** Students wishing to take MATH 1450 instead of MATH 1410 are recommended to take Math in the first semester and a UCCS Ind. Soc. Behavior course in the second semester.

**** For MATH cognate courses, MATH 4740 Biostatistical Methods and Models is strongly recommended, however MATH 1700 Modern Elementary Statistics, PSYC 2001 Psychological Measurements and Statistics, SOCI 2060 Social Statistics is accepted.

**** For students intending to apply to medical school, BIOL 4101 Biochemistry and the Molecular Basis of Biology is recommended as a science elective.

**Major in Physiological Sciences: Pre-dental Scholars**

This major in physiological sciences is open to students who were directly admitted to the Pre-dental Scholars Program or students who were accepted into the program after their freshman year. In this program, students complete three years of courses in the College of Arts and Sciences for a minimum of 98 credits by end of third year. The fourth year of the program consists of Dental School course requirements, which typically consist of approximately 44 credit hours.

The major consists of seven required biology courses, including one laboratory course, and the first year Dental School course requirements, as well as nine cognate course requirements in chemistry, mathematics, philosophy or theology, and physics chosen from the lists below. Certain courses in the first year dental curriculum are counted toward completion of the Major in Physiological Sciences (BISC 7410 Microbiology, BISC 7514 General Histology, BISC 7515 Biomedical Systems 1, BISC 7516 Biomedical Systems 2 and DEIN 7121 Oral Biology); in addition, other courses (i.e., DEIN 7114 Introduction to Clinical Practice 1, DEIN 7118 Dental Rounds 1, DEIN 7124 Introduction to Clinical Practice 2, DEIN 7128 Dental Rounds 2; DEGD 7113 Dental Anatomy and Occlusion 1, DEGD 7123 Dental Anatomy and Occlusion 2) count toward the total credit hour requirement for the Bachelor of Science degree as well as for dental school requirements. After successful completion of these dental courses a B.S. degree is conferred.

**Notes:**

- Dental curriculum for all dental students is determined by the Dental School and is subject to change.
- Students must achieve a grade of C or better in those courses in order to count them toward the B.S. completion.

**Required Courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>BIOL 1001</td>
<td>General Biology 1</td>
<td>3</td>
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<tr>
<td>BIOL 1002</td>
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<td>Cell Biology</td>
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<tr>
<td>BIOL 3501</td>
<td>Neurobiology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 3701</td>
<td>Human Physiology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 4101</td>
<td>Biochemistry and the Molecular Basis of Biology</td>
<td>3</td>
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</tbody>
</table>

**Laboratory Course Requirement:**
First Year Dental School Requirements for BS Completion:

- BIOL 3502 or BIOL 3702: Experimental Neurobiology
- BISC 7410: Microbiology
- BISC 7514: General Histology
- BISC 7515: Biomedical Systems 1
- BISC 7516: Biomedical Systems 2
- DEIN 7121: Oral Biology
- DEIN 7114: Introduction to Clinical Practice 1
- DEIN 7124: Introduction to Clinical Practice 2
- DEGD 7113: Dental Anatomy and Occlusion 1
- DEGD 7123: Dental Anatomy and Occlusion 2
- DEIN 7118: Dental Rounds 1
- DEIN 7128: Dental Rounds 2

Total Credit Hours: 52

Cognate Course Requirements:

- Chemistry Courses:
  - CHEM 1001 or CHEM 1013: General Chemistry 1
  - CHEM 1002 or CHEM 1014: General Chemistry 2
  - CHEM 2111 or CHEM 2113: Organic Chemistry 1
  - CHEM 2112 or CHEM 2114: Organic Chemistry 2

- Mathematics Courses:
  - MATH 1410 or MATH 1450: Calculus for the Biological Sciences

- Ethics Course: Choose one of the following:
  - PHIL 4335: Biomedical Ethics
  - THEO 4450: Medical Ethics

- Physics Courses:
  - PHYS 1001 or PHYS 1003: General Physics 1
  - PHYS 1002 or PHYS 1004: General Physics 2

Total Credit Hours: 33-34

** For MATH cognate courses, MATH 4740 Biostatistical Methods and Models is the preferred statistics course, however MATH 1700 Modern Elementary Statistics, PSYC 2001 Psychological Measurements and Statistics, SOCI 2060 Social Statistics, or equivalent is accepted.

### Typical Program for Physiological Sciences Majors - Pre-dental Scholars

#### Freshman

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<th>Second Term</th>
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<td>ENGL 1002</td>
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<td>UCCS-Indiv. &amp; Soc. Behav.</td>
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<td>MATH 1410&quot;</td>
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Sophomore

**First Term**

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<tr>
<td>BIOL 2301</td>
<td>3</td>
<td>CHEM 2112 or 2114</td>
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<td>CHEM 2111 or 2113</td>
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**Second Term**

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**Junior**

**First Term**

<table>
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<td>BIOL 3702 (or elective)</td>
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<td>BIOL 3502 (or elective)</td>
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<tr>
<td>BIOL 4101</td>
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<td>UCCS-Diverse Cultures</td>
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**Second Term**

<table>
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<tr>
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<th>Hours</th>
</tr>
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<tbody>
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<td>Elective</td>
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<tr>
<td>16</td>
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</tbody>
</table>

Total credit hours: 98

- Must complete a minimum of 98 credits, depending on courses.
- If PHIL 4335 Biomedical Ethics or THEO 4450 Medical Ethics cannot be scheduled due to conflicts with other required courses, students are required to take a one credit medical ethics course (PHIL 4336 Applied Ethics for the Health Sciences).
- Students wishing to take MATH 1450 instead of MATH 1410 are recommended to take Math in the fall term and a UCCS Individual and Social Behavior course in the second term.
- For MATH cognate courses, MATH 4740 Biostatistical Methods and Models is the preferred statistics course, however MATH 1700 Modern Elementary Statistics, PSYC 2001 Psychological Measurements and Statistics, SOCI 2060 Social Statistics, or equivalent is accepted.

**Year One - Dental Curriculum**

**First Year**

**First Term**

<table>
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<th>Course</th>
<th>Hours</th>
<th>Course</th>
<th>Hours</th>
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</thead>
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<tr>
<td>BISC 7514</td>
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<td>BISC 7517</td>
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<td>BISC 7515</td>
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<td>DEGD 7122</td>
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<td>DEGD 7123</td>
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<td>DEIN 7110</td>
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<td>DEIN 7120</td>
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<td>DEIN 7114</td>
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<table>
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</thead>
<tbody>
<tr>
<td>23</td>
<td></td>
</tr>
</tbody>
</table>

Total credit hours: 50
Note: Dental curriculum for all dental students is determined by the Dental School. This represents a sample year one schedule and is subject to change. The curriculum for years two through four are also the same as other dental students. Certain courses in the first year dental curriculum are counted toward completion of the Bachelor of Science degree as well as for dental school requirements. Students must achieve a grade of C or better in those courses in order to count them toward the B.S. completion.

Major in Physiological Sciences: Physical Therapy

Open only to undergraduate students who have been admitted directly into the six year doctor of physical therapy degree program, are in good academic standing prior to the beginning of the professional phase of the program and want to earn a bachelor of science degree from the Klingler College of Arts and Sciences after four years of study. The major consists of 21 required courses (61 credit hours) as well as 11 cognate course requirements (39-40 credit hours) in chemistry, physics, mathematics, philosophy and psychology chosen from the lists below.

Note:

• For information on the physical therapy program, please see the College of Health Sciences section in this bulletin. Students admitted directly to the doctoral PT program who are interested in the Physiological Sciences major should contact the Department of Biological Sciences as soon as possible, and then consult with an adviser in the Department of Physical Therapy.

| Required: |
| Biology Courses: |
| BIOL 1001 | General Biology 1 | 3 |
| BIOL 1002 | General Biology 2 | 3 |
| BIOL 2201 | Genetics | 3 |
| BIOL 2301 | Cell Biology | 3 |
| BIOL 3501 | Neurobiology | 3 |
| BIOL 3502 | Experimental Neurobiology | 3 |
| BIOL 3701 | Human Physiology | 4 |
| BIOL 3702 | Experimental Physiology | 3 |
| Biomedical Sciences Courses: |
| BISC 2135 | Clinical Human Anatomy | 4 |
| BISC 3150 | General Pathology | 3 |
| BISC 4120 | Pharmacology | 3 |
| BISC 7130 | Human Gross Anatomy | 5 |
| Physical Therapy Courses: |
| PHTH 1001 | Introduction to Physical Therapy and Medical Terminology | 1 |
| PHTH 7503 | Patient Management 1 | 3 |
| PHTH 7504 | Patient Management 2 | 2 |
| PHTH 7512 | Culture and Disability | 3 |
| PHTH 7513 | Health Care Policy/Management | 3 |
| PHTH 7515 | Pathophysiology | 2 |
| PHTH 7516 | Geriatric Rehabilitation | 2 |
| PHTH 7525 | Kinesiology 1: The Upper Extremity | 3 |
| PHTH 7528 | Physical Therapy Evaluation, Tests and Measures | 2 |
| Total Credit Hours | 61 |

Cognate Course Requirements: 11 courses:

Chemistry courses:

| CHEM 1001 | General Chemistry 1 | 4 |
| or CHEM 1013 | General Chemistry 1 for Majors | 4 |
| CHEM 1002 | General Chemistry 2 | 4 |
| or CHEM 1014 | General Chemistry 2 for Majors | 4 |
| CHEM 2111 | Organic Chemistry 1 | 4 |
| or CHEM 2113 | Organic Chemistry for Majors 1 | 4 |
| CHEM 2112 | Organic Chemistry 2 | 4 |
| or CHEM 2114 | Organic Chemistry for Majors 2 | 4 |

Mathematics:

| MATH 1410 | Calculus for the Biological Sciences | 3-4 |
Calculus 1 or MATH 1450
MATH 4740 Biostatistical Methods and Models

Ethics Course:
PHIL 4335 Biomedical Ethics
or THEO 4450 Medical Ethics

Physics Courses:
PHYS 1001 General Physics 1
or PHYS 1003 General Physics with Introductory Calculus 1
PHYS 1002 General Physics 2
or PHYS 1004 General Physics with Introductory Calculus 2

Psychology Courses:
PSYC 1001 General Psychology
PSYC 3101 Developmental Psychology: Conception Through Adolescence
or
PSYC 3120 Developmental Psychology: Adulthood and Aging
or
PSYC 3401 Abnormal Psychology

Total Credit Hours 39-40

# For MATH cognate courses, MATH 4740 Biostatistical Methods and Models is the preferred statistics course, however MATH 1700 Modern Elementary Statistics, PSYC 2001 Psychological Measurements and Statistics, SOCI 2060 Social Statistics, or equivalent is accepted.

### Typical Program for Physiological Sciences Major - Physical Therapy Concentration

#### Freshman

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
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<tbody>
<tr>
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<td>BIOL 1002</td>
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<tr>
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<td>3</td>
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<tr>
<td>PSYC 1001</td>
<td>3</td>
<td>MATH 1410**</td>
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<td></td>
<td>THEO 1001</td>
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<tr>
<td></td>
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#### Sophomore

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<th>Hours</th>
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<tr>
<td>BIOL 2301</td>
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<td>BIOL 2201</td>
<td>3</td>
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<tr>
<td>BISC 2135</td>
<td>4</td>
<td>CHEM 2112 or 2114</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 2111 or 2113</td>
<td>4</td>
<td>PHIL 1001</td>
<td>3</td>
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<tr>
<td>MATH 4740**</td>
<td>3</td>
<td>UCCS-Lit./Performing Arts</td>
<td>3</td>
</tr>
<tr>
<td>UCCS-Hist. of Cultures &amp; Soc.</td>
<td>3</td>
<td>UCCS-Theology</td>
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#### Junior

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<tr>
<td>BIOL 3701</td>
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<td>BIOL 3501</td>
<td>3</td>
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<tr>
<td>BIOL 3702</td>
<td>3</td>
<td>BIOL 3502</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 1001 or 1003</td>
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<td>PHYS 1002 or 1004</td>
<td>4</td>
</tr>
<tr>
<td>PHIL 2310</td>
<td>3</td>
<td>PHIL 4335*</td>
<td>3</td>
</tr>
</tbody>
</table>
PSYC 3101 (or PSYC 3120 or PSYC 3401) 3  PHTH 1001 1

Senior  

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
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<tbody>
<tr>
<td>BISC 7130</td>
<td>5</td>
<td>BISC 3150</td>
<td>3</td>
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<tr>
<td>PHTH 7503</td>
<td>3</td>
<td>BISC 4120</td>
<td>3</td>
</tr>
<tr>
<td>PHTH 7512 (UCCS-Diverse Cultures)</td>
<td>3</td>
<td>PHTH 7504</td>
<td>2</td>
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<tr>
<td>PHTH 7513</td>
<td>3</td>
<td>PHTH 7515</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PHTH 7516</td>
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<td>PHTH 7525</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PHTH 7528</td>
<td>2</td>
</tr>
</tbody>
</table>

Total credit hours: 124

* If PHIL 4335 Biomedical Ethics or THEO 4450 Medical Ethics cannot be scheduled due to conflicts with other required courses, students are required to take a one credit medical ethics course (PHIL 4336 Applied Ethics for the Health Sciences).

** Students wishing to take MATH 1450 instead of MATH 1410 are recommended to take Math in the fall term and a PSYC 1001 in the second term.

## For MATH cognate courses, MATH 4740 Biostatistical Methods and Models is strongly recommended, however MATH 1700 Modern Elementary Statistics, PSYC 2001 Psychological Measurements and Statistics, SOCI 2060 Social Statistics, or equivalent is accepted.

### Physiological Sciences B.S./M.B.A. Accelerated Degree Programs

The Department of Biological Sciences together with the Graduate School of Management offers accelerated degree programs which allow students to earn their B.S. in Physiological Sciences and a master of business administration (M.B.A.), all within in a five-year time period.

During the first four years of the program, students complete both their coursework requirements for their B.S. degree and the necessary prerequisite courses for the M.B.A. degree in the College of Business Administration. In addition, undergraduate students begin their M.B.A. graduate work in their senior year by taking two graduate level courses.

To be considered for admission to the B.S./M.B.A. five-year program, applicants must formally apply to the Graduate School of Management during their junior year at Marquette University. For more detailed information and details of a typical five-year coursework plan, please refer to the Graduate School of Management Bulletin and contact the Department of Biological Sciences or the Graduate School of Management.

### Biochemistry and Molecular Biology

The major in biochemistry and molecular biology consists of 53-59 credit hours in biology, chemistry and mathematics courses as listed below. Additional cognate courses in mathematics and physics are required.

Required Biological Sciences courses (18 cr. hrs.):

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1001</td>
<td>General Biology 1</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 1002</td>
<td>General Biology 2</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 2201</td>
<td>Genetics</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 2301</td>
<td>Cell Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 4101</td>
<td>Biochemistry and the Molecular Basis of Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 4102</td>
<td>Experimental Molecular Biology</td>
<td>3</td>
</tr>
</tbody>
</table>

Required Chemistry Courses (23-26 cr. hrs.):

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 1001</td>
<td>General Chemistry 1</td>
<td>4</td>
</tr>
<tr>
<td>or CHEM 1013</td>
<td>General Chemistry 1 for Majors</td>
<td></td>
</tr>
<tr>
<td>CHEM 1002</td>
<td>General Chemistry 2</td>
<td>4</td>
</tr>
<tr>
<td>or CHEM 1014</td>
<td>General Chemistry 2 for Majors</td>
<td></td>
</tr>
<tr>
<td>CHEM 3201</td>
<td>Quantitative Analysis</td>
<td>4</td>
</tr>
</tbody>
</table>

Organic Chemistry Sequence - Choose one of the following: 8
<table>
<thead>
<tr>
<th>Course Numbers</th>
<th>Course Title and Description</th>
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</thead>
<tbody>
<tr>
<td>CHEM 2111 &amp; CHEM 2112</td>
<td>Organic Chemistry 1 and Organic Chemistry 2</td>
</tr>
<tr>
<td>CHEM 2113 &amp; CHEM 2114</td>
<td>Organic Chemistry for Majors 1 and Organic Chemistry for Majors 2</td>
</tr>
</tbody>
</table>

**Physical Chemistry** - Choose one of the following:

<table>
<thead>
<tr>
<th>Course Numbers</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 4431</td>
<td>Physical Chemistry: Fundamentals with Applications in Biological Sciences</td>
</tr>
<tr>
<td>CHEM 4433 &amp; CHEM 4434</td>
<td>Physical Chemistry 1 and Physical Chemistry 2</td>
</tr>
</tbody>
</table>

**Additional Laboratory Course Requirement** - Choose option one or option two:

**Option 1:**

<table>
<thead>
<tr>
<th>Course Numbers</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 4956 or CHEM 4956</td>
<td>Laboratory Research Project in Biological Sciences or Undergraduate Research in Chemistry</td>
</tr>
</tbody>
</table>

**Option 2 (choose one of the following):**

<table>
<thead>
<tr>
<th>Course Numbers</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 3202</td>
<td>Experimental Genetics</td>
</tr>
<tr>
<td>BIOL 3302</td>
<td>Experimental Cell Biology</td>
</tr>
<tr>
<td>BIOL 3502</td>
<td>Experimental Neurobiology</td>
</tr>
<tr>
<td>BIOL 3602</td>
<td>Experimental Vertebrate Anatomy and Development</td>
</tr>
<tr>
<td>BIOL 3702</td>
<td>Experimental Physiology</td>
</tr>
<tr>
<td>BIOL 3802</td>
<td>Experimental Microbiology</td>
</tr>
</tbody>
</table>

**Elective Courses** - Choose any three of the following not previously taken:

<table>
<thead>
<tr>
<th>Course Numbers</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 3202</td>
<td>Experimental Genetics</td>
</tr>
<tr>
<td>BIOL 3302</td>
<td>Experimental Cell Biology</td>
</tr>
<tr>
<td>BIOL 3401</td>
<td>Advanced Ecology</td>
</tr>
<tr>
<td>BIOL 3404</td>
<td>Evolutionary Biology</td>
</tr>
<tr>
<td>BIOL 3406</td>
<td>Plant Biology</td>
</tr>
<tr>
<td>BIOL 3501</td>
<td>Neurobiology</td>
</tr>
<tr>
<td>BIOL 3502</td>
<td>Experimental Neurobiology</td>
</tr>
<tr>
<td>BIOL 3601</td>
<td>Animal Development</td>
</tr>
<tr>
<td>BIOL 3602</td>
<td>Experimental Vertebrate Anatomy and Development</td>
</tr>
<tr>
<td>BIOL 3701</td>
<td>Human Physiology</td>
</tr>
<tr>
<td>BIOL 3702</td>
<td>Experimental Physiology</td>
</tr>
<tr>
<td>BIOL 3801</td>
<td>Microbiology</td>
</tr>
<tr>
<td>BIOL 3802</td>
<td>Experimental Microbiology</td>
</tr>
<tr>
<td>BIOL 4201</td>
<td>Genomics and Bioinformatics</td>
</tr>
<tr>
<td>BIOL 4703</td>
<td>Exercise Physiology</td>
</tr>
<tr>
<td>BIOL 4806</td>
<td>Immunobiology</td>
</tr>
<tr>
<td>BIOL 4956</td>
<td>Laboratory Research Project in Biological Sciences</td>
</tr>
<tr>
<td>BIOL 4987</td>
<td>Applying the Internship Experience</td>
</tr>
<tr>
<td>BIOL 4995</td>
<td>Independent Study in Biology</td>
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<td>BISC 4995</td>
<td>Independent Study in Biomedical Sciences</td>
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**Chemistry Courses**:

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<th>Course Title</th>
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<tbody>
<tr>
<td>CHEM 3210</td>
<td>Instrumental Analysis</td>
</tr>
<tr>
<td>CHEM 4130</td>
<td>Characterization of Organic Compounds</td>
</tr>
<tr>
<td>CHEM 4330</td>
<td>Inorganic Chemistry</td>
</tr>
<tr>
<td>CHEM 4430</td>
<td>Introduction to Quantum Chemistry</td>
</tr>
<tr>
<td>CHEM 4530</td>
<td>Introduction to Biochemistry</td>
</tr>
<tr>
<td>CHEM 4956</td>
<td>Undergraduate Research in Chemistry</td>
</tr>
</tbody>
</table>

**Mathematics Courses**:

<table>
<thead>
<tr>
<th>Course Numbers</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>MATH 2450</td>
<td>Calculus 3</td>
</tr>
<tr>
<td>MATH 2451</td>
<td>Differential Equations</td>
</tr>
<tr>
<td>MATH 4740</td>
<td>Biostatistical Methods and Models</td>
</tr>
<tr>
<td>or MATH 4720</td>
<td>Statistical Methods</td>
</tr>
</tbody>
</table>
or PSYC 2001  Psychological Measurements and Statistics

Total Credit Hours  53-59

Notes:

• Students who take CHEM 4433 Physical Chemistry 1, CHEM 4434 Physical Chemistry 2 and MATH 2450 Calculus 3 are required to take only one additional elective in biological sciences, chemistry or mathematics.

• A second BIOL 4956 Laboratory Research Project in Biological Sciences course may be taken as an elective if BIOL 4956 previously taken as a laboratory course.

• Honors courses are available from both departments by contract with the instructors. Courses available for honors credit are identified.

Cognate Course Requirements:

Mathematics Courses:

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<th>Course</th>
<th>Title</th>
<th>Hours</th>
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</tr>
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<td>MATH 1451</td>
<td>Calculus 2</td>
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Physics Sequence - Choose one of the following:

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<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tr>
<td>PHYS 1001 &amp; PHYS 1002</td>
<td>General Physics 1 and General Physics 2</td>
<td>8</td>
</tr>
<tr>
<td>PHYS 1003 &amp; PHYS 1004</td>
<td>General Physics with Introductory Calculus 1 and General Physics with Introductory Calculus 2</td>
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</table>

Total Credit Hours  16

Typical Program for Biochemistry/Molecular Biology Majors

Freshman

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<th>Hours</th>
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<td>MATH 1451</td>
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<tr>
<td>ENGL 1001</td>
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14  14

Sophomore

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<td>BIOL 2201</td>
<td>3</td>
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<td>PHYS 1001 or 1003</td>
<td>4</td>
<td>UCCS-Hist. of Cultures &amp; Soc.</td>
<td>3</td>
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<tr>
<td>BIOL 2301</td>
<td>3</td>
<td>PHIL 2310</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 1001</td>
<td>3</td>
<td>CHEM 2112 or 2114</td>
<td>4</td>
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<tr>
<td>THEO 1001</td>
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<td>PHYS 1002 or 1004</td>
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17  17

Junior

<table>
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<tr>
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<tr>
<td>BIOL 4101</td>
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<td>Biology lab (upper division)**</td>
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<td>CHEM 44311</td>
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<td>CHEM 3201</td>
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<tr>
<td>UCCS-Theology</td>
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<td>Elective</td>
<td>3</td>
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<td>UCCS-Lit./Performing Arts</td>
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<td>UCCS-Indiv. &amp; Soc. Behav.8</td>
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<td>Elective</td>
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15  13
Senior

<table>
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<th>Second Term</th>
<th>Hours</th>
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<td>BIOL 4102</td>
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<td>Biochemistry/Molecular Biology electives</td>
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<td>Electives</td>
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<tr>
<td>Electives</td>
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</tr>
<tr>
<td>UCCS-Diverse Cultures</td>
<td>3</td>
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</table>

15-16 15

Total credit hours: 120-121

* Many students, including those continuing on to graduate school, should consider the option of two terms of physical chemistry CHEM 4433 Physical Chemistry 1 and CHEM 4434 Physical Chemistry 2 which require an additional term of calculus MATH 2450 Calculus 3. Students who take CHEM 4433 Physical Chemistry 1, CHEM 4434 Physical Chemistry 2, and MATH 2450 Calculus 3 are required to take only one additional elective in biological sciences, chemistry or mathematics.

** BIOL 4956 Laboratory Research Project in Biological Sciences or CHEM 4956 Undergraduate Research in Chemistry may be substituted.

# For students intending to apply to medical school: MATH 4740 Biostatistical Methods and Models is recommended as a math elective, PSYC 1001 General Psychology is recommended to satisfy the UCCS Individual and Social (ISB) requirement, and SOCI 1001 Principles of Sociology is recommended as a general elective.

Biochemistry and Molecular Biology B.S./M.B.A. Accelerated Degree Programs

The Departments of Biological Sciences and Chemistry together with the Graduate School of Management offer an accelerated degree programs which allow students to earn their B.S. in Biochemistry & Molecular Biology and a master of business administration (M.B.A.), all within in a five-year time period.

During the first four years of the program, students complete both their coursework requirements for their B.S. degree and the necessary prerequisite courses for the M.B.A. degree in the College of Business Administration. In addition, undergraduate students begin their M.B.A. graduate work in their senior year by taking two graduate level courses.

To be considered for admission to the B.S./M.B.A. five-year program, applicants must formally apply to the Graduate School of Management during their junior year at Marquette University. For more detailed information and details of a typical five-year coursework plan, please refer to the Graduate School of Management Bulletin and contact the Departments of Biological Sciences and/or Chemistry or the Graduate School of Management.

Minor in Biological Sciences

The minor in Biological Sciences consists of four required courses listed below (13 credit hours) and two electives chosen from Biological Sciences or one Biological Sciences elective and ANTH 2201 (6-7 credit hours) for a total of 19-20 credit hours.

Note:

- BIOL 1009 Biology for Non-Science Majors, BIOL 1406 Plants, Pathogens and People, BIOL 1410 Biology of Human Disease, and BIOL 4956 Laboratory Research Project in Biological Sciences cannot be taken except with consent of department chair.

Required:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1001</td>
<td>General Biology 1</td>
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</tr>
<tr>
<td>BIOL 1002</td>
<td>General Biology 2</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 2001</td>
<td>Principles of Biological Investigation</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1001</td>
<td>General Chemistry 1</td>
<td>4</td>
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</tbody>
</table>

Electives - Choose two of the following: 6-7

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>ANTH 2201</td>
<td>Human Evolutionary Process</td>
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<tr>
<td>BIOL 2201</td>
<td>Genetics</td>
</tr>
<tr>
<td>BIOL 2301</td>
<td>Cell Biology</td>
</tr>
<tr>
<td>BIOL 2401</td>
<td>Ecology</td>
</tr>
<tr>
<td>BIOL 3401</td>
<td>Advanced Ecology</td>
</tr>
<tr>
<td>BIOL 3406</td>
<td>Plant Biology</td>
</tr>
<tr>
<td>BIOL 3501</td>
<td>Neurobiology</td>
</tr>
<tr>
<td>BIOL 3601</td>
<td>Animal Development</td>
</tr>
<tr>
<td>BIOL 3701</td>
<td>Human Physiology</td>
</tr>
</tbody>
</table>
Department of Public Instruction Certification

College of Education students wishing to pursue Department of Public Instruction Certification should follow the biological sciences minor. The minor consists of five required courses (15 credit hours) and one additional upper division elective course in Biological Sciences (3-4 credit hours) for a total of 18-19 credit hours as follows:

Required:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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</thead>
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<tr>
<td>BIOL 1001</td>
<td>General Biology 1</td>
<td>3</td>
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<tr>
<td>BIOL 1002</td>
<td>General Biology 2</td>
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<td>3</td>
</tr>
<tr>
<td>BIOL 2301</td>
<td>Cell Biology</td>
<td>3</td>
</tr>
</tbody>
</table>

Elective - Choose one additional upper-division BIOL course. 3-4

Total Credit Hours 18-19

Courses

BIOL 1001. General Biology 1. 3 cr. hrs.
Covers the molecular basis of life, biology of the cell, genetics and evolution in a genetic context. 3 hrs. lec., disc.

BIOL 1001H. Honors General Biology 1. 3 cr. hrs.
Covers the molecular basis of life, biology of the cell, genetics and evolution in a genetic context. 3 hrs. lec., disc. Prereq: Admission to Marquette University Honors Program.

BIOL 1002. General Biology 2. 3 cr. hrs.
Covers the diversity of Life, plant form and function, animal form and function, ecology and evolution in context of diversity. 3 hrs. lec., disc. Prereq: BIOL 1001 or cons. of instr.

BIOL 1002H. Honors General Biology 2. 3 cr. hrs.
Covers the diversity of Life, plant form and function, animal form and function, ecology and evolution in context of diversity. 3 hrs. lec., disc. Prereq: BIOL 1001 or BIOL 1001H and CHEM 1001 or CHEM 1001H; or cons. of instr.; and admission to Marquette University Honors Program.

BIOL 1003. Biology Matters. 1 cr. hr.
A seminar to introduce students early in their academic careers to modern biological and biomedical research. Students learn about various career paths biological science graduates can take. Medical school, dental school, and graduate school will be discussed, along with the possibility of combining biology with disciplines such as law, finance and computer science. Primarily for freshmen and sophomores. S/U grade assessment.

BIOL 1009. Biology for Non-Science Majors. 3 cr. hrs.
Designed for non-science students, the course introduces biological concepts and will focus on how scientific knowledge is created. Special emphasis on cell function, evolutionary biology, genetics, and modern genetic methods. Topics covered will include inheritance of genetic traits, cloning, and biotechnology, nervous system evolution, speciation, and extinction. 3 hrs. lec., disc. May be counted toward the Natural Science requirement of the College Curriculum.

BIOL 1101. Foundations in Biological Inquiry. 2 cr. hrs.
Develop research questions based on hypothesis, design and conduct experiments, analyze data, and draw conclusions using basic biology research techniques and laboratory practices (pipetting, microscopy, solution preparation, sterile technique, spectrophotometry, PCR/DNA electrophoresis, data analysis and basic statistics etc.). 2 hrs. lab. Prereq: BIOL 1001 and cons. of instr.

BIOL 1406. Plants, Pathogens and People. 3 cr. hrs.
Plant diseases and their effects on food supplies and human history. Biology of plants and the pathogens that cause plant diseases. Controversies related to pesticide use, biological control, genetic engineering, biodiversity. Covers the major biology concepts. Hands-on activities and class discussions. Designed for nonscience students and Biology for the Professions. Does not fulfill biological sciences major requirements.
BIOL 1410. Biology of Human Disease. 3 cr. hrs.
Explores human physiology in relationship to health and disease. Topics include the cardiovascular system, heart disease, the immune system, infectious diseases, cancer, drug addiction, the brain, and neurodegenerative disorders such as Alzheimer's disease. Emphasis on understanding scientific reporting and critically assessing the value and importance of published findings. Students will be required to research, analyze, and critique an independent topic based on science in the news. Designed for non-science students and Biology for the Professions. Does not fulfill biological sciences requirements except for Biology for the Professions.

BIOL 1420. Environmental Biology: From Macro to Micro Through the Lens of the Environment. 3 cr. hrs.
Intended for non-science majors and covers topics in global ecology and sustainability, from fossil fuels, greenhouse gases, housing, food production and water. Challenges students to draw on their introspective skills to form positions for use in class discussions and debates. Explorations of ethical and spiritual issues surrounding topics provide a framework for deeper discussions in the tradition of Jesuit education.

Introduction to selected instrumentation and techniques, including light microscopy, staining, aseptic procedures, spectrophotometry, gel electrophoresis, and immunoassays. Topics may include: photosynthesis, protein quantification, bacteria, fungi, nematodes, histology, evolution, embryo development, and physiology of the nervous system. Recommended for freshman and sophomores who have completed BIOL 1002 but may be taken concurrently. 1 hr. lec., 3 hrs. lab. Prereq: BIOL 1001.

BIOL 2201. Genetics. 3 cr. hrs.
Analysis of mechanisms of inheritance with emphasis on the nature of the gene, inheritance of genetic traits, and organisms with special advantages as model genetic systems. 3 hrs. lec., disc. Prereq: BIOL 1001 and BIOL 1002.

BIOL 2301. Cell Biology. 3 cr. hrs.
The cell is the basic unit of life; it is the fundamental unit from which all organisms are built. The concepts as well as the scientific evidence that underlie our current understanding of cellular organization and function are emphasized. Key cellular processes including membrane function, signaling, transcriptional regulation, protein targeting, vesicular trafficking, cytoskeleton, cell cycle regulation, and cell death are discussed. These processes will be related to our understanding of human disease. 3 hrs. lec., disc. Prereq: BIOL 1001 and BIOL 1002.

BIOL 2401. Ecology. 3 cr. hrs.
Introductory study of the complex interactions of living organisms, including both micro- and macro-organisms, with each other and with their chemical and physical environments. Emphasis on the scientific principles involved in these interactions. 3 hrs. lec., disc. Prereq: BIOL 1001 and BIOL 1002; or cons. of instr.

BIOL 2953. Entering Research 1. 1 cr. hr.
A one-credit seminar for undergraduate students that is the first in a two-course series, designed to complement the independent research experience. Students meet weekly to share their research experiences and to get feedback on the progress of their research projects.

BIOL 2954. Entering Research 2. 1 cr. hr.
A one-credit seminar for undergraduate students that is the second in a two course series, designed to complement the independent research experience. Students meet weekly to share their research experiences and to get feedback on the progress of their research projects.

BIOL 3202. Experimental Genetics. 3 cr. hrs.
Genetic organization, function, engineering, and inheritance in procaryotic and eucaryotic organisms. 1 hr. lec., 4 hrs. lab. Prereq: BIOL 2201, which may be taken concurrently; and cons. of dept. ch.

BIOL 3302. Experimental Cell Biology. 3 cr. hrs.
Molecular and biochemical studies of cellular structure and organization in relation to integrated cellular function. 1 hr. lec., 4 hrs. lab. Prereq: BIOL 2301 and cons. of dept. ch.

BIOL 3401. Advanced Ecology. 3 cr. hrs.
Studies the interactions of organisms with each other and their abiotic environments beyond the introductory level. Both mathematical models and the evolutionary genetics involved in ecologically important traits are emphasized. Ecological concepts in current and classical scientific literature are explored. Mathematical and computer models are used to analyze and understand ecological interactions and processes in population, community, ecosystem and evolutionary ecology. These are combined with advanced concepts in population and ecological genetics. 3 hrs. lec, disc. Prereq: BIOL 2401 or equiv.; or cons. of instr.

BIOL 3402. Experimental Ecology and Field Biology. 3 cr. hrs.
Experimental approach of both laboratory and field exercises designed to emphasize experimental design, ecological measurement, observation, modeling and statistical analyses of fundamental concepts in ecology. 1 hr. lec., 4 hr. lab. Prereq: BIOL 2401 or equiv.

BIOL 3404. Evolutionary Biology. 3 cr. hrs.
Evolution is integral to understanding all facets of the life sciences with scientist Theodosius Dobzhansky famously stating, “nothing in biology makes sense except in the light of evolution.” Covers core topics in evolution including: the history of evolutionary thought in biology, genetic variation, development, population genetics, classification and phylogeny; the fossil record; biogeography, natural selection and adaptation, genetic drift, speciation, and sexual selection. Prereq: BIOL 2201; or cons. of instr.

BIOL 3406. Plant Biology. 3 cr. hrs.
Despite their tremendous diversity in form, seed plants share many similarities in their cellular organization, metabolism, and core development paradigms. Primary course objectives include student familiarity with organization, growth and development of vascular plants; application of genetic engineering to plants; and concepts of plant evolution and reproduction from algae to flowering plants. 3 hrs. lec. Prereq: BIOL 1002 or cons. of instr.
BIOL 3501. Neurobiology. 3 cr. hrs.
General principles of the organization and function of the vertebrate nervous system. Topics include the cellular and molecular mechanisms of cell excitability, synaptic transmission, and how neuromodulators regulate these functions in neuronal networks; mechanisms of learning and memory at the synaptic level; sensory systems from transduction to higher-order processing; and motor systems from the neuromuscular junction to voluntary movement to provide an integrative understanding of the nervous system. A functional approach to neuroanatomy will be integrated throughout the course. 3 hrs. lec., disc. Prereq: BIOL 1002.

BIOL 3502. Experimental Neurobiology. 3 cr. hrs.
Experimental analysis of synapses and neuronal circuitry using a variety of preparations and electrophysiological techniques. The basic electrical properties of excitable cells and chemical communication between cells are investigated. 1 hr. lec., 4 hrs. lab. Prereq: BIOL 3501, which may be taken concurrently, and cons. of dept. ch.; or BIOL 3701 and cons. of dept. ch.

BIOL 3601. Animal Development. 3 cr. hrs.
The study of the ordered formation of complex, multi-cellular organisms from a single cell. A multidisciplinary exploration of the integrative processes underlying animal development, incorporating techniques of cellular and molecular biology for the study of development. 3 hrs. lec. Prereq: BIOL 2301 or cons. of instr.

BIOL 3602. Experimental Vertebrate Anatomy and Development. 3 cr. hrs.
Study of vertebrate anatomy at both gross and microscopic levels, facilitated by dissection of representative mammals and examination of microscope slides. Includes a developmental component supported by a study of early chick embryos. Prereq: BIOL 1001 and BIOL 1002, or equiv. and cons. of dept. ch.

BIOL 3701. Human Physiology. 4 cr. hrs.
Designed to explain to students in Biological Sciences, Physiological Sciences and Physical Therapy curricula the systemic and cellular mechanisms responsible for cellular, organ, and system functions in the human organism. 4 hrs. lec., disc. Prereq: BIOL 1002; or cons. of instr. BIOL 2301 recommended.

BIOL 3702. Experimental Physiology. 3 cr. hrs.
Investigation of selected topics relating to the regulation of physiological activity in vertebrate organisms. Emphasis on use of modern recording systems and experimental preparation of the vertebrate for the study of integrated systemic functions. 1 hr. lec., 4 hrs. lab. Prereq: BIOL 3701, which may be taken concurrently, and cons. of dept. ch.

BIOL 3801. Microbiology. 3 cr. hrs.
Study of selected groups of microorganisms (algae, bacteria, and fungi). Topics include microbial morphology, taxonomy and metabolic activities, and the effect of microorganisms on man and on the earth. 3 hrs. lec., disc. Prereq: BIOL 1002.

BIOL 3802. Experimental Microbiology. 3 cr. hrs.
Basic modern approaches to the laboratory investigation of microorganisms. A major part of the course is in-depth analysis of unknown microorganisms that students isolate from the environment. Prereq: BIOL 1002 and cons. of dept. ch.

BIOL 3986. Internship in Biological Sciences - Part-time. 0 cr. hrs.
Experience with a business or not-for-profit organization that affords students an opportunity to apply and integrate the knowledge and skills they have gained in the classroom to the “real world”. Placement is for a minimum of 160 hours per term under the supervision of an internship mentor/manager. Prereq: Cons. of internship coordinator.

BIOL 3987. Internship in Biological Sciences - Full-time. 0 cr. hrs.
Experience with a business or not-for-profit organization that affords students an opportunity to apply and integrate the knowledge and skills they have gained in the classroom to the “real world”. Placement is for a minimum of 450 hours per term under the supervision of an internship mentor/manager. Prereq: Cons. of internship coordinator.

BIOL 4101. Biochemistry and the Molecular Basis of Biology. 3 cr. hrs.
Major themes in biochemistry are examined in the context of mammalian physiology. Topics include: protein structure and enzyme catalysis, carbohydrate and lipid metabolism in relation to energy production, protein and nucleic acid synthesis, and the nature of the genetic code. 3 hrs. lec., disc. Prereq: BIOL 1002 and CHEM 2111 or CHEM 2113 (can be taken concurrently). CHEM 2112 or CHEM 2114 are highly recommended; or cons. of instr.

BIOL 4102. Experimental Molecular Biology. 3 cr. hrs.
Purification, characterization and molecular analysis of proteins, nucleic acids, lipids and other biomolecules with emphasis on standard techniques widely used in research laboratories. 1 hr. lec., 4 hrs. lab. Prereq: BIOL 4101 which may be taken concurrently with cons. of instr.

BIOL 4201. Genomics and Bioinformatics. 3 cr. hrs.
The analysis of gene structure and genetic regulation in selected prokaryotes and plant and animal systems, as well as transgenic organisms. Introduction to the principles of bioinformatics and proteomics as applied to genome comparisons and protein structure and function. Models and algorithms for predictions of the biological properties of genetically modified nucleotide sequences and proteins. Prereq: BIOL 2201 or cons. of instr.

BIOL 4703. Exercise Physiology. 3 cr. hrs.
Study of the effects of acute and chronic exercise on selected organ systems. Particular emphasis will be placed on muscle, cardiovascular, respiratory, and environmental physiology. Prereq: BIOL 3701 or equiv., or cons. of instr.
BIOL 4806. Immunobiology. 3 cr. hrs.
Cellular and molecular mechanisms of the immune response. Nature of antigens and antibodies and their interactions. Special topics include complement, immediate and delayed hypersensitivity, transplantation and tumor immunobiology, immunosuppression, and immunological tolerance. 3 hrs. lec., disc. Prereq: BIOL 2301 or cons. of instr.

BIOL 4931. Topics in Biology. 1 cr. hr.
Analysis of selected topics under faculty supervision. S/U grade assessment. A maximum of 3 cr. hrs. of BIOL 4931 will be counted towards major. Prereq: Cons. of instr.

BIOL 4956. Laboratory Research Project in Biological Sciences. 1-3 cr. hrs.
Laboratory experience in experimental design and analysis of a selected research project with faculty guidance and supervision. A maximum of six cr. hrs. of BIOL 4995 and BIOL 4956 combined will be counted toward the major. Prereq: cons. of dept. ch.

BIOL 4987. Applying the Internship Experience. 3 cr. hrs.
A weekly seminar that follows the completion of a full-time or part-time internship experience. Students reflect on and share the skills and knowledge that they have gained during their internship experience through presentations, case studies and mentoring. In addition, students present their internship projects to a broader audience of students and faculty in the format of a scientific poster and hone their scientific and technical writing skills through collaborative revision of their final work reports. Prereq: BIOL 3986 or BIOL 3987, and cons. of internship coordinator.

BIOL 4995. Independent Study in Biology. 1-3 cr. hrs.
Readings and analyses of published papers on selected topics in biology. Prereq: Jr. or Sr. stndg., cons. of instr., and cons. of dept ch. A maximum of six (6) cr. hrs. of BIOL 4995 and BIOL 4956 combined will be counted toward the major.
Chemistry

Chairperson: Scott Reid, Ph.D.
Department of Chemistry website (http://www.marquette.edu/chem)

The Marquette University Chemistry Department offers several areas of study with outstanding facilities and research opportunities for undergraduate students interested in pursuing careers related to chemistry or biochemistry. Three different majors are available: Chemistry, Biochemistry/Molecular Biology (jointly with Biological Sciences) and Chemistry for the Professions (for students enrolled in the College of Education or as a secondary major). A minor in chemistry is also available. The chemistry major is certified by the American Chemical Society, and through course and laboratory work we emphasize developing the whole scientist, in turn preparing students for many fields including research and development, chemistry, dental and medical careers, pharmacy, business, technical sales and marketing, law and education. In addition, together with the Graduate School of Management, the Department of Chemistry offers a five-year B.S./M.B.A. accelerated degree program.

Major in Chemistry

The major in chemistry consists of thirteen courses (43 credit hours): 11 required courses (37 credit hours) and 2 elective courses (6 credit hours). In addition, background courses in mathematics (12 credit hours) and physics (8 credit hours) are required as listed below.

Notes:

- Students who select a chemistry major following their sophomore year may substitute CHEM 2111 Organic Chemistry 1, CHEM 2112 Organic Chemistry 2 for CHEM 2113 Organic Chemistry for Majors 1, CHEM 2114 Organic Chemistry for Majors 2, respectively.
- Chemistry offers both American Chemical Society (ACS) certified and non-certified degrees. Consult with the department undergraduate curriculum chair for the requirements of each.

Required Chemistry Courses:

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<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>CHEM 1013</td>
<td>General Chemistry 1 for Majors</td>
<td>4</td>
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<tr>
<td>or CHEM 1001</td>
<td>General Chemistry 1</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 1014</td>
<td>General Chemistry 2 for Majors</td>
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<tr>
<td>or CHEM 1002</td>
<td>General Chemistry 2</td>
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</tr>
<tr>
<td>CHEM 2113</td>
<td>Organic Chemistry for Majors 1</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 2114</td>
<td>Organic Chemistry for Majors 2</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 3201</td>
<td>Quantitative Analysis</td>
<td>4</td>
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<tr>
<td>CHEM 3210</td>
<td>Instrumental Analysis</td>
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</tr>
<tr>
<td>CHEM 3320</td>
<td>Inorganic Synthesis</td>
<td>2</td>
</tr>
<tr>
<td>CHEM 3420</td>
<td>Physical Chemistry Laboratory</td>
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</tr>
<tr>
<td>CHEM 4330</td>
<td>Inorganic Chemistry</td>
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<tr>
<td>CHEM 4433</td>
<td>Physical Chemistry 1</td>
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<tr>
<td>CHEM 4434</td>
<td>Physical Chemistry 2</td>
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Choose two additional Chemistry electives. 6

Total Credit Hours 43

Additional Course Requirements for Chemistry Majors:

Mathematics Courses:

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<td>MATH 1451</td>
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</tr>
<tr>
<td>MATH 2450</td>
<td>Calculus 3</td>
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Physics Courses:

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<tr>
<td>PHYS 1013</td>
<td>Classical and Modern Physics with Calculus 1</td>
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<td>or PHYS 1003</td>
<td>General Physics with Introductory Calculus 1</td>
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<tr>
<td>PHYS 1014</td>
<td>Classical and Modern Physics with Calculus 2</td>
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<tr>
<td>or PHYS 1004</td>
<td>General Physics with Introductory Calculus 2</td>
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Total Credit Hours 20
## Typical Program for Chemistry Majors

**Freshman**

<table>
<thead>
<tr>
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<th>Hours</th>
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<td>CHEM 1014 or 1002</td>
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<td>MATH 1451</td>
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<td>UCCS-Hist of Cultures &amp; Soc.</td>
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<td>THEO 1001</td>
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**Sophomore**

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<td>CHEM 2114 or 2112</td>
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<td>PHYS 1013 or 1003</td>
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<tr>
<td>MATH 2450</td>
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<td>UCCS-Diverse Cultures</td>
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<td>UCCS-Lit./Performing Arts</td>
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<td>UCCS-Indiv. &amp; Soc. Behav.</td>
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**Junior**

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<td>CHEM 3210</td>
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<td>3</td>
<td>PHIL 2310</td>
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**Senior**

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<td>CHEM 3420 **</td>
<td>2</td>
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<tr>
<td>CHEM 3320</td>
<td>2</td>
<td>Chemistry elective *</td>
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<td>Electives</td>
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<tr>
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</table>

Total credit hours: 120

* CHEM 4530 Introduction to Biochemistry is required for the American Chemical Society certified degree.
* CHEM 4956 Undergraduate Research in Chemistry is a recommended elective. Up to 6 hours can be counted towards the degree.
** CHEM 3420 Physical Chemistry Laboratory may be taken the junior year, concurrently with CHEM 4434.

### Chemistry B.S./M.S. Accelerated Degree Program

The department offers a five-year combined bachelor’s-master’s program which enables students to earn both their bachelor of science and master of science degrees in chemistry in just five years. After completing the program, it is anticipated that students would have the potential for:

- Obtaining an industrial position in the chemical profession and related industries featuring greater responsibility and leadership than possible with a bachelor of science degree alone.
- Developing their academic skills and portfolio further, with the possibility to improve their chances of acceptance into doctoral, medical or other advanced degree programs.
• Immersion into an intensive research experience to provide guidance on their ability and aptitude for pursuing a doctor of philosophy degree in chemistry.

Students are admitted following their junior year but are encouraged to begin undergraduate research (CHEM 4956 Undergraduate Research in Chemistry) during their junior year. Normally, a GPA of 2.75 in their Marquette University undergraduate science and math course work is required for admission. During the spring term of their fourth year, students are eligible to apply for a graduate assistantship for the fifth year, which would be awarded, if available, on the basis of merit as determined by the Graduate Committee (GC). Note that priority for academic year graduate assistantships is given to doctoral candidates.

**Chemistry B.S./M.B.A. Accelerated Degree Program**

The Department of Chemistry together with the Graduate School of Management offers an accelerated degree program which allows students to earn both their B.S. in Chemistry and master of business administration (M.B.A.) all within a five-year time period.

During the first four years of the program, students complete both their coursework requirements for their Chemistry B.S. degree and the necessary prerequisite courses for the M.B.A. degree in the College of Business Administration. In addition, undergraduate students begin their M.B.A. graduate work in their senior year by taking two graduate level courses.

To be considered for admission to the B.S./M.B.A. five-year program, applicants must formally apply to the Graduate School of Management during their junior year at Marquette University. For more detailed information and details of a typical five-year coursework plan, please refer to the Graduate School of Management Bulletin and contact the Department of Chemistry or the Graduate School of Management.

**Major in Chemistry for the Professions**

Chemistry for the Professions is a second major for students in the College of Education who wish to teach chemistry at the high school level. The major consists of 34 credit hours: eight required chemistry courses (30 credit hours) and 4 credit hours of chemistry electives. In addition, 12 credit hours of mathematics and physics courses must be completed to fulfill prerequisites for required course work.

**Required Chemistry Courses:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 1001</td>
<td>General Chemistry 1</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 1002</td>
<td>General Chemistry 2</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 2113</td>
<td>Organic Chemistry for Majors 1</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 2114</td>
<td>Organic Chemistry for Majors 2</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 3201</td>
<td>Quantitative Analysis</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 3210</td>
<td>Instrumental Analysis</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 4433</td>
<td>Physical Chemistry 1</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 4434</td>
<td>Physical Chemistry 2</td>
<td>3</td>
</tr>
<tr>
<td>Electives: Choose four credit hours of Chemistry electives.</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

**Total Credit Hours** 34

**Note:**

• The additional course requirements listed below for the Chemistry for the Professions major are prerequisites for CHEM 4433 Physical Chemistry 1 and CHEM 4434 Physical Chemistry 2.

**Mathematics Course:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 2450</td>
<td>Calculus 3</td>
<td>4</td>
</tr>
</tbody>
</table>

**Physics Courses:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 1013</td>
<td>Classical and Modern Physics with Calculus 1</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 1001</td>
<td>General Physics 1</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 1003</td>
<td>General Physics with Introductory Calculus 1</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 1014</td>
<td>Classical and Modern Physics with Calculus 2</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 1002</td>
<td>General Physics 2</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 1004</td>
<td>General Physics with Introductory Calculus 2</td>
<td>4</td>
</tr>
</tbody>
</table>

**Total Credit Hours** 12

**Biochemistry and Molecular Biology**

The major in biochemistry and molecular biology consists of 53-59 credit hours in biology, chemistry and mathematics courses as listed below. Additional cognate courses in mathematics and physics are required.
Required Biological Sciences courses (18 cr. hrs.):

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1001</td>
<td>General Biology 1</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 1002</td>
<td>General Biology 2</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 2201</td>
<td>Genetics</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 2301</td>
<td>Cell Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 4101</td>
<td>Biochemistry and the Molecular Basis of Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 4102</td>
<td>Experimental Molecular Biology</td>
<td>3</td>
</tr>
</tbody>
</table>

Required Chemistry Courses (23-26 cr. hrs.)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 1001 or CHEM 1013</td>
<td>General Chemistry 1 for Majors</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 1002 or CHEM 1014</td>
<td>General Chemistry 2 for Majors</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 3201</td>
<td>Quantitative Analysis</td>
<td>4</td>
</tr>
</tbody>
</table>

Organic Chemistry Sequence - Choose one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 2111 &amp; CHEM 2112</td>
<td>Organic Chemistry 1</td>
<td>8</td>
</tr>
<tr>
<td>&amp; CHEM 2113 &amp; CHEM 2114</td>
<td>Organic Chemistry for Majors 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>and Organic Chemistry 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>and Organic Chemistry for Majors 2</td>
<td></td>
</tr>
</tbody>
</table>

Physical Chemistry - Choose one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 4431</td>
<td>Physical Chemistry: Fundamentals with Applications in Biological Sciences</td>
</tr>
<tr>
<td>&amp; CHEM 4433</td>
<td>Physical Chemistry 1</td>
</tr>
<tr>
<td></td>
<td>and Physical Chemistry 2</td>
</tr>
</tbody>
</table>

Additional Laboratory Course Requirement - Choose option one or option two:

<table>
<thead>
<tr>
<th>Option 1:</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 4956 or CHEM 4956</td>
<td>Laboratory Research Project in Biological Sciences</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Undergraduate Research in Chemistry</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Option 2 (choose one of the following):</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 3202</td>
<td>Experimental Genetics</td>
</tr>
<tr>
<td>BIOL 3302</td>
<td>Experimental Cell Biology</td>
</tr>
<tr>
<td>BIOL 3502</td>
<td>Experimental Neurobiology</td>
</tr>
<tr>
<td>BIOL 3602</td>
<td>Experimental Vertebrate Anatomy and Development</td>
</tr>
<tr>
<td>BIOL 3702</td>
<td>Experimental Physiology</td>
</tr>
<tr>
<td>BIOL 3802</td>
<td>Experimental Microbiology</td>
</tr>
</tbody>
</table>

Elective Courses - Choose any three of the following not previously taken:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 3202</td>
<td>Experimental Genetics</td>
</tr>
<tr>
<td>BIOL 3302</td>
<td>Experimental Cell Biology</td>
</tr>
<tr>
<td>BIOL 3401</td>
<td>Advanced Ecology</td>
</tr>
<tr>
<td>BIOL 3404</td>
<td>Evolutionary Biology</td>
</tr>
<tr>
<td>BIOL 3406</td>
<td>Plant Biology</td>
</tr>
<tr>
<td>BIOL 3501</td>
<td>Neurobiology</td>
</tr>
<tr>
<td>BIOL 3502</td>
<td>Experimental Neurobiology</td>
</tr>
<tr>
<td>BIOL 3601</td>
<td>Animal Development</td>
</tr>
<tr>
<td>BIOL 3602</td>
<td>Experimental Vertebrate Anatomy and Development</td>
</tr>
<tr>
<td>BIOL 3701</td>
<td>Human Physiology</td>
</tr>
<tr>
<td>BIOL 3702</td>
<td>Experimental Physiology</td>
</tr>
<tr>
<td>BIOL 3801</td>
<td>Microbiology</td>
</tr>
<tr>
<td>BIOL 3802</td>
<td>Experimental Microbiology</td>
</tr>
<tr>
<td>BIOL 4201</td>
<td>Genomics and Bioinformatics</td>
</tr>
<tr>
<td>BIOL 4703</td>
<td>Exercise Physiology</td>
</tr>
<tr>
<td>BIOL 4806</td>
<td>Immunobiology</td>
</tr>
<tr>
<td>BIOL 4956</td>
<td>Laboratory Research Project in Biological Sciences</td>
</tr>
<tr>
<td>BIOL 4987</td>
<td>Applying the Internship Experience</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Name</td>
</tr>
<tr>
<td>-------------</td>
<td>-------------------------------------------------</td>
</tr>
<tr>
<td>BIOL 4995</td>
<td>Independent Study in Biology</td>
</tr>
<tr>
<td>BISC 4995</td>
<td>Independent Study in Biomedical Sciences</td>
</tr>
</tbody>
</table>

**Chemistry Courses:**
- CHEM 3210 Instrumental Analysis
- CHEM 4130 Characterization of Organic Compounds
- CHEM 4330 Inorganic Chemistry
- CHEM 4430 Introduction to Quantum Chemistry
- CHEM 4530 Introduction to Biochemistry
- CHEM 4956 Undergraduate Research in Chemistry

**Mathematics Courses:**
- MATH 2450 Calculus 3
- MATH 2451 Differential Equations
- MATH 4740 Biostatistical Methods and Models
  or MATH 4720 Statistical Methods
  or PSYC 2001 Psychological Measurements and Statistics

**Total Credit Hours** 53-59

**Notes:**
- Students who take CHEM 4433 Physical Chemistry 1, CHEM 4434 Physical Chemistry 2 and MATH 2450 Calculus 3 are required to take only one additional elective in biological sciences, chemistry or mathematics.
- A second BIOL 4956 Laboratory Research Project in Biological Sciences course may be taken as an elective if BIOL 4956 previously taken as a laboratory course.
- Honors courses are available from both departments by contract with the instructors. Courses available for honors credit are identified.

**Cognate Course Requirements:**

**Mathematics Courses:**
- MATH 1450 Calculus 1 4
- MATH 1451 Calculus 2 4

**Physics Sequence - Choose one of the following:**
- PHYS 1001 General Physics 1
  & PHYS 1002 and General Physics 2
- PHYS 1003 General Physics with Introductory Calculus 1
  & PHYS 1004 and General Physics with Introductory Calculus 2

**Total Credit Hours** 16

**Typical Program for Biochemistry/Molecular Biology Majors**

**Freshman**

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1001</td>
<td>3</td>
<td>BIOL 1002</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1001 or 1013</td>
<td>4</td>
<td>CHEM 1002 or 1014</td>
<td>4</td>
</tr>
<tr>
<td>MATH 1450</td>
<td>4</td>
<td>MATH 1451</td>
<td>4</td>
</tr>
<tr>
<td>ENGL 1001</td>
<td>3</td>
<td>ENGL 1002</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>14</strong></td>
<td><strong>14</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Sophomore**

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 2111 or 2113</td>
<td>4</td>
<td>BIOL 2201</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 1001 or 1003</td>
<td>4</td>
<td>UCCS-Hist. of Cultures &amp; Soc.</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 2301</td>
<td>3</td>
<td>PHIL 2310</td>
<td>3</td>
</tr>
</tbody>
</table>
### Junior

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 4101 Biology lab (upper division)</td>
<td>3</td>
<td>CHEM 4431 Physical Chemistry 1</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 4434 Physical Chemistry 2</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UCCS-Theology</td>
<td>3</td>
<td>Selective</td>
<td>3</td>
</tr>
<tr>
<td>UCCS-Lit./Performing Arts</td>
<td>3</td>
<td>UCCS-Indiv. &amp; Soc. Behav.</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>**</td>
<td>15</td>
<td>**</td>
<td>13</td>
</tr>
</tbody>
</table>

### Senior

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 4102 Biochemistry/Molecular Biology electives</td>
<td>6</td>
<td>Electives</td>
<td>9</td>
</tr>
<tr>
<td>Biochemistry/Molecular Biology elective</td>
<td>3-4</td>
<td>Electives</td>
<td>9</td>
</tr>
<tr>
<td>Electives</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UCCS-Diverse Cultures</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>**</td>
<td>15-16</td>
<td>**</td>
<td>15</td>
</tr>
</tbody>
</table>

Total credit hours: 120-121

* Many students, including those continuing on to graduate school, should consider the option of two terms of physical chemistry CHEM 4433 Physical Chemistry 1 and CHEM 4434 Physical Chemistry 2 which require an additional term of calculus MATH 2450 Calculus 3. Students who take CHEM 4433 Physical Chemistry 1, CHEM 4434 Physical Chemistry 2, and MATH 2450 Calculus 3 are required to take only one additional elective in biological sciences, chemistry or mathematics.

** BIOL 4956 Laboratory Research Project in Biological Sciences or CHEM 4956 Undergraduate Research in Chemistry may be substituted.

# For students intending to apply to medical school: MATH 4740 Biostatistical Methods and Models is recommended as a math elective, PSYC 1001 General Psychology is recommended to satisfy the UCCS Individual and Social (ISB) requirement, and SOCI 1001 Principles of Sociology is recommended as a general elective.

### Biochemistry and Molecular Biology B.S./M.B.A. Accelerated Degree Programs

The Departments of Biological Sciences and Chemistry together with the Graduate School of Management offer an accelerated degree programs which allow students to earn their B.S. in Biochemistry & Molecular Biology and a master of business administration (M.B.A.), all within in a five-year time period.

During the first four years of the program, students complete both their coursework requirements for their B.S. degree and the necessary prerequisite courses for the M.B.A. degree in the College of Business Administration. In addition, undergraduate students begin their M.B.A. graduate work in their senior year by taking two graduate level courses.

To be considered for admission to the B.S./M.B.A. five-year program, applicants must formally apply to the Graduate School of Management during their junior year at Marquette University. For more detailed information and details of a typical five-year coursework plan, please refer to the Graduate School of Management Bulletin and contact the Departments of Biological Sciences and/or Chemistry or the Graduate School of Management.

### Minor in Chemistry

The Chemistry minor consists of five courses for a minimum of 19 credit hours, as listed below:

<table>
<thead>
<tr>
<th>Required Chemistry Courses:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 1001 General Chemistry 1</td>
<td>4</td>
</tr>
<tr>
<td>or CHEM 1013 General Chemistry 1 for Majors</td>
<td></td>
</tr>
<tr>
<td>CHEM 1002 General Chemistry 2</td>
<td>4</td>
</tr>
<tr>
<td>or CHEM 1014 General Chemistry 2 for Majors</td>
<td></td>
</tr>
</tbody>
</table>
CHEM 2111  Organic Chemistry 1  4
or CHEM 2113  Organic Chemistry for Majors 1
CHEM 2112  Organic Chemistry 2  4
or CHEM 2114  Organic Chemistry for Majors 2

Elective Course: Choose one upper-division CHEM course or one of the following.

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 4012</td>
<td>Quantum Mechanics</td>
</tr>
<tr>
<td>PHYS 4062</td>
<td>Introduction to Thermodynamics</td>
</tr>
</tbody>
</table>

Total Credit Hours  19

Notes:

• CHEM 4956 Undergraduate Research in Chemistry or CHEM 4995 Independent Study in Chemistry may not be counted toward the minor.

Department of Public Instruction Certification

College of Education students wishing to pursue Department of Public Instruction Certification must complete the following courses listed below for a total of 22 credit hours:

Required Chemistry courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 1001</td>
<td>General Chemistry 1</td>
</tr>
<tr>
<td>CHEM 1002</td>
<td>General Chemistry 2</td>
</tr>
<tr>
<td>CHEM 2111</td>
<td>Organic Chemistry 1</td>
</tr>
<tr>
<td>or CHEM 2113</td>
<td>Organic Chemistry for Majors 1</td>
</tr>
<tr>
<td>CHEM 2112</td>
<td>Organic Chemistry 2</td>
</tr>
<tr>
<td>or CHEM 2114</td>
<td>Organic Chemistry for Majors 2</td>
</tr>
<tr>
<td>CHEM 3201</td>
<td>Quantitative Analysis</td>
</tr>
</tbody>
</table>

Electives - Choose two credit hours of Chemistry electives  2

Total Credit Hours  22

Courses

CHEM 1000. Essentials of Chemistry. 1 cr. hr.

Transitional, 7-week course for students beginning the fall term in CHEM 1001. Course focuses on critical thinking and scientific reasoning skills. Prereq: Enrollment in CHEM 1001 at the beginning of fall term.

CHEM 1001. General Chemistry 1. 4 cr. hrs.

Introductory college chemistry. Fundamental principles of chemistry including stoichiometry, physical states of matter, energy relationships, periodic table, atomic and molecular structure and solutions. The following mathematical concepts are used in CHEM 1001 and CHEM 1002: Scientific notation, logarithms, the quadratic equation and proportionality. 3 hrs. lec., 3 hrs. lab., 1 hr. disc.

CHEM 1001H. Honors General Chemistry 1. 4 cr. hrs.

Introductory college chemistry. Fundamental principles of chemistry including stoichiometry, physical states of matter, energy relationships, periodic table, atomic and molecular structure and solutions. The following mathematical concepts are used in CHEM 1001 and CHEM 1002: Scientific notation, logarithms, the quadratic equation and proportionality. 3 hrs. lec., 3 hrs. lab., 1 hr. disc. Prereq: Admission to Marquette University Honors Program.

CHEM 1002. General Chemistry 2. 4 cr. hrs.

Continuation of CHEM 1001. Chemistry of metals and nonmetals, kinetics, chemical equilibrium, aqueous equilibria, free energy relationships, electrochemistry, nuclear chemistry, organic chemistry, and chemistry of the transition metals. Qualitative analysis included as part of the laboratory work. 3 hrs. lec., 3 hrs. lab., 1 hr. disc. Prereq: CHEM 1001 or 1013.

CHEM 1002H. Honors General Chemistry 2. 4 cr. hrs.

Continuation of CHEM 1001 or CHEM 1001H. Chemistry of metals and nonmetals, kinetics, chemical equilibrium, aqueous equilibria, free energy relationships, electrochemistry, nuclear chemistry, organic chemistry, and chemistry of the transition metals. Qualitative analysis included as part of the laboratory work. 3 hrs. lec., 3 hrs. lab., 1 hr. disc. Prereq: CHEM 1001 or CHEM 1001H and admission to Marquette University Honors Program.

CHEM 1013. General Chemistry 1 for Majors. 4 cr. hrs.

Introductory college chemistry, designed for students majoring in the natural sciences. Fundamental principles of chemistry including stoichiometry, physical states of matter, energy relationships, periodic table, atomic and molecular structure and solutions. The following mathematical concepts are used: Scientific notation, logarithms, the quadratic equation and proportionality. 3 hrs. lec., 3 hrs. lab. Students cannot receive credit for both CHEM 1001 and CHEM 1013.
CHEM 1014. General Chemistry 2 for Majors. 4 cr. hrs.
Continuation of CHEM 1001 or 1013. Intended for students majoring in the natural sciences. Emphasis in the lecture is on kinetics, equilibrium, electrochemistry, nuclear chemistry, symmetry in coordination and organic chemistry, and industrial processes as applied from thermodynamic principles. The laboratory consists of experiments designed to correlate with lecture; introduction of some research-grade instrumentation is given. 3 hrs. lec., 3 hrs. lab. Students cannot receive credit for both CHEM 1002 and CHEM 1014. Prereq: CHEM 1001 or CHEM 1013.

CHEM 1021. CHEM 1001 Laboratory Only. 1 cr. hr.
Designed to provide students with a formal course number in which they may register for a laboratory in CHEM 1001 (first semester general chemistry), without taking lecture or discussion. Prereq: Cons. of dept. ch.

CHEM 1022. CHEM 1002 Laboratory Only. 1 cr. hr.
Designed to provide students with a formal course number in which they may register for a laboratory in CHEM 1002 (second semester general chemistry), without taking lecture or discussion. Prereq: Cons. of dept. ch.

CHEM 1031. CHEM 1001 Lecture Only. 3 cr. hrs.
Designed to provide students with a formal course number in which they may register for a lecture in CHEM 1001 (first semester general chemistry), without taking laboratory. Prereq: Cons. of dept. ch.

CHEM 1032. CHEM 1002 Lecture Only. 3 cr. hrs.
Designed to provide students with a formal course number in which they may register for a lecture in CHEM 1002 (second semester general chemistry), without taking laboratory. Prereq: Cons. of dept. ch.

CHEM 1080. Chemistry in the World. 4 cr. hrs.
Introduction to chemical concepts and their applications in the world, with focus on applications in energy, the environment, air and water pollution, agriculture, food and drug development. Intended for non-science majors. 3 hrs. lecture, 2 hrs. lab.

CHEM 2111. Organic Chemistry 1. 4 cr. hrs.
Modern theories of bonding, stereochemistry, synthesis and reaction mechanism. The chemistry of aliphatic hydrocarbons and their functional group derivatives. Laboratory: basic organic manipulations such as distillation, recrystallization, including simple synthesis. 3 hrs. lec., 4 hrs. lab. Prereq: CHEM 1002 or CHEM 1014.

CHEM 2112. Organic Chemistry 2. 4 cr. hrs.
Continuation of CHEM 2111. Extension of the chemistry of the remaining mono and polyfunctional, and aromatic compounds. Bonding, stereochemistry, mechanisms, synthesis, applied spectroscopy, heterocycles and natural products. Laboratory: synthesis, instrumental application, organic qualitative analysis. 3 hrs. lec., 4 hrs. lab. Prereq: CHEM 2111 or CHEM 2113.

CHEM 2113. Organic Chemistry for Majors 1. 4 cr. hrs.
Intended to be taken by chemistry majors, honors students, and other interested science majors. Principles of bonding, stereochemistry, mechanisms, kinetics, and spectrometry applied to aliphatic and aromatic hydrocarbons and simple monofunctional organic molecules. Laboratory: modern techniques using research instruments. 3 hrs. lec., 1 hr. disc., 4 hrs. lab. Prereq: CHEM 1002 or CHEM 1014.

CHEM 2114. Organic Chemistry for Majors 2. 4 cr. hrs.
Continuation of CHEM 2113. Mechanisms, structure-reactivity relationships, and complex syntheses applied to the remaining principle classes of organic compounds. Laboratory: organic qualitative analysis. 3 hrs. lec., 1 hr. disc., 4 hrs. lab. Prereq: CHEM 2111 or CHEM 2113.

CHEM 2121. CHEM 2111 Laboratory Only. 1 cr. hr.
Designed to provide students with a formal course number in which they may register for a laboratory in CHEM 2111 (organic chemistry 1), without taking lecture. Prereq: Cons. of dept. ch.

CHEM 2122. CHEM 2112 Laboratory Only. 1 cr. hr.
Designed to provide students with a formal course number in which they may register for a laboratory in CHEM 2112 (organic chemistry 2), without taking lecture. Prereq: Cons. of dept. ch.

CHEM 2131. CHEM 2111 Lecture Only. 3 cr. hrs.
Designed to provide students with a formal course number in which they may register for a lecture in CHEM 2111 (organic chemistry 1), without taking lab. Prereq: Cons. of dept. ch.

CHEM 2132. CHEM 2112 Lecture Only. 3 cr. hrs.
Designed to provide students with a formal course number in which they may register for a lecture in CHEM 2112 (organic chemistry 2), without taking lab. Prereq: Cons. of dept. ch.

CHEM 3120. Chemistry Laboratory Only: Upper Division. 1-2 cr. hrs.
This is a variable title, variable credit course designed to provide students with a formal course number in which they may register for a laboratory without lecture basis for existing upper division chemistry courses. Prereq: Cons. of dept. ch.

CHEM 3130. Lecture Only - Upper Division. 1-3 cr. hrs.
This is a variable title, variable credit course designed to provide students with a formal course number in which they may register for a lecture without laboratory basis for existing upper division chemistry courses. Prereq: Cons. of dept. ch.

CHEM 3201. Quantitative Analysis. 4 cr. hrs.
Fundamental theory of analytical chemistry covering principal gravimetric and titrimetric methods with introduction to electrochemical and spectrophotometric techniques and to separations. 3 hrs. lec., 4 hrs. lab. Prereq: CHEM 1002 or CHEM 1014.
CHEM 3210. Instrumental Analysis. 4 cr. hrs.
Continuation of CHEM 3201. Physical methods of analysis with emphasis on electrochemical, spectral and chromatographic methods. 3 hrs. lec., 4 hrs.
lab. Prereq: CHEM 3201, CHEM 4433 and PHYS 1002 or PHYS 1004 or PHYS 1014.

CHEM 3320. Inorganic Synthesis. 2 cr. hrs.
Synthesis and characterization of transition and post-transition inorganic and organometallic compounds. Emphasis on structure elucidation through
electronic and nuclear magnetic spectroscopy; handling of air-sensitive compounds; high-vacuum line techniques; homogeneous catalysis. 1 lab-recit., 4
hrs. lab. Prereq: CHEM 4330, which must be taken concurrently, and CHEM 4434.

CHEM 3420. Physical Chemistry Laboratory. 2 cr. hrs.
Laboratory experiments illustrating the principles of physical chemistry. 5 hrs. lab. Prereq: CHEM 4433 and CHEM 4434, which must be taken
concurrently.

CHEM 3931. Topics in Chemistry. 1-3 cr. hrs.
Topics of current interest in inorganic, organic, analytical, physical or biochemistry. Prereq: CHEM 4434, which may be taken concurrently, or cons. of
instr.

Fundamental theory of spectral methods used to identify organic compounds. Structure elucidation through application of nuclear magnetic resonance,
ultraviolet, infrared, and mass spectroscopy. 3 hrs. lec. Prereq: CHEM 4434.

CHEM 4230. Forensic Chemistry. 3 cr. hrs.
Examines the chemistry of forensics. Topics include: the science behind forensic analysis, methods for data analysis and applications of analytical
methods in forensic science. Prereq: CHEM 3201; may be taken concurrently.

CHEM 4330. Inorganic Chemistry. 3 cr. hrs.
Structure and bonding as related to physical and chemical properties; concepts relating to mechanisms; metal complexes; organometallic chemistry;
molecular symmetry; catalysis; and descriptive chemistry to demonstrate applications of principles. Prereq: CHEM 4434.

CHEM 4430. Introduction to Quantum Chemistry. 3 cr. hrs.
Elementary quantum theory and applications to atoms, molecules, and chemical bonding. Prereq: CHEM 4434.

CHEM 4431. Physical Chemistry: Fundamentals with Applications in Biological Sciences. 3 cr. hrs.
One term course in Physical Chemistry with focus on basic principles, using examples drawn from applications to biological systems. Covers
macroscopic, statistical, and microscopic descriptions of matter. Emphasis on thermodynamics, chemical and physical equilibria, transport properties,
and kinetics. Prereq: CHEM 1002 or CHEM 1014; and MATH 1410 or MATH 1450; and PHYS 1002 or PHYS 1004.

CHEM 4433. Physical Chemistry 1. 3 cr. hrs.
Foundations of quantum mechanics, applications to chemical systems, atomic and molecular structure and spectroscopy, foundations of statistical
mechanics, states of matter, laws of thermodynamics, phase and chemical equilibrium, electrochemistry, transport properties, and chemical kinetics. 3
hrs. lec. Prereq: CHEM 2114, MATH 2450, and either PHYS 1002 or PHYS 1004.

CHEM 4434. Physical Chemistry 2. 3 cr. hrs.
Continuation of CHEM 4433. 3 hrs. lec. Prereq: CHEM 4433.

CHEM 4530. Introduction to Biochemistry. 3 cr. hrs.
Bioenergetics, glycolysis, oxidative degradation, enzymes, metabolic controls, metabolism of carbohydrates, lipids and amino acids. Prereq: CHEM 2112
and CHEM 4433; or CHEM 2112 and CHEM 4433.

CHEM 4630. Introduction to Polymer Science. 3 cr. hrs.
Theory and practice of molecular weight determination for macromolecules. Characterization of polymers, including spectroscopic, chemical and
mechanical procedures. Synthesis of polymers, including kinetics of reaction. Polymer additives and technology. Prereq: CHEM 2112 and CHEM 4434.

CHEM 4932. Advanced Topics in Chemistry. 1-3 cr. hrs.
Advanced topics of current interest in inorganic, organic, analytical, physical or biochemistry. Prereq: CHEM 4434.

CHEM 4953. Undergraduate Seminar. 1-3 cr. hrs.
Emphasis on critical reading, analysis, and oral reporting of current literature sources in Chemistry. Prereq: CHEM 4434.

CHEM 4956. Undergraduate Research in Chemistry. 1-3 cr. hrs.
Research project conducted under the direction of a faculty advisor. A written progress report is required. The course may be repeated; however, a
maximum of six (6) cr. hrs. of CHEM 4956 and CHEM 4995 combined will be counted towards the major. Prereq: Consent of Instructor.

CHEM 4995. Independent Study in Chemistry. 1-3 cr. hrs.
Analysis of a specific topic under faculty supervision. The course may be repeated; however, a maximum of six (6) cr. hrs. of CHEM 4956 and
CHEM 4995 combined will be counted towards the major. Prereq: CHEM 4434 and cons. of dept. ch.

CHEM 4999. Senior Thesis. 2-4 cr. hrs.
Laboratory work leading to a thesis under the direction of an adviser. Prereq: CHEM 4434 and cons. of dept. ch.
Economics

Chairperson: Joseph P. Daniels, Ph.D.
Department of Economics website (http://business.marquette.edu/departments/economics)

Some disciplines train you to be a specialist. The economics discipline is a way of thinking about the world and the factors that influence and shape human actions. Economists have applied their science to the study of many forms of human endeavor. A major in economics gives students a way of analytically reasoning through problems. Whether they are interested in a career in private industry, government, public policy or the nonprofit sector, a degree in economics provides them with the tools to succeed. Being in a vibrant metropolitan area offers a great many advantages to our students, including access to internships with many top firms and organizations within the Milwaukee metro area. Our internships are carefully designed to guarantee that students attain valuable work experience. Students can even gain an inside track on jobs with those firms once they graduate. Our alumni have gone on to successful careers in many different areas including, but not limited to, policy analysts, practicing attorney, futures traders, banking analysts and business consultants.

Major in Economics

The major in economics consists of nine courses (27 credit hours) in economics: four required courses (12 credit hours) and 15 additional credit hours of upper division economics courses. In addition to the economics courses, two mathematics and statistics courses (6-8 credit hours) are required as listed below. Economics (ECON) majors are also required to take two additional social science courses outside of the ECON major. This requirement can be satisfied by taking any two courses that have one or more of the following subject codes: ANTH, CRLS, POSC, PSYC, SOCI, or SOWJ. Courses with the ANTH subject code must be in the area of cultural anthropology rather than biological anthropology.

A minimum grade of C must be earned in each of the major courses, including those numbered 3000 and above, (and including the required core courses: ECON 3003 Intermediate Microeconomic Analysis and ECON 3004 Intermediate Macroeconomic Analysis).

Required Economics Courses:
- ECON 1103 Principles of Microeconomics 3
- ECON 1104 Principles of Macroeconomics 3
- ECON 3003 Intermediate Microeconomic Analysis 3
- ECON 3004 Intermediate Macroeconomic Analysis 3

Electives - Choose five upper-division ECON courses. 15

Total Credit Hours 27

Required Mathematics and Statistics Courses:
- MATH 1400 Elements of Calculus (or equivalent or higher-level calculus course) 3
- and
- MATH 1700 Modern Elementary Statistics 3

Total Credit Hours 6

Note:
- Students contemplating graduate study in economics should take MATH 1450 Calculus 1 and MATH 1451 Calculus 2.
- Students may not take both ECON 3001 Applied Business Economics and ECON 3003 Intermediate Microeconomic Analysis for credit. Since ECON 3003 Intermediate Microeconomic Analysis is a required course, students cannot take ECON 3001 as an elective course for credit.

Economics B.A./M.S.A.E. Accelerated Degree Program

The Department of Economics offers a special five-year program enabling students to earn an undergraduate degree and a Master of Science degree in Applied Economics (M.S.A.E.). For information, consult the Graduate School of Management Bulletin or contact the Department of Economics.

Minor in Economics

The minor in Economics consists of 18 credit hours: two required courses (6 credit hours) and four upper division economics electives (12 credit hours). In addition to the economics course requirements, a basic statistics course (3 credit hours) is required as listed below.

Required:
- ECON 1103 Principles of Microeconomics 3
- ECON 1104 Principles of Macroeconomics 3

Electives - Choose four upper-division ECON courses. 12

Total Credit Hours 18
Additional Statistics Course Requirement:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>MATH 1700</td>
<td>Modern Elementary Statistics (or equivalent)</td>
<td>3</td>
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</table>

**Note:**

- Students minoring in Economics are urged to complete one of the following mathematics sequences listed below:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>MATH 1390</td>
<td>Finite Mathematics</td>
<td>6</td>
</tr>
<tr>
<td>&amp; MATH 1400</td>
<td>and Elements of Calculus</td>
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<td></td>
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<tr>
<td>MATH 1450</td>
<td>Calculus 1</td>
<td>8</td>
</tr>
<tr>
<td>&amp; MATH 1451</td>
<td>and Calculus 2</td>
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</tbody>
</table>

**Department of Public Instruction Certification**

To pursue Department of Public Instruction certification, College of Education students are required to complete the following requirements for a major in Economics. The major consists of 27 credit hours: four required courses (12 credits) and 15 additional credit hours of upper-division work selected from Groups I - III. An additional 9-11 credit hours in basic statistics and mathematics courses are required as listed below.

**Required Courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ECON 1103</td>
<td>Principles of Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 1104</td>
<td>Principles of Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 3003</td>
<td>Intermediate Microeconomic Analysis</td>
<td>3</td>
</tr>
<tr>
<td>ECON 3004</td>
<td>Intermediate Macroeconomic Analysis</td>
<td>3</td>
</tr>
</tbody>
</table>

**Upper-Division Courses from Groups I-III as listed below:**

**Group I:** Choose one of the following courses.

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ECON 4008</td>
<td>Economics and Law</td>
<td>3</td>
</tr>
<tr>
<td>ECON 4070</td>
<td>Economics and Ethics</td>
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</table>

**Group II:** Choose two of the following courses.

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ECON 4006</td>
<td>Public Policies Toward American Industry</td>
<td>3</td>
</tr>
<tr>
<td>ECON 4010</td>
<td>Public Finance</td>
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<tr>
<td>ECON 4012</td>
<td>Urban and Regional Economics</td>
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<tr>
<td>ECON 4016</td>
<td>Environmental and Natural Resource Economics</td>
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<tr>
<td>ECON 4020</td>
<td>Economics of Labor Markets</td>
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<tr>
<td>ECON 4080</td>
<td>Money, Banking and Monetary Policy</td>
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</table>

**Group III:** Choose one of the following courses.

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<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ECON 4040</td>
<td>International Economic Issues</td>
<td>3</td>
</tr>
<tr>
<td>ECON 4042</td>
<td>International Antitrust and Competition Policy</td>
<td></td>
</tr>
<tr>
<td>ECON 4044</td>
<td>International Currency Markets</td>
<td></td>
</tr>
<tr>
<td>ECON 4045</td>
<td>Comparative Economic Systems</td>
<td></td>
</tr>
<tr>
<td>ECON 4046</td>
<td>International Trade</td>
<td></td>
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<tr>
<td>ECON 4047</td>
<td>Development Economics</td>
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</tbody>
</table>

**Economics Elective:** Choose one additional upper-division ECON course.

<table>
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<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
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<td>3</td>
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</table>

**Total Credit Hours**

<table>
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<tr>
<th>Credits</th>
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<tr>
<td>27</td>
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**Additional Mathematics Courses Required:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1390</td>
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<td>MATH 1450</td>
<td>Calculus 1</td>
<td>6-8</td>
</tr>
<tr>
<td>&amp; MATH 1451</td>
<td>and Calculus 2</td>
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</tbody>
</table>

**Required Statistics Course:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1700</td>
<td>Modern Elementary Statistics (or equivalent)</td>
<td>3</td>
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</table>

**Total Credit Hours**

<table>
<thead>
<tr>
<th>Credits</th>
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<tbody>
<tr>
<td>9-11</td>
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</table>
Courses

ECON 1001. Introduction to Economics. 3 cr. hrs.
An introductory survey of economic issues for non-majors with an emphasis on using economic concepts as elements of critical reasoning. Microeconomic topics include markets and the role of government in a market economy. Macroeconomic topics include the banking system, inflation and unemployment. International issues include the balance of trade and foreign exchange. Will not be counted towards the Economics major. Not available for students enrolled in the College of Business Administration.

ECON 1103. Principles of Microeconomics. 3 cr. hrs.
Institutions and processes of market specialization and exchange. Supply and demand and their determinants. Pricing and production decisions of the firm under varying competitive conditions. The role of government in a modern mixed economy. Microeconomic analysis applied to selected economic problems.

ECON 1104. Principles of Macroeconomics. 3 cr. hrs.

ECON 1104H. Honors Principles of Macroeconomics. 3 cr. hrs.

ECON 3001. Applied Business Economics. 3 cr. hrs.
The focus of this course is to explain and develop key economic principles, models, and data that are relevant to business analysis and managerial decision-making. It expands on important economic principles including demand and supply, production and cost, market structures, profit maximization and pricing strategies under varying competitive conditions. Students are expected to develop skills in the practice of using economic models, data and statistical techniques in the process of business decision-making, as well as an understanding of both the usefulness and limitations of such models, data, and techniques. Students may not take both ECON 3001 and ECON 3003 for credit. Prereq: ECON 1103 and admission to SNC/UNC grade assessment. Prereq: Jr. standing, cons. of prog. dir. and cons. of Business Career Center.

ECON 3002. Intermediate Microeconomic Analysis. 3 cr. hrs.
Reviews the tools of supply and demand analysis. Studies the market behavior of consumers and business firms and the way they interact with each other and with public policy. Applies market theory to questions of resource allocation efficiency, changing market conditions, optimal pricing and output strategies and to important social issues of the day. Students may not take both ECON 3001 and ECON 3003 for credit. Prereq: ECON 1103, ECON 1104 and BUAD 1560 or MANA 2028 or equiv.

ECON 3003. Intermediate Microeconomic Analysis. 3 cr. hrs.
Determines levels of aggregate output, employment and prices. Describes available policy variables and their impacts upon the money, bond, goods and labor markets. Looks at inflation and unemployment, international macroeconomic interrelationships and fundamentals of the economic growth process. Prereq: ECON 1103, ECON 1104, MATH 1400 or equiv.

ECON 3004. Intermediate Macroeconomic Analysis. 3 cr. hrs.

Applied Global Business Learning is a short-term applied global business service learning experience. Under the direction of the instructor, students work with a foreign business venture to solve business problems. In the classroom setting, students learn about the history and culture of the country, as well as the experiences of individuals who have completed a global service project in the region. Students also have the opportunity to learn the realities of developing country business problems. Students help develop a business case solution for the selected project and travel to the location for implementation. Upon completion of the in-country experience, students prepare a post trip report for both the instructor and the entrepreneur and participate in a reflection retreat. Prereq: All application materials completed and cons. of instr.; Jr. stndg.

ECON 3986. Internship Work Period. 0 cr. hrs.
SNC/UNC grade assessment. Prereq: Jr. standing, cons. of prog. dir. and cons. of Business Career Center.

ECON 4006. Public Policies Toward American Industry. 3 cr. hrs.
Role of competition as an economic regulator. Bases and consequences of monopoly power. Development of statutory and administrative law affecting market processes in the U.S. Antitrust policies applied to monopoly, oligopoly, mergers and restrictive trade policies. Alternatives to anti-trust, including utility regulation and social regulation. Prereq: ECON 1103 and ECON 1104.

ECON 4008. Economics and Law. 3 cr. hrs.
Relationship between the rights and obligations which the legal system confers on individuals and the allocation of resources which results from alternative assignments of legal rights. Uses and limitations of economic analysis in explaining the process by which legal rights are conferred. Prereq: ECON 1103 and ECON 1104.

ECON 4010. Public Finance. 3 cr. hrs.
ECON 4012. Urban and Regional Economics. 3 cr. hrs.

ECON 4016. Environmental and Natural Resource Economics. 3 cr. hrs.
Economic analysis of environmental and natural resources including land, air, and water. Special emphasis on the role of human values and economic institutions in resource exploitation. Topics covered include air and water pollution, energy, ocean resources, forestry practices, mineral resources, the population problem, and agriculture. Prereq: ECON 1103 and ECON 1104.

ECON 4020. Economics of Labor Markets. 3 cr. hrs.
Supply and demand conditions unique to markets for services of human beings. The economics of investment and disinvestment of human capital. Topics include: determination of labor force size, geographic distribution and qualitative aspects; economic effects of institutional arrangements and labor laws; current issues. Prereq: ECON 1103 and ECON 1104.

ECON 4022. Economics of Healthcare and Health Policy. 3 cr. hrs.
An introduction to healthcare and health policy from an economics perspective. Covers the demand for and supply of healthcare, moral hazard, adverse selection, and health insurance markets (public and private) using economic evaluation techniques. Also covers the ongoing federal healthcare reform as the Patient Protection and Affordable Care Act of 2010 is the largest piece of health legislation in decades and is dramatically changing the underlying structure and operation of the healthcare sector. Discuss the value of health, externalities and public health, cost containment and managed care in addition to several other health topics. The main goal is to better understand the issues and debates in the vast and rapidly growing field of health economics. Prereq: ECON 1103 and ECON 1104.

ECON 4040. International Economic Issues. 3 cr. hrs.
Survey of international economics. Basis for and welfare effects of international trade, commercial policies, and economic growth. International organizations, trading regions, and trade accords. Balance of payments concepts and exchange rate theories. History and theory of international monetary systems including fixed versus flexible exchange rates. Prereq: ECON 1103 and ECON 1104. Credit not given if ECON 4044 or ECON 4046 has already been completed for credit.

ECON 4042. International Antitrust and Competition Policy. 3 cr. hrs.
Examines the economics of Antitrust or Competition Policy in an international context. Through readings, lectures, and class discussions it explores the economic rationale for Antitrust Policy, and examines the major topical areas that receive policy attention. Coverage includes a comparative survey of the policy approaches pursued by several major countries/economies, along with discussion of the conflicts and coordination issues that arise in a world characterized by extensive global trade. Prereq: ECON 1103 and ECON 1104.

ECON 4044. International Currency Markets. 3 cr. hrs.
Examination of various foreign exchange markets, including the spot, forward, futures and options markets. Risk, pricing and arbitrage procedures for cash and portfolio managers. Exchange rate management, structure of the international financial architecture, and the determination of exchange rates and the balance of payments. The role and practice of global financial intermediaries. Prereq: ECON 1103 and ECON 1104.

ECON 4045. Comparative Economic Systems. 3 cr. hrs.
An analysis and description of institutional differences among national economies. A theoretical framework for analyzing the effects of alternative systems on social and economic behavior is developed. Theoretical models are applied to specific cases, with special emphasis on issues of growth and development in advanced variants of capitalist, post-communist and less-developed economies. Prereq: ECON 1103 and ECON 1104.

ECON 4046. International Trade. 3 cr. hrs.
Sources, patterns, and welfare implications of international trade. Empirical investigations of traditional trade theories. Arguments for and impact of commercial policies. Trade effects of economic growth. Imperfect competition and intra-industry trade as alternatives to traditional theories and views. Prereq: ECON 1103 and ECON 1104.

ECON 4047. Development Economics. 3 cr. hrs.
Traditional economics is concerned with the allocation of scarce resources and emphasizes rationality and self-interest in decision-making. Political economy combines economics and politics to examine how social and institutional processes and power influence the allocation of scarce resources. Development economics deals with the economic, social, political and institutional mechanisms necessary to bring about rapid, large scale improvements in the lives of people in developing economies. Its ultimate goal is to understand the overall process of social and economic change in less developed countries in order to improve the lives of the majority of the world’s population. Prereq: ECON 1103 and ECON 1104.

ECON 4060. Introduction to Econometrics. 3 cr. hrs.
Designed to teach how to build an econometric model and to make forecasts using it. Models are constructed to explain phenomena that are observed frequently in business, economics and the social sciences. Linear regression analysis is employed and both single-equation and multi-equation models are investigated. Of practical value to economists, businessmen, engineers, statisticians, and other professionals for whom applied quantitative techniques are important. Prereq: ECON 1103, ECON 1104, and MATH 1700 or equiv.; or ECON 1103, ECON 1104, and BUAD 1560 or MANA 2028 or equiv.
ECON 4065. Introduction to Mathematical Economics. 3 cr. hrs.
Designed to give students the quantitative background required to appreciate the use of mathematics in economic analysis. Emphasis is on developing important techniques. However, many economic applications are incorporated in order to demonstrate how standard economic models can be developed in mathematical terms. Topics include matrix algebra, differential calculus, both constrained and unconstrained optimization and comparative statistics. Prereq: ECON 1103, ECON 1104 and one of the following three options: MATH 1390 and MATH 1400; or MATH 1450 and MATH 1451; or MATH 1390 and MATH 1450.

ECON 4070. Economics and Ethics. 3 cr. hrs.
Examines the relationship between economics and ethics, or how moral values and ethical reasoning underlie both the science of economics and the operation of the economy. Aim of the course is to introduce students to the role of ethical reasoning in economics and economic life, and thereby help create a capacity on their part for ethical reflection and action in connection with economic policy and individual economic experience. Prereq: ECON 1103 and ECON 1104.

ECON 4080. Money, Banking and Monetary Policy. 3 cr. hrs.

ECON 4931. Topics in Economics. 3 cr. hrs.
Lectures and discussions in an area which, because of its topicality, is not the subject of a regular course. The topics will be designated in the Schedule of Classes. Prereq: Jr. stndg.; ECON 1103 and ECON 1104.

ECON 4951. Marquette Led Travel and Study Abroad in Economics. 3 cr. hrs.
Course taught in an international setting by Marquette professors and where students earn Marquette credit. Study Abroad expenses apply. Prereq: Cons. of dept. ch.; Sr. stndg.

ECON 4953. Seminar in Economics. 3 cr. hrs.
same as previous one Prereq: Jr. stndg. and ECON 1103 and ECON 1104.

ECON 4986. Economics Internship - Grading Period. 3 cr. hrs.

ECON 4995. Independent Study in Economics. 1-4 cr. hrs.
Prereq: Cons. of dept. ch.

ECON 4999. Senior Thesis. 2 cr. hrs.
With department approval. Seniors may write a thesis under direction of an adviser. Prereq: Cons. of dept. ch.
English

Chairperson: Sarah Wadsworth, Ph.D.
Department of English website (http://www.marquette.edu/english)

The Department of English at Marquette University is a community of scholar-teachers and students who embrace the traditional Jesuit conception of liberal education inspired by St. Ignatius of Loyola. Grounded in this tradition, the department focuses on the study of “humane letters,” which is accorded a central and indispensable place in Jesuit education and defined as the study of rhetoric, poetry, grammar and history. Informed by this tradition as well as by contemporary literary and language studies, the department includes nationally and internationally prominent faculty and offers the following undergraduate programs of study: three majors (English Literature [ENGL], Writing-Intensive English [ENGW], and English Language Arts [ENGA]) and three minors (Literature, Literatures of Diverse Cultures and Writing-Intensive English). The Literature major studies major periods, authors and kinds of English and American literature with an emphasis on literary-historical-cultural analysis. The Writing-Intensive English major studies both literature and writing with emphases on rhetoric and composition, creative writing and/or professional writing. The English Language Arts major (a secondary major for students in the College of Education) studies literature, language and writing to prepare for successful teaching of English at the primary or secondary level. All three majors and minors provide opportunities for students to develop skills in critical reasoning, researching and evaluating information, written and spoken communication and creative writing. The course work is designed to prepare students for a wide variety of careers in areas including writing, editing, education, nonprofit work, business and law.

Notes:

• All literature courses fulfilling the English major and minor requirements must be taken from English department offerings.

• Students pursuing teaching certification in English by the Wisconsin Department of Public Instruction for an Elementary or Secondary Education major must complete the Major in English Language Arts requirements.

Major in Literature

The major in literature consists of 30 hours (excluding ENGL 1001 Rhetoric and Composition 1 and ENGL 1002 Rhetoric and Composition 2 or equivalents), divided according to Groups I-V, as listed below:

Group I: Foundational sequence

<table>
<thead>
<tr>
<th>Choose one of the following:</th>
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<tbody>
<tr>
<td>ENGL 2000</td>
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<tr>
<td>ENGL 2010</td>
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</table>

Required courses:

| ENGL 3000                  | Critical Practices and Processes in Literary Studies |
| ENGL 4997                  | Capstone |

Group II: Literature pre-1700

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<tr>
<th>Choose one of the following:</th>
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<tbody>
<tr>
<td>ENGL 4301</td>
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<tr>
<td>ENGL 4311</td>
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<tr>
<td>ENGL 4321</td>
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<tr>
<td>ENGL 4331</td>
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<td>ENGL 4341</td>
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<tr>
<td>ENGL 4351</td>
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<tr>
<td>ENGL 4361</td>
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<tr>
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Group III: Literature 1700-1900

<table>
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<th>Choose one of the following:</th>
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<tbody>
<tr>
<td>ENGL 4361</td>
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<tr>
<td>ENGL 4402</td>
</tr>
<tr>
<td>ENGL 4412</td>
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<td>ENGL 4422</td>
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<td>ENGL 4432</td>
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<td>ENGL 4442</td>
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<td>ENGL 4462</td>
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<tr>
<td>Course Code</td>
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</tr>
<tr>
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</table>

**Group IV: Literature post-1900**

Choose one of the following:

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>ENGL 4503</td>
<td>British Literature since 1900</td>
</tr>
<tr>
<td>ENGL 4513</td>
<td>Irish Literature</td>
</tr>
<tr>
<td>ENGL 4523</td>
<td>Modernism</td>
</tr>
<tr>
<td>ENGL 4533</td>
<td>US Literature: 20th-Century Beginnings to World War II</td>
</tr>
<tr>
<td>ENGL 4543</td>
<td>British Literature of the Postmodernist Period</td>
</tr>
<tr>
<td>ENGL 4553</td>
<td>US Literature after World War II</td>
</tr>
<tr>
<td>ENGL 4563</td>
<td>Literatures of the 21st Century</td>
</tr>
<tr>
<td>ENGL 4717</td>
<td>Comics and Graphic Narrative</td>
</tr>
<tr>
<td>ENGL 4840</td>
<td>Postcolonial Literatures</td>
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</table>

**Group V: Literature elective:**

Choose any four upper-division courses, no more than one of which may be a writing course:

<table>
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<tr>
<th>Literature courses:</th>
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<tbody>
<tr>
<td>ENGL 4110 Exploring the English Language</td>
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<td>ENGL 4120 Anatomy of English</td>
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<tr>
<td>ENGL 4130 History of the English Language</td>
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<td>ENGL 4170 Studies in Language</td>
</tr>
<tr>
<td>ENGL 4301 Medieval Literature and Chaucer</td>
</tr>
<tr>
<td>ENGL 4311 Themes in Medieval Literature</td>
</tr>
<tr>
<td>ENGL 4321 British Literature of the 16th Century</td>
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<tr>
<td>ENGL 4331 Shakespeare</td>
</tr>
<tr>
<td>ENGL 4341 British Literature of the 17th Century</td>
</tr>
<tr>
<td>ENGL 4351 Milton</td>
</tr>
<tr>
<td>ENGL 4361 Literatures of Pre-Colonial and Colonial America</td>
</tr>
<tr>
<td>ENGL 4402 The Novel to 1900</td>
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<tr>
<td>ENGL 4412 Transatlantic Literature, 1700-1900</td>
</tr>
<tr>
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<td>ENGL 4432 US Literatures of the Revolution and New Republic</td>
</tr>
<tr>
<td>ENGL 4442 US Literature from the Constitution to the Civil War</td>
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<tr>
<td>ENGL 4452 British Literature of the Romantic Period, 1790-1837</td>
</tr>
<tr>
<td>ENGL 4462 Gothic</td>
</tr>
<tr>
<td>ENGL 4472 British Literature of the Victorian Period, 1837-1900</td>
</tr>
<tr>
<td>ENGL 4482 US Literature from the Civil War to the Early 20th Century</td>
</tr>
<tr>
<td>ENGL 4503 British Literature since 1900</td>
</tr>
<tr>
<td>ENGL 4513 Irish Literature</td>
</tr>
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<td>ENGL 4523 Modernism</td>
</tr>
<tr>
<td>ENGL 4533 US Literature: 20th-Century Beginnings to World War II</td>
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<td>ENGL 4543 British Literature of the Postmodernist Period</td>
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<td>ENGL 4553 US Literature after World War II</td>
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<td>ENGL 4563 Literatures of the 21st Century</td>
</tr>
<tr>
<td>ENGL 4610 Individual Authors</td>
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<tr>
<td>ENGL 4615 Text in Context</td>
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<tr>
<td>ENGL 4710 Studies in Genre</td>
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<tr>
<td>ENGL 4715 Children’s Literature</td>
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<tr>
<td>ENGL 4716 Science Fiction/Fantasy</td>
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<tr>
<td>ENGL 4717 Comics and Graphic Narrative</td>
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<td>ENGL 4718 British Humor</td>
</tr>
<tr>
<td>ENGL 4720 Literary Criticism and Cultural Studies</td>
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<tr>
<td>ENGL 4735 Drama</td>
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</table>
ENGL 4736 Fiction
ENGL 4737 Creative Nonfiction
ENGL 4738 Poetry
ENGL 4740 Film Studies
ENGL 4745 Digital Literacies
ENGL 4755 Law and Literature
ENGL 4770 Studies in Literature and Culture
ENGL 4775 Literature and Place
ENGL 4785 Gender, Sexuality, Literature
ENGL 4786 Women Writers
ENGL 4810 Comparative Race and Ethnic Studies
ENGL 4820 Studies in Critical Race and Ethnic Studies
ENGL 4825 Native American / Indigenous Literatures
ENGL 4830 Africana Literatures
ENGL 4840 Postcolonial Literatures
ENGL 4850 Global Literatures
ENGL 4931 Topics in Literature
ENGL 4997 Capstone

Writing courses:
ENGL 3210 Writing Practices and Processes
ENGL 3220 Writing for Workplaces
ENGL 4210 Writing, Literacy, and Rhetoric Studies
ENGL 4220 Rhetorical Theories and Practices
ENGL 4230 Writing Center Theory, Practice, and Research
ENGL 4250 Creative Writing: Fiction
ENGL 4260 Creative Writing: Poetry
ENGL 4932 Topics in Writing
ENGL 4954 Seminar in Creative Writing
ENGL 4986 Writing Internship

Total Credit Hours 30

* These courses may be used to fulfill the indicated group requirements above, if the topic is appropriate: ENGL 4610 Individual Authors, ENGL 4615 Text in Context, ENGL 4710 Studies in Genre, ENGL 4715 Children’s Literature, ENGL 4716 Science Fiction/Fantasy, ENGL 4770 Studies in Literature and Culture, ENGL 4785 Gender, Sexuality, Literature, ENGL 4786 Women Writers, ENGL 4931 Topics in Literature.

Major in English Language Arts

Students in the College of Education who are pursuing teaching certification for Primary or Secondary Education in English should choose this major. The major in English Language Arts consists of thirty-three hours (excluding ENGL 1001 Rhetoric and Composition and ENGL 1002 or equivalents), divided according to Groups I-X, as listed below.

Group I: Foundational courses 6
Choose one of the following:

ENGL 2000 Literature, History, and Culture
ENGL 2010 Literature and Genre

Required course:

ENGL 3000 Critical Practices and Processes in Literary Studies

Group II: Shakespeare 3

ENGL 4331 Shakespeare

Group III: Language study 3

ENGL 4110 Exploring the English Language
ENGL 4120 Anatomy of English
ENGL 4130 History of the English Language
ENGL 4170 Studies in Language
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<tr>
<th>Group IV: Literature pre-1700</th>
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<tr>
<td>Choose one of the following:*</td>
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<tr>
<td>ENGL 4301 Medieval Literature and Chaucer</td>
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<td>ENGL 4311 Themes in Medieval Literature</td>
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<tr>
<td>ENGL 4321 British Literature of the 16th Century</td>
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<td>ENGL 4351 Milton</td>
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<td>ENGL 4361 Literatures of Pre-Colonial and Colonial America</td>
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<td>ENGL 4402 The Novel to 1900</td>
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<tr>
<td>ENGL 4402 The Novel to 1900</td>
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<tr>
<td>ENGL 4412 Transatlantic Literature, 1700-1900</td>
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<td>ENGL 4422 British literature of the Long 18th Century</td>
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<td>ENGL 4462 Gothic</td>
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<td>ENGL 4472 British Literature of the Victorian Period, 1837-1900</td>
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<td>ENGL 4482 US Literature from the Civil War to the Early 20th Century</td>
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<table>
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<tr>
<th>Group VI: Literature post-1900</th>
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<td>Choose one of the following:***</td>
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<td>ENGL 4503 British Literature since 1900</td>
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<td>ENGL 4513 Irish Literature</td>
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<td>ENGL 4523 Modernism</td>
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<td>ENGL 4533 US Literature: 20th-Century Beginnings to World War II</td>
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<td>ENGL 4543 British Literature of the Postmodernist Period</td>
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<td>ENGL 4553 US Literature after World War II</td>
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<td>ENGL 4563 Literatures of the 21st Century</td>
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<tr>
<td>ENGL 4717 Comics and Graphic Narrative</td>
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<td>ENGL 4840 Postcolonial Literatures</td>
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<th>Group VII: Multicultural American Literature elective</th>
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<tr>
<td>ENGL 4810 Comparative Race and Ethnic Studies</td>
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<tr>
<td>ENGL 4820 Studies in Critical Race and Ethnic Studies</td>
<td></td>
</tr>
<tr>
<td>ENGL 4825 Native American / Indigenous Literatures</td>
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<tr>
<td>ENGL 4830 Africana Literatures</td>
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</table>

<table>
<thead>
<tr>
<th>Group VIII: American Literature elective:</th>
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<tbody>
<tr>
<td>Choose one of the following:****</td>
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<tr>
<td>ENGL 4361 Literatures of Pre-Colonial and Colonial America</td>
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<tr>
<td>ENGL 4432 US Literatures of the Revolution and New Republic</td>
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<tr>
<td>ENGL 4442 US Literature from the Constitution to the Civil War</td>
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<tr>
<td>ENGL 4533 US Literature: 20th-Century Beginnings to World War II</td>
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<tr>
<td>ENGL 4553 US Literature after World War II</td>
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<thead>
<tr>
<th>Group IX: Writing practices and processes</th>
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<tr>
<td>ENGL 3210 Writing Practices and Processes</td>
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<table>
<thead>
<tr>
<th>Group X: Writing elective</th>
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<tr>
<td>Choose one of the following:</td>
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<tr>
<td>ENGL 4210 Writing, Literacy, and Rhetoric Studies</td>
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<tr>
<td>ENGL 4220 Rhetorical Theories and Practices</td>
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</table>
ENGL 4230  Writing Center Theory, Practice, and Research

* The following courses can fulfill the requirement when the topic is appropriate: ENGL 4610 Individual Authors, ENGL 4615 Text in Context, ENGL 4710 Studies in Genre, ENGL 4770 Studies in Literature and Culture, ENGL 4785 Gender, Sexuality, Literature, ENGL 4786 Women Writers or ENGL 4931 Topics in Literature.

** The following courses can fulfill the requirement when the topic is appropriate: ENGL 4610 Individual Authors, ENGL 4615 Text in Context, ENGL 4710 Studies in Genre, ENGL 4715 Children's Literature, ENGL 4716 Science Fiction/Fantasy, ENGL 4770 Studies in Literature and Culture, ENGL 4785 Gender, Sexuality, Literature, ENGL 4786 Women Writers, ENGL 4825 Native American / Indigenous Literatures, ENGL 4830 Africana Literatures, ENGL 4850 Global Literatures or ENGL 4931 Topics in Literature.

*** The following courses can fulfill the requirement when the topic is appropriate: ENGL 4610 Individual Authors or ENGL 4931 Topics in Literature.

**** The following courses can fulfill the requirement when the topic is appropriate: ENGL 4563 Literatures of the 21st Century, ENGL 4610 Individual Authors, ENGL 4710 Studies in Genre, ENGL 4715 Children's Literature, ENGL 4716 Science Fiction/Fantasy, ENGL 4717 Comics and Graphic Narrative, ENGL 4775 Literature and Place or ENGL 4931 Topics in Literature.

Major in Writing-Intensive English

The major in writing-intensive English consists of 36 hours (excluding ENGL 1001 Rhetoric and Composition 1 and ENGL 1002 Rhetoric and Composition 2 or equivalents), divided according to Groups I-VI, as listed below:

Group I: Foundational sequence 9

Choose one of the following:

- ENGL 2000  Literature, History, and Culture
- ENGL 2010  Literature and Genre

Required course:

- ENGL 3000  Critical Practices and Processes in Literary Studies

Choose one of the following:

- ENGL 4954  Seminar in Creative Writing
- ENGL 4997  Capstone

Group II: Literature pre-1700 3

Choose one of the following:

- ENGL 4301  Medieval Literature and Chaucer
- ENGL 4311  Themes in Medieval Literature
- ENGL 4321  British Literature of the 16th Century
- ENGL 4331  Shakespeare
- ENGL 4341  British Literature of the 17th Century
- ENGL 4351  Milton
- ENGL 4361  Literatures of Pre-Colonial and Colonial America
- ENGL 4402  The Novel to 1900

Group III: Literature 1700-1900 3

Choose one of the following:

- ENGL 4361  Literatures of Pre-Colonial and Colonial America
- ENGL 4402  The Novel to 1900
- ENGL 4412  Transatlantic Literature, 1700-1900
- ENGL 4422  British literature of the Long 18th Century
- ENGL 4432  US Literatures of the Revolution and New Republic
- ENGL 4442  US Literature from the Constitution to the Civil War
- ENGL 4452  British Literature of the Romantic Period, 1790-1837
- ENGL 4462  Gothic
- ENGL 4472  British Literature of the Victorian Period, 1837-1900
- ENGL 4482  US Literature from the Civil War to the Early 20th Century

Group IV: Language study 3

Choose one of the following:

- ENGL 4110  Exploring the English Language
- ENGL 4120  Anatomy of English
<table>
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<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>ENGL 4130</td>
<td>History of the English Language</td>
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<tr>
<td>ENGL 4170</td>
<td>Studies in Language</td>
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<td>Choose any two upper-division literature course from the following:</td>
</tr>
<tr>
<td>ENGL 4301</td>
<td>Medieval Literature and Chaucer</td>
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<tr>
<td>ENGL 4311</td>
<td>Themes in Medieval Literature</td>
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<td>Shakespeare</td>
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<td>Literatures of the 21st Century</td>
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<td>ENGL 4610</td>
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<td>Studies in Genre</td>
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<td>ENGL 4720</td>
<td>Literary Criticism and Cultural Studies</td>
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<td>Drama</td>
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<td>ENGL 4736</td>
<td>Fiction</td>
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<td>ENGL 4737</td>
<td>Creative Nonfiction</td>
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<td>Film Studies</td>
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<td>Digital Literacies</td>
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<td>ENGL 4755</td>
<td>Law and Literature</td>
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<td>ENGL 4770</td>
<td>Studies in Literature and Culture</td>
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<td>ENGL 4775</td>
<td>Literature and Place</td>
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<td>ENGL 4785</td>
<td>Gender, Sexuality, Literature</td>
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<td>ENGL 4786</td>
<td>Women Writers</td>
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<td>ENGL 4810</td>
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<tr>
<td>ENGL 4850</td>
<td>Global Literatures</td>
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</tbody>
</table>
ENGL 4931  Topics in Literature
ENGL 4997  Capstone

Group VI: Writing courses  12

Required course:
ENGL 3210  Writing Practices and Processes

Choose any three of the following:
ENGL 3220  Writing for Workplaces
ENGL 4210  Writing, Literacy, and Rhetoric Studies
ENGL 4110  Exploring the English Language
ENGL 4120  Anatomy of English
ENGL 4130  History of the English Language
ENGL 4170  Studies in Language
ENGL 4220  Rhetorical Theories and Practices
ENGL 4230  Writing Center Theory, Practice, and Research
ENGL 4250  Creative Writing: Fiction
ENGL 4260  Creative Writing: Poetry
ENGL 4932  Topics in Writing
ENGL 4954  Seminar in Creative Writing
ENGL 4986  Writing Internship

No more than two courses from the following:
DGMD 4345  Advanced Scriptwriting
JOUR 4160  Narrative Nonfiction Reporting
JOUR 4200  Publications Editing
JOUR 4360  Freelance Writing
JOUR 4500  Newspaper Design and Production
JOUR 4510  Magazine Design and Production
JOUR 4520  Online Editing and Design
THAR 4600  Playwriting

Total Credit Hours  36

* These courses may be used to fulfill the indicated group requirements above, if the topic is appropriate: ENGL 4610 Individual Authors, ENGL 4615 Text in Context, ENGL 4710 Studies in Genre, ENGL 4715 Children’s Literature, ENGL 4716 Science Fiction/Fantasy, ENGL 4770 Studies in Literature and Culture, ENGL 4785 Gender, Sexuality, Literature, ENGL 4786 Women Writers, ENGL 4931 Topics in Literature.

Minor in Literature

The minor in literature consists of 18 credit hours (excluding ENGL 1001 Rhetoric and Composition 1 and ENGL 1002 Rhetoric and Composition 2 or equivalents), divided between Groups I and II as listed below:

Group I - Introduction to literature  3

Choose one of the following:
ENGL 2000  Literature, History, and Culture
ENGL 2010  Literature and Genre

Group II - Electives  15

Any five upper-division literature courses, no more than one of which may be a writing course:
ENGL 4110  Exploring the English Language
ENGL 4120  Anatomy of English
ENGL 4130  History of the English Language
ENGL 4170  Studies in Language
ENGL 4301  Medieval Literature and Chaucer
ENGL 4311  Themes in Medieval Literature
ENGL 4321  British Literature of the 16th Century
ENGL 4331  Shakespeare
ENGL 4341  British Literature of the 17th Century
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<td>Milton</td>
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<td>ENGL 4361</td>
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<td>ENGL 4402</td>
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<td>ENGL 4755</td>
<td>Law and Literature</td>
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<td>Studies in Literature and Culture</td>
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<td>Native American / Indigenous Literatures</td>
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<tr>
<td>ENGL 4830</td>
<td>Africana Literatures</td>
</tr>
<tr>
<td>ENGL 4840</td>
<td>Postcolonial Literatures</td>
</tr>
<tr>
<td>ENGL 4850</td>
<td>Global Literatures</td>
</tr>
<tr>
<td>ENGL 4931</td>
<td>Topics in Literature</td>
</tr>
<tr>
<td>ENGL 4995</td>
<td>Independent Study in English</td>
</tr>
<tr>
<td>ENGL 4997</td>
<td>Capstone</td>
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<tr>
<td>ENGL 4999</td>
<td>Senior Thesis</td>
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Writing Courses (no more than one)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>ENGL 4210</td>
<td>Writing, Literacy, and Rhetoric Studies</td>
</tr>
<tr>
<td>ENGL 4220</td>
<td>Rhetorical Theories and Practices</td>
</tr>
</tbody>
</table>
Department of Public Instruction Certification - English Literature Minor

To pursue Department of Public Instruction certification, College of Education students are required to complete the following requirements for an English literature minor. The minor consists of 21-22 credit hours (excluding and or equivalents), divided according to Groups I-VII, as listed below.

Note:
College of Education students pursuing an English Literature minor MUST fulfill the UCCS-LPA requirement (3 credit hours) with one of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 2000</td>
<td>Literature, History, and Culture</td>
</tr>
<tr>
<td>ENGL 2010</td>
<td>Literature and Genre</td>
</tr>
</tbody>
</table>

The requirements for the minor are as follows:

Group I - Language Study 3

Choose one of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 4110</td>
<td>Exploring the English Language</td>
</tr>
<tr>
<td>ENGL 4120</td>
<td>Anatomy of English</td>
</tr>
<tr>
<td>ENGL 4130</td>
<td>History of the English Language</td>
</tr>
<tr>
<td>ENGL 4170</td>
<td>Studies in Language</td>
</tr>
</tbody>
</table>

Group II - British Literature 3

Choose one upper-division elective in British Literature:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>ENGL 4301</td>
<td>Medieval Literature and Chaucer</td>
</tr>
<tr>
<td>ENGL 4311</td>
<td>Themes in Medieval Literature</td>
</tr>
<tr>
<td>ENGL 4321</td>
<td>British Literature of the 16th Century</td>
</tr>
<tr>
<td>ENGL 4341</td>
<td>British Literature of the 17th Century</td>
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<tr>
<td>ENGL 4351</td>
<td>Milton</td>
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<tr>
<td>ENGL 4422</td>
<td>British literature of the Long 18th Century</td>
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<td>ENGL 4452</td>
<td>British Literature of the Romantic Period, 1790-1837</td>
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<td>Gothic</td>
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<tr>
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</tr>
<tr>
<td>ENGL 4503</td>
<td>British Literature since 1900</td>
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<td>ENGL 4513</td>
<td>Irish Literature</td>
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<td>British Humor</td>
</tr>
<tr>
<td>ENGL 4840</td>
<td>Postcolonial Literatures</td>
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<tr>
<td>ENGL 4850</td>
<td>Global Literatures</td>
</tr>
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</table>

Or, when course content is British:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>ENGL 4170</td>
<td>Studies in Language</td>
</tr>
<tr>
<td>ENGL 4610</td>
<td>Individual Authors</td>
</tr>
<tr>
<td>ENGL 4615</td>
<td>Text in Context</td>
</tr>
<tr>
<td>ENGL 4710</td>
<td>Studies in Genre</td>
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<tr>
<td>ENGL 4770</td>
<td>Studies in Literature and Culture</td>
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<tr>
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<td>Topics in Literature</td>
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</table>

Group III - Advanced Composition 3

ENGL 3210 Writing Practices and Processes

Group IV - Rhetoric 3-4
Choose one of the following:

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>ENGL 4210</td>
<td>Writing, Literacy, and Rhetoric Studies</td>
</tr>
<tr>
<td>ENGL 4220</td>
<td>Rhetorical Theories and Practices</td>
</tr>
<tr>
<td>ENGL 4230</td>
<td>Writing Center Theory, Practice, and Research</td>
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</table>

**Group V - Multicultural**

<table>
<thead>
<tr>
<th>Course</th>
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</thead>
<tbody>
<tr>
<td>ENGL 4810</td>
<td>Comparative Race and Ethnic Studies</td>
</tr>
<tr>
<td>ENGL 4820</td>
<td>Studies in Critical Race and Ethnic Studies</td>
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<tr>
<td>ENGL 4825</td>
<td>Native American / Indigenous Literatures</td>
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<tr>
<td>ENGL 4830</td>
<td>Africana Literatures</td>
</tr>
</tbody>
</table>

Or, when course content is Multicultural:

<table>
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<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>ENGL 4931</td>
<td>Topics in Literature</td>
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</table>

**Group VI - Shakespeare**

<table>
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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>ENGL 4321</td>
<td>Shakespeare</td>
</tr>
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</table>

**Group VII - American Literature**

Choose one of the following upper-division electives in American Literature:

<table>
<thead>
<tr>
<th>Course</th>
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</thead>
<tbody>
<tr>
<td>ENGL 4361</td>
<td>Literatures of Pre-Colonial and Colonial America</td>
</tr>
<tr>
<td>ENGL 4432</td>
<td>US Literatures of the Revolution and New Republic</td>
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<tr>
<td>ENGL 4442</td>
<td>US Literature from the Constitution to the Civil War</td>
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<tr>
<td>ENGL 4482</td>
<td>US Literature from the Civil War to the Early 20th Century</td>
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<tr>
<td>ENGL 4533</td>
<td>US Literature: 20th-Century Beginnings to World War II</td>
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<tr>
<td>ENGL 4553</td>
<td>US Literature after World War II</td>
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<tr>
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<td>Africana Literatures</td>
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</tbody>
</table>

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<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>ENGL 4563</td>
<td>Literatures of the 21st Century</td>
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<tr>
<td>ENGL 4610</td>
<td>Individual Authors</td>
</tr>
<tr>
<td>ENGL 4710</td>
<td>Studies in Genre</td>
</tr>
<tr>
<td>ENGL 4740</td>
<td>Film Studies</td>
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<tr>
<td>ENGL 4775</td>
<td>Literature and Place</td>
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<td>ENGL 4785</td>
<td>Gender, Sexuality, Literature</td>
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<tr>
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</table>

Total Credit Hours 21-22

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**Minor in the Literature of Diverse Cultures**

The minor in Literature of Diverse Cultures consists of 18 credit hours (excluding ENGL 1001 Rhetoric and Composition 1 and ENGL 1002 Rhetoric and Composition 2 or equivalents), divided according to Groups I-III, as listed below:

**Group I - Introduction to literature**

Choose one of the following:

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<tr>
<td>ENGL 2000</td>
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</tr>
</tbody>
</table>

**Group II - Race, Ethnicity and Identity in American Literature and Culture**

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>ENGL 4810</td>
<td>Comparative Race and Ethnic Studies</td>
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**Group III - Electives**

Four upper-division literature electives, must choose three from the following:

<table>
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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>ENGL 4820</td>
<td>Studies in Critical Race and Ethnic Studies</td>
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<td>ENGL 4825</td>
<td>Native American / Indigenous Literatures</td>
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</tbody>
</table>
The fourth literature elective could also be fulfilled by one of the courses listed above or one of the following:

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<tr>
<td>ENGL 4775</td>
<td>Literature and Place</td>
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</tbody>
</table>

Total Credit Hours: 18

*The following course will fulfill the requirement when the topic is appropriate: ENGL 4170 Studies in Language, ENGL 4610 Individual Authors, ENGL 4615 Text in Context, ENGL 4710 Studies in Genre, ENGL 4770 Studies in Literature and Culture, ENGL 4785 Gender, Sexuality, Literature, ENGL 4786 Women Writers, ENGL 4931 Topics in Literature, ENGL 4995 Independent Study in English, ENGL 4997 Capstone. Or, other courses approved by the director of undergraduate studies.

**Minor in Writing-Intensive English**

The minor consists of six courses (18 credit hours, excluding ENGL 1001 Rhetoric and Composition 1 and ENGL 1002 Rhetoric and Composition 2 or equivalents), divided according to Groups I - IV, as listed below:

**Note:**
• For ENGW minors taking Journalism courses who are not also Journalism majors, ENGL 3210 Writing Practices and Processes is a prerequisite.
• For JOUR 4510 Magazine Design and Production and JOUR 4520 Online Editing and Design, JOUR 4200 Publications Editing is a prerequisite.

<table>
<thead>
<tr>
<th>Group I - Introduction to literature</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choose one of the following:</td>
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<tr>
<td>ENGL 2000</td>
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<table>
<thead>
<tr>
<th>Group II - Advanced Composition</th>
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</thead>
<tbody>
<tr>
<td>ENGL 3210</td>
<td>Writing Practices and Processes</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Group III - Literature Elective</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>One upper-division literature elective, chosen from the following:</td>
<td></td>
</tr>
<tr>
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<td>ENGL 4716</td>
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<td>Studies in Literature and Culture</td>
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<td>Literature and Place</td>
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<td>Women Writers</td>
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ENGL 4810 Comparative Race and Ethnic Studies
ENGL 4820 Studies in Critical Race and Ethnic Studies
ENGL 4825 Native American / Indigenous Literatures
ENGL 4830 Africana Literatures
ENGL 4840 Postcolonial Literatures
ENGL 4850 Global Literatures
ENGL 4931 Topics in Literature
ENGL 4997 Capstone
ENGL 4999 Senior Thesis

Group IV - Writing Electives 9
Three writing course electives, chosen from the following:
ENGL 3220 Writing for Workplaces
ENGL 4210 Writing, Literacy, and Rhetoric Studies
ENGL 4220 Rhetorical Theories and Practices
ENGL 4230 Writing Center Theory, Practice, and Research
ENGL 4250 Creative Writing: Fiction
ENGL 4260 Creative Writing: Poetry
ENGL 4932 Topics in Writing
ENGL 4954 Seminar in Creative Writing
ENGL 4986 Writing Internship
Or, when the course content focuses on writing:
ENGL 4995 Independent Study in English
ENGL 4999 Senior Thesis

One of the three courses may be chosen from the following:
ENGL 4110 Exploring the English Language
ENGL 4120 Anatomy of English
ENGL 4130 History of the English Language
ENGL 4170 Studies in Language
DGMD 4345 Advanced Scriptwriting
JOUR 4160 Narrative Nonfiction Reporting
JOUR 4200 Publications Editing
JOUR 4360 Freelance Writing
JOUR 4500 Newspaper Design and Production
JOUR 4510 Magazine Design and Production
JOUR 4520 Online Editing and Design
THAR 4600 Playwriting

Total Credit Hours 18

Courses

ENGL 1001. Rhetoric and Composition 1. 3 cr. hrs.
An introduction to the basic principles of rhetoric and composition. Investigation and practice of the methods of college writing.

ENGL 1002. Rhetoric and Composition 2. 3 cr. hrs.
A further introduction to the principles of rhetoric and composition. Investigation and practice of the uses of the written language in exposition, persuasion, and critical analysis. Prereq: ENGL 1001 or equiv.

ENGL 1301H. Honors English 1. 3 cr. hrs.
Study the ways in which human beings have fashioned imaginative works that reflect, challenge, and transfigure the worlds in which they live, with intensive analysis of texts selected from such writers as Chaucer, Dante, Homer, Marie de France, Milton, Sappho, Shakespeare, Sophocles, and Virgil. Strong emphasis placed on student writing. Prereq: Cons. of dept. ch.; cons. of prog. dir. and admission to Marquette University Honors Program.

ENGL 1302H. Honors English 2. 3 cr. hrs.
Continuation of ENGL 1301H, with texts selected from such writers as Adams, Austen, the Brontes, Camus, Chopin, Dostoevsky, T.S. Eliot, Faulkner, Flaubert, Hemingway, Kafka, Keats, Melville, Morrison, Pope, Rhys, the Shelleys, Swift, Voltaire, Woolf, and Wordsworth. Strong emphasis placed on student writing. Equivalent of ENGL 2000 or 2010 for English majors and minors. Prereq: Admission to Marquette University Honors Program.
ENGL 2000. Literature, History, and Culture. 3 cr. hrs.
Learn to analyze literature and its historical and cultural contexts in a self-conscious, logical, and rigorous manner. Students will discover the pleasure of reading complex works of art and develop critical thinking habits for life beyond the university. Focus varies by instructor, and students should consult the Department of English website for information on specific sections before enrolling (http://www.marquette.edu/english/). This course may be repeated, if instructor and subtitle are different. Prereq: UCCS Rhetoric.

ENGL 2010. Literature and Genre. 3 cr. hrs.
Students will learn to analyze literature and its genre conventions in a self-conscious, logical, and rigorous manner. Genre (e.g., novel, short story, drama, poetry, film) provides one of the most basic ways of creating meaning. Students will discover the pleasure of reading complex works of art and develop critical thinking habits for life beyond the university. The focus of course content will vary by instructor, and students should consult the Department of English website for information on specific sections before enrolling (http://www.marquette.edu/english/). This course may be repeated, if instructor and subtitle are different. Prereq: UCCS Rhetoric.

ENGL 2951. MU Led Travel/Study Abroad. 3 cr. hrs.
Course taught in an international setting by Marquette professors and where students earn Marquette credit. Study Abroad expenses apply. Prereq: Cons. of the Office of International Education.

ENGL 3000. Critical Practices and Processes in Literary Studies. 3 cr. hrs.
In this foundational course for all majors, students learn key questions and practices for understanding and producing knowledge within the disciplinary contexts of literary studies. Building on the skills developed in ENGL 2000/ENGL 2010, students will gain a more sophisticated ability to draw upon historical and cultural contexts to understand literary works. Students will also begin to use prominent methods or theories to explore significant questions in light of current debates within the disciplines. The focus of course content will vary by instructor, and students should consult the Department of English website for information on specific sections before enrolling (http://www.marquette.edu/english/). Prereq: ENGL 2000 or ENGL 2010.

ENGL 3210. Writing Practices and Processes. 3 cr. hrs.
In this required course for the ENGW and ENGA majors (though not limited to ENGW and ENGA majors), students engage in and reflect on multiple processes of writing; compose in different media and/or genres; address a variety of rhetorical situations and audiences; and examine how social power relates to uses of writing. Students consider: What can writing do? Who am I as a writer? Who am I as a writer among others? What responsibilities do I have when I write? Prereq: UCCS R and LPA requirements fulfilled. May not be counted as a Literature course.

ENGL 3220. Writing for Workplaces. 3 cr. hrs.
Studies workplace writing (broadly defined) from a rhetorical perspective, with particular emphases on purposes, genres, styles, and audiences. Individually and collaboratively, students define practical workplace problems and respond to these problems by designing, composing, and revising workplace documents, such as resumes, letters, memos, emails, reports, and web pages as well as oral and visual presentations. Prereq: UCCS R and LPA requirements fulfilled. May not be counted as a Literature course.

ENGL 4100. Exploring the English Language. 3 cr. hrs.
How do humans use a small set of sounds to express an infinite set of meanings? Do apes and whales and dogs have language? Why do dialects exist? Students explore the physical, cognitive, and social dimensions of human language. Fulfills the language requirement for ENGA and ENGW majors, or an elective requirement for ENGL and ENGW majors. Prereq: UCCS R and LPA requirements fulfilled.

ENGL 4110. History of the English Language. 3 cr. hrs.
Explores the glamour of grammar (the words are related!) as we develop a working model of the structure of sounds, words, and sentences of English and develop a basis for making informed decisions about style, usage, and grammar pedagogy. Fulfills the language requirement for ENGA and ENGW majors, or an elective requirement for ENGL and ENGW majors. Prereq: UCCS R and LPA requirements fulfilled.

ENGL 4110. History of the English Language. 3 cr. hrs.
Explores the glamour of grammar (the words are related!) as we develop a working model of the structure of sounds, words, and sentences of English and develop a basis for making informed decisions about style, usage, and grammar pedagogy. Fulfills the language requirement for ENGA and ENGW majors, or an elective requirement for ENGL and ENGW majors. Prereq: UCCS R and LPA requirements fulfilled.

ENGL 4130. History of the English Language. 3 cr. hrs.
Marauding Germanic tribes in a corner of Europe in the 5th century established an island society whose native tongue is now spoken by billions around the world as the language of business, technology, and diplomacy. This is the story of English from before Ælfric to present-day Zimbabwe. Explore the nature of linguistic change, major developments in the structure and use of the English language, and current variation in English worldwide. Fulfills the language requirement for ENGA and ENGW majors, or an elective requirement for ENGL and ENGW majors. Prereq: UCCS R and LPA requirements fulfilled.

ENGL 4140. Studies in Language. 3 cr. hrs.
In-depth study on a topic such as Language, Gender, and Power; Language and Social Identity; English as World Language; Languages of Milwaukee, among others. See course listings on English Department website for current course description. Fulfills the language requirement for ENGA and ENGW majors, or an elective requirement for ENGL and ENGW majors Prereq: UCCS R and LPA requirements fulfilled.

ENGL 4210. Writing, Literacy, and Rhetoric Studies. 3 cr. hrs.
This theory and writing course invites students to explore current topics within rhetoric and composition, such as community literacy, digital rhetoric, multimodal composing, women's rhetorics, rhetorics of peace, writing and race, and so on. Students engage these (inter)disciplinary conversations by developing scholarly and/or community-based projects that combine critical thinking, research, and reading, writing, speaking, and listening skills. Prereq: UCCS R and LPA requirements fulfilled. May not be counted as a Literature course.
ENGL 4220. Rhetorical Theories and Practices. 3 cr. hrs.
What is rhetoric, and how does a knowledge of rhetorical theories enhance critical thinking, reading, writing, speaking, and listening? In this theory
and writing course, students explore these questions and others by exploring rhetorical theories spanning from Greco-Roman ideas about the logic
and ethics of argument to contemporary concepts of identification, performativity, and raced voices and consciousness. Assignments may include
opportunities to analyze texts, people, and cultures and to compose and revise texts in different genres, media, contexts, and styles for a variety of
audiences. Prereq: UCCS R and LPA requirements fulfilled. May not be counted as a Literature course.

ENGL 4230. Writing Center Theory, Practice, and Research. 4 cr. hrs.
How can conversations about writing help writers? What are the challenges and rewards of peer tutoring? How can writing centers promote change?
Students address these questions and others while studying the theory and practice of peer tutoring. Topics drawn from writing center scholarship
include processes of written, oral, and multimodal composition; concepts of genre and situation; and strategies for giving writers effective feedback. This
4-credit course includes a required writing center “internship.” Students who complete 4230 can apply to become Ott Memorial Writing Center tutors.
Prereq: UCCS R and LPA requirements fulfilled. May not be counted as a Literature course.

ENGL 4240. Creative Writing: Fiction. 3 cr. hrs.
“Tragedy is when I cut my finger. Comedy is when you fall into an open sewer and die.” So says that great theorist of narrative craft, the filmmaker Mel
Brooks. Of course, most of life (and most of the fiction that tries to reflect the complexity of life) falls all along the spectrum between (and including)
those two poles. Gives students an opportunity both to exercise their narrative imagination and to harness it productively to explore that spectrum. Learn
the craft and techniques of writing fiction and develop their understanding of the creative process by analyzing published fiction from the practitioner’s
perspective, by writing and revising fiction, and by discussing their work and the work of their peers in workshop. Prereq: UCCS R and LPA requirements
fulfilled. May not be counted as a Literature course.

ENGL 4250. Creative Writing: Poetry. 3 cr. hrs.
Poetry is all about surprise. As Robert Frost put it, “I have never started a poem yet whose end I knew. Writing a poem is discovering.” The practice of
poetry will benefit anyone who wants to write—and think—in innovative ways about themselves and their world(s). Students explore the work of living
poets while developing a portfolio of their own drafts and revisions. The workshop format is open and accessible to all—from beginners to advanced
practitioners—and allows every student to find a voice in the context of a supportive, rigorous, and exploratory atmosphere. Prereq: UCCS R and LPA
requirements fulfilled. May not be counted as a Literature course.

ENGL 4301. Medieval Literature and Chaucer. 3 cr. hrs.
“The Canterbury Tales” sets itself in the late decades of fourteenth-century England when political upheavals and revolts against feudal hierarchy were
abroad in both country and court: agricultural workers rising up against tax burdens, friars being viewed as figures of excess, women increasing pressure
to compete in the marketplace and to travel, prompting thereby hundreds of treatises censuring them as unruly and dangerous to society. Chaucer,
however, seems to have thrived on such havoc. His are nervy questions in his “Tales” as he explores corruption within the Church, the dangerous and
comical effects of courtly love, women challenging clerical interpretation of Scripture, men who try to hold their wives “narrow in cage,” what constitutes
happiness, the impulses behind our choices, and the clergy’s abuse of knowledge. The explorations are both comic and dead-serious. Text include
“Troylus and Criseyde” and “The Canterbury Tales.” Prereq: UCCS R and LPA requirements fulfilled.

ENGL 4311. Themes in Medieval Literature. 3 cr. hrs.
Students explore the poetic techniques of Old English poetry through later Medieval literature. Some of the most fundamental issues faced by the Anglo-
Saxon poets include the hero in a darkening world, the dangers of royal pride, the transitory joys of life, feuds and unavenged losses, the concept of
kingship, and exile. The later Medieval literature, in turn, has its own fears, hilarities and preoccupations, including the nature of obsessive love, comedic
loves, the crisis of the transfer of power, the instability of human nature, the ideal of knighthood, the status of women, and gender roles themselves. Works may include “Beowulf,” “The Wife’s Lament,” “The Wanderer,” “Pearl Anonymous,” “Tristan and Isolde,” “Gawain and the Green
Knight,” Malory’s “Morte Darthur.” Prereq: UCCS R and LPA requirements fulfilled.

ENGL 4321. British Literature of the 16th Century. 3 hrs.
In the decades after the Reformation, Britain was rolled by religious and political debates both intensely local and far transcending the country’s national
boundaries, at the same time that its citizens were figuring out for the first time what it meant to be a nation with its own distinct language and culture.
Sonnets, epics, political treatises, closet drama, and the first plays for the public stage all competed in what became the country’s first public literary
marketplace, as economic and political changes helped foster the first English literature and the first conception of the person that we can call truly
modern. In this course we make ourselves present at the hotly contested beginnings of genres, categories, and ideas familiar enough to us now that
we take them as natural, by reading poems and plays so enduring that 400 years later they are still part of our cultural fabric. Prereq: UCCS R and LPA
requirements fulfilled.

ENGL 4331. Shakespeare. 3 cr. hrs.
“To be or not to be,” “all the world’s a stage”—you’ve heard of some of the big moments, but are you aware of the extraordinary variety and breadth of
the subjects that interested Shakespeare? Property law, Roman history, same-sex love, gender-bending, political representation, profound questions of
existence and ethics—all these subjects and many more are taken up in Shakespeare’s vast body of work, which has served as a touchstone for literate
culture since right after his death. We will read poems and of course plays, some famous and some not as much, that both locate Shakespeare in his
own particular context and suggest why his work has been so enduring and useful all over the modern world. Prereq: UCCS R and LPA requirements
fulfilled.
ENGL 4341. British Literature of the 17th Century. 3 cr. hrs.
Colonialism and empire, economic slavery, regicide, revolution, one of the earliest experiments with republicanism in the modern world, the development of scientific empiricism and positivism, the invention of newspapers... all of these events and institutions in seventeenth-century Britain, so fundamental to our own culture, not only shaped but were shaped by its literature, which was one of the central public forums in which ideas were ventilated and debated. In this course we will read poems, plays, prose, and speeches by writers both famous and (now) obscure, from Francis Bacon and Mary Wroth to John Milton and Kenelm Digby, as a window into their thinking about such central problems as love, friendship, community, beauty, profit and self-interest, and political justice. Prereq: UCCS R and LPA requirements fulfilled.

ENGL 4351. Milton. 3 cr. hrs.
In our world, in which we debate how and if we can protect our freedoms, in which our use of reason has brought us such unprecedented power to communicate but also to destroy, and in which religious discourse figures so prominently, for good and for ill, Milton has particular relevance. His apparent confidence (arrogance?) in advancing his ideas, in many works but in "Paradise Lost" especially, forces each one of us to reevaluate our own. In this course, students will explore Milton's major poetry and prose in the context of seventeenth-century England. Prereq: UCCS R and LPA requirements fulfilled.

ENGL 4361. Literatures of Pre-Colonial and Colonial America. 3 cr. hrs.
What constitutes the earliest forms of American literature? How did writing in the Americas prior to the foundation of modern nation-states grow out of and respond to the unique circumstances of contact and collision between the “Old World” of Europe and the “New World” of America? How was colonial American literature situated in the larger geopolitical arenas of the Atlantic World, the Black Atlantic, and competing imperialist projects? In this course, students will encounter the diverse genres and multiple literary traditions that converged in North America from the initial arrival of Europeans up to the American Revolution. The course may take a comparative transatlantic, transnational, and / or hemispheric approach, with readings drawn from the literatures of British, French, and Spanish America as well as Native American cultures Prereq: UCCS R and LPA requirements fulfilled.

ENGL 4402. The Novel to 1900. 3 cr. hrs.
The modern British novel took shape in England in the late seventeenth century, and by 1900 it had become the most popular genre of its day. Through innovations in point of view, characterization, and narrative form, novelists offer unprecedented techniques for representing human emotion and experience. Traces the development of the novel from its origins to the end of the nineteenth century, considering how writers examine questions such as gender and marriage, race and empire, science and religion, and law and justice. Topics vary each term. Prereq: UCCS R and LPA requirements fulfilled.

ENGL 4412. Transatlantic Literature, 1700-1900. 3 cr. hrs.
Transatlantic studies reframe Anglophone literature (and sometimes literature in translation) to incorporate perspectives beyond the national. The eighteenth and nineteenth centuries were eras of economic and cultural exchange across the Atlantic ocean; this course will track some of these "currents." Individual instructors may focus on comparative revolutions, on the Black Atlantic, on transnational romanticism, travel and exploration, slavery and abolition, or other topics. Prereq: UCCS R and LPA requirements fulfilled.

ENGL 4422. British literature of the Long 18th Century. 3 cr. hrs.
During the "long eighteenth century" (1660-1830), England experienced unprecedented literary and cultural innovation: writers developed new forms of fiction, actresses appeared on stage for the first time, and poets used verse as vehicles for satirical and public expression. Meanwhile, political parties took shape, the government expanded the reach of its empire, the nuclear family assumed its modern form, and burgeoning print media provided a stream of gossip and news. In this course, students will explore the era's literary developments in the context of such social, cultural, and political changes. Topics vary from semester to semester.

ENGL 4442. US Literatures of the Revolution and New Republic. 3 cr. hrs.
The eighteenth century saw profound changes in America; there were revolutions not only in politics but in the ways people lived their everyday lives, in travel, in industry, and in literature. While the American Revolution ended the colonial domination of European settlers and the founding of the United States, those citizens in turn were colonizing Native American lands and African labor. Women clamored to be included in the democratic conversation, and the ideology of "Republican Motherhood" simultaneously stimulated and constrained those desires. Students look at the ways a diverse group of writers responded to these sea changes by employing a comparative transatlantic or transpecific approach or by focusing more closely on issues specific to the North American continent; issues studied may include the rise of the novel and the changes in print culture surrounding the Revolution, or may focus on the literature of women or narratives of captivity and slavery. Prereq: UCCS R and LPA requirements fulfilled.

ENGL 442. US Literature from the Constitution to the Civil War. 3 cr. hrs.
The first decades of the nineteenth century marked a period of innovation and abundance in the literary history of the United States. Students will explore the landmark developments of the early national and antebellum periods within the broader contexts of American cultural history, paying particular attention to the influence of Romanticism and such North American variants as New England Transcendentalism and the American Gothic. They may also explore the intersections between literature and a variety of social reform movements, such as those involving abolitionism, women's rights, and Native American rights. Authors assigned may include a selection of the following: Apsess (Pequot), Brockden Brown, Cooper, Irving, Poe, Sedgwick, Emerson, Thoreau, Hawthorne, Melville, Douglass, Wells Brown, Whitman, and Stowe. Prereq: UCCS R and LPA requirements fulfilled.

ENGL 4452. British Literature of the Romantic Period, 1790-1837. 3 cr. hrs.
From the French Revolution to the Industrial Revolution, 1780-1837. How exactly did civil and human rights evolve in Great Britain? Gender, class, religious turmoil, and race are also central issues in the study of works by romantic-era writers such as Jane Austen, Ann Radcliffe, William Wordsworth, William Blake, John Keats, Percy Shelley, George Gordon Byron, Samuel Taylor Coleridge, and Mary Shelley. Students will study thematic approaches to or surveys of the literature of the period. Prereq: UCCS R and LPA requirements fulfilled.
ENGL 4462. Gothic. 3 cr. hrs.
Vampires, werewolves, mummies and zombies have been popular representations in a wide variety of literature for more than two centuries. Examines their origins and cultural, religious, and social meanings. From Frankenstein to Dracula, or “Carmilla” to “The Mummy,” the gothic has explored Britain's fear of immigrants, scientific experimentation, and sexual transgressions. Classic texts are read, as well as their popular manifestations in poetry, drama, and short stories. Prereq: UCCS R and LPA requirements fulfilled.

ENGL 4472. British Literature of the Victorian Period, 1837-1900. 3 cr. hrs.
Dracula, Alice in Wonderland, A Christmas Carol. “How do I love thee? Let me count the ways,” the Sherlock Holmes stories, Jane Eyre—these are all Victorian classics. A Victorian literature course introduces students to many more exciting, wise, and weird texts written in Britain during the reign of Queen Victoria (1837-1901), dealing with such topics as social justice, gender and sexuality, religious faith, empire, crime, ecology, childhood, and the role of literature in an era of mass literacy. Whether it’s the Arthurian tales of Tennyson, the religious poetry of Christina Rossetti and the Jesuit Gerard Manley Hopkins, the ecocriticism of John Ruskin, Oscar Wilde’s hilarious plays, or the exploration of vocation in Middlemarch by George Eliot (Marian Evans), Victorian literature offers many great reads in addition to those that have become standards of contemporary popular culture. Prereq: UCCS R and LPA requirements fulfilled.

ENGL 4482. US Literature from the Civil War to the Early 20th Century. 3 cr. hrs.
The period between the end of the Civil War and the beginning of the twentieth century was one of profound social, technological, and political changes in the United States. We look at how writers reflected and responded to the world of the late nineteenth century (sometimes reaching into the early twentieth century) in literature written by American authors and, sometimes, by the European writers that influenced them during this period of intense transnational literary exchange. Courses may address the waxing and waning popularity of sentimental literature, the elite enthusiasm for realist literature and the related growth of regional literature, the connection between fiction and the muckraking school of journalism, the expansion of publication in magazines and newspapers, the explosion of literatures by and about immigrants, and/or African American literary production in the eras of Reconstruction and Jim Crow. Students may read works by Frederick Douglass, Walt Whitman, Emily Dickinson, Henry James, Mark Twain, William Dean Howells, W. E. B. DuBois, Charles Chesnutt, Theodore Dreiser, Franklin Norris, Sarah Orne Jewett, Sarah M. B. Piatt, Zitkala Sa, Charlotte Perkins Gilman, Mary E. Wilkins Freeman, and a multitude of others. Prereq: UCCS R and LPA requirements fulfilled.

ENGL 4503. British Literature since 1900. 3 cr. hrs.
Students explore English literature written since 1900, a period when writers have confronted the turbulence of modern history while defending the value of their art. The last century is marked by two world wars, the rise and fall of the British Empire, globalization, accelerating technological development, and changing gender roles and class structures. In this era, some artists have followed the modernist dictum to “make it new,” to overthrow, reimagine, and thus revitalize older forms of literary expression no longer attuned to the modern era, while others have sought to refine traditional structures for plays, poems, novels, and short stories. Against an historical backdrop that has witnessed the rise of radio, television, film, the Internet, and the 24-hour news cycle, writers have used their art to assert that (in the words of twentieth-century poet Ezra Pound) “literature is news that stays news.” Prereq: UCCS R and LPA requirements fulfilled.

ENGL 4513. Irish Literature. 3 cr. hrs.
Even a quick glance at the canon of modern English literature yields a strange insight—many of the most celebrated English writers of the past century were actually Irish: Yeats, Joyce, Shaw, Synge, Beckett, Heaney, Boland, to name a few. How does reading these writers as either English or Irish shape the way we understand them? To answer this question, students explore some of the most important literature to emerge in Ireland in the past century or so, an era when Irish writers have grappled with changing questions surrounding what it means to be Irish. In the process of reckoning with what Yeats called the “terrible beauty” of a violent Irish history, Irish writers seized a space on the world stage for their art. Prereq: UCCS R and LPA requirements fulfilled.

ENGL 4523. Modernism. 3 cr. hrs.
What should literature be and do in an era of war, revolution, and cataclysmic cultural change? Modernist literature emerged across Europe and North America in the early twentieth century in response to this question. Old ideas and forms suddenly seemed ill-equipped to respond to the twentieth century, which led modernist artists to rebel against convention. Writers such as Joseph Conrad, Virginia Woolf, James Joyce, Samuel Beckett, Ezra Pound, T.S. Eliot, H.D., W.B. Yeats, and Gertrude Stein worked across languages, national traditions, and genres to reinvent the literary past and change contemporary history. In the process, they created some of the most astonishing, daring, and rewarding poems, novels, and plays of the twentieth century. Prereq: UCCS R and LPA requirements fulfilled.

ENGL 4533. US Literature: 20th-Century Beginnings to World War II. 3 cr. hrs.
Students construct an overview of American literature from the beginning of the twentieth century to the end of World War II, focusing on the historical contexts of literary production. The themes and formal and stylistic aspects of the different works under discussion are situated within the context of the political, social, scientific, technological and economic transformations in this period of American history. Examines the interactions between the development of modern American literature and key issues of the period including racial segregation and racial uplift, class inequality, labor and immigration debates, the feminist movement, global war, the invention of the atom bomb, and the rise of mass entertainments and consumerism. Prereq: UCCS R and LPA requirements fulfilled.
ENGL 4543. British Literature of the Postmodernist Period. 3 cr. hrs.
Students explore modern and contemporary English literature, which engages catastrophes and humiliations blared in countless headlines, from England's near starvation by German U-boats in World War I to the loss of the Raj, the British expulsion from Suez and not long after what was once called Rhodesia, the Christine Keeler scandal, and the Falklands debacle. Whether the collapse of the British empire qualifies as disaster, opportunity, retribution, graveyard, or cradle will depend on who is talking. And exactly who is talking, often for the first time, is the point. As Kipling feared, Conrad hoped, and Orwell predicted, the weakening empire gave new freedom and power to the once silenced and voiceless, not only in the former colonies and throughout the Commonwealth but within England itself. Students study the accelerating evolution of new genres, the trade-offs of dialect literature, the appropriation and/or resistance of "popular" cultures, the danger of the high-tech police state, and the search for a way to awaken the sleepwalkers and inspire the denials without trampling their freedom, even if that freedom is enthralled to commercially motivated and cynically destructive mythologies. Among the storytellers and poets threading this labyrinth can be counted Auden, Orwell, Thomas, Reed, Bennett, Harrison, Wa Thiong'O, Larkin, Walcott, Hughes, Achebe, Naipaul, Heaney, Gordimer, Rushdie, Boland, and Muldoon. Prereq: UCCS R and LPA requirements fulfilled.

ENGL 4553. US Literature after World War II. 3 cr. hrs.
Students explore fiction, poetry, and drama composed since World War II, with special attention to the shift from modernism to postmodernism. How has American literature in the twentieth century responded to and been influenced by the civil rights and feminist movements, the Vietnam War, anti-communism, consumer culture, environmentalism, scientific and technological progress, economic crisis, and the ever-looming threat of the nuclear bomb? What are the intersections between literary culture and popular culture, and between literary culture and the state, in the high-water years of the "American Century"? Approaches vary with instructor, but authors studied are likely to include Auster, Baldwin, Barth, Bishop, Carson, Carver, DeLillo, Didion, Ellison, Erdrich, Graham, Heller, Kingston, Levine, Morrison, Nabokov, O'Connor, Ozick, Plath, Pynchon, Rich, Roth, Silko, Spiegelman, Stone, Vonnegut, Wallace, Walker, and White. Prereq: UCCS R and LPA requirements fulfilled.

ENGL 4563. Literatures of the 21st Century. 3 cr. hrs.
Students study the literature of the twenty-first century from a variety of national and transnational perspectives. How have different authors responded to the rapid social changes and urgent political crises the world has undergone since the year 2000? What role has literature played in registering and shaping our collective response to these events? What is the continued relevance of literature (and literary study) for an era increasingly dominated by nonliterary and non-narrative media forms? Possible authors include Atwood, Diaz, Ishiguro, Lahiri, Mitchell, McCarthy, Morrison, Murakami, Saramago, Sebald, Smith, Rowling, Roy, Winterson and Wallace. Prereq: UCCS R and LPA requirements fulfilled.

ENGL 4610. Individual Authors. 3 cr. hrs.
Studies of the works of selected individual authors, usually within biographical, historical, intellectual, and/or cultural contexts. Authors studied may include Austen, the Brontes, the Brownings, Cheever and Carver, Conrad, Frost, Hardy and Hopkins, Heaney, Melville, Morrison, Wharton and Stein and Yeats. Consult Schedule of Classes or the English Department's website for specific author(s). Prereq: UCCS R and LPA requirements fulfilled.

ENGL 4611. Jane Austen. 3 cr. hrs.
Austen's novels are read with the close attention they demand and deserve. Her novels represent the plight of women in a patriarchal society rigged against them. Students study Austen's novels as pedagogical interventions in a culture that kept women from achieving their full human potential. Prereq: UCCS R and LPA requirements fulfilled.

ENGL 4615. Text in Context. 3 cr. hrs.
Students engage in an in-depth, semester-long study of a “major” or “monumental” work in its cultural and historical context. Alongside a close and thorough reading of the text, such a study may include analysis of its source texts; its contemporaneous interlocutors; significant critical and theoretical responses; transmedia adaptations; unauthorized rewrites, fan fictions and sequels; and contemporary remixes. Central texts vary from year to year but may include such works as "Paradise Lost," "Hamlet," "Frankenstein," "Middlemarch," "Ulysses," "Invisible Man," "One Hundred Years of Solitude," "Beloved," "Almanac of the Dead" or "Infinite Jest." Prereq: UCCS R and LPA requirements fulfilled.

ENGL 4710. Studies in Genre. 3 cr. hrs.
Advanced study of a particular genre and its ability to articulate meaning in historical, social, and/or literary contexts. Offerings have included Romance and Epic in Early Modern England, the Family Novel, the Novella, the Epic, the Court Romance and the American Western. Consult Schedule of Classes or the English Department's website for specific topics. Prereq: UCCS R and LPA requirements fulfilled.

ENGL 4715. Children's Literature. 3 cr. hrs.

ENGL 4716. Science Fiction/Fantasy. 3 cr. hrs.
"Everything is becoming science fiction," wrote J.G. Ballard in 1971. "From the margins of an almost invisible literature has sprung the intact reality of the 20th century." What has been the role of speculative and fantastic media in anticipating and articulating social change? How have creators in science fiction and fantasy used the relative safety of these genres' unreal situations to comment on very real crises in politics, identity, economics, ecology and war? How have science fiction and fantasy provided a space for reflection upon and resistance to dominant ideologies, and where have they served instead to reproduce and augment such powers? What role does the imagination of improbable and impossible worlds play in contemporary life? Content may range from surveys of different periods in the history of science fiction and fantasy to focused study of particular themes, subgenres and authors. Prereq: UCCS R and LPA requirements fulfilled.
ENGL 4717. Comics and Graphic Narrative. 3 cr. hrs.
Students explore the production and reception of comics and graphic narrative as a literary-artistic form, with topics ranging from the early history of the genre to its ongoing fixation on the figure of the superhero to the development of an international art movement crossing gender, class, and ethnic lines. Texts discussed may include DC and Marvel superhero comics, manga and anime, "Watchmen," "Maus," "Persepolis," "Fun Home," "Gemma Bovary," "Buddha," "Understanding Comics," underground and alternative comics and "Jimmy Corrigan: The Smartest Kid on Earth." Prereq: UCCS R and LPA requirements fulfilled.

ENGL 4718. British Humor. 3 cr. hrs.
At least since Monty Python achieved world-wide popularity, critics and fans have identified a distinctively British form of humor. Students explore the characteristics associated with British humor—e.g., nonsense, absurdity, surrealism, parody, verbal play, drag, scatology—through various periods and genres, depending upon instructor. Authors treated may include William Congreve, Jonathan Swift, Oscar Wilde, Gilbert and Sullivan, Lewis Carroll, Ivy Compton Burnett, P. G. Wodehouse, Joe Orton, Alan Bennett and David Lodge. Prereq: UCCS R and LPA requirements fulfilled.

ENGL 4720. Literary Criticism. 3 cr. hrs.
An introduction to a variety of literary critical methods ranging from New Criticism to Cultural Studies with emphasis on premises and methods of criticism, exercises in practical criticism, and application of theory to analysis of literary works. Prereq: UCCS R and LPA requirements fulfilled.

ENGL 4735. Drama. 3 cr. hrs.
"The play's the thing," states Shakespeare's Hamlet, that will enable him to uncover the truth about the murder of his father. Well beyond Shakespeare, writers have used the genre of drama to create a unique literary opportunity—because it demands simultaneously our aural, visual and rhetorical attention—to explore truths about relationships, human motivations, ethics, aesthetics, etc. Students explore the literary genre of drama in terms of its formal conventions (plot, characterization, dialogue, staging, etc.); its types (the epic, tragedy, comedy, musical, theatre of the absurd, etc.); and its cultural/historical contexts. Content may include Revenge Tragedy; Jacobean drama; The Restoration Stage; The Musical; Staging Race, Ethnicity, & Gender, etc. Prereq: UCCS R and LPA requirements fulfilled.

ENGL 4736. Fiction. 3 cr. hrs.
"There is no doubt," says Doris Lessing, "that fiction makes a better job of the truth." What is the connection between fiction and truth? Why are stories (narrative fictions) so compelling? Fiction takes a variety of forms, including the novel, the short story, the story cycle, the novella, the graphic novel, etc. New media has added to these in the forms of collaborative tales, fan fiction and hypertextual works, for examples. Students focus on one specific fictional form (topics vary by term) and study it in depth. Upon completing the course, students have a firm grasp of the form's literary conventions, its cultural/historical contexts of its production and ongoing reception, and relation to other literary genres. Prereq: UCCS R and LPA requirements fulfilled.

ENGL 4737. Creative Nonfiction. 3 cr. hrs.
Where does fact end and fiction begin? Sometimes referred to as the "literature of fact," creative nonfiction blurs the line between literary art (poetry, fiction, and drama) and "objective" writing practices of research and reportage (history and journalism). Works of creative nonfiction have been galvanizing forces in the transformation of public opinion, influencing debates on the abolition of slavery, the environment, pacifism, women's rights and more. Students explore different types of creative nonfiction including documentary, literary journalism, memoirs and other types of life-writing, and travel writing. Students engage creative nonfiction to explore ethical issues that might arise from practices of fictionalization including recent high-profile cases and controversies in the journalism and popular media. Prereq: UCCS R and LPA requirements fulfilled.

ENGL 4738. Poetry. 3 cr. hrs.
Students engage with the discipline and pleasure of poetry, from ancient sacred lyrics to twenty-first century experimental texts. The possibilities are endless: individual sections may focus on indigenous poetry of the Americas; on the poetry of witness; on feminist poetry; on long-form poetry; on ecopoetics; or on prosody; or on a particular "school" such as Deep Image, Black Arts, or L=A=N=G=U=A=G=E. Prereq: UCCS R and LPA requirements fulfilled.

ENGL 4740. Film Studies. 3 cr. hrs.
Studies in film and television from a media studies perspective, including consideration of audiovisual reception, the political economy of the culture industry, and developments in the cinematic apparatus alongside narrative analysis. Specific course topics will vary but can range from surveys in film history to focused studies of particular genres or auteurs, as well as comparative analyses between Hollywood cinema, independent cinema, and global cinema. Prereq: UCCS R and LPA requirements fulfilled.

ENGL 4745. Digital Literacies. 3 cr. hrs.
What does it mean to be literate in the age of digital natives? Students explore new media forms that have arisen since the mid-twentieth century, including video games, social media, digital music and art, and Internet writing. Students address questions such as: How can or should the study of literature and film include new media? How does the production and reception of different types of new media texts challenge our ideas about writing and reading? How do available technologies impact digital genres and forms? What theoretical constructs and aesthetic frameworks do they demand? And how are new media augmenting, challenging, or changing education, including university study? Prereq: UCCS R and LPA.

ENGL 4755. Law and literature. 3 cr. hrs.
From Sophocles and Shakespeare to Herbert Melville and Toni Morrison, Western writers have long been fascinated by questions of law and literature. In this course, we consider the ways in which imaginative writers have responded to and shaped legal and ethical concerns that remain of interest to this day. Topics may include the nature of law; the limits of legal authority; the legal construction of gender, race, and class; and the problem of crime and punishment.
ENGL 4765. Material Cultures. 3 cr. hrs.
Shifts English studies off the page towards analysis of other sorts of objects, employing methodologies from history, anthropology, archaeology, museum studies, and sociology alongside literary and linguistic methods and exploring the materiality of text and other methods of representation. Topics may range from the study of archives, museums, national parks, and monuments to food, clothing, toys and games; to the history of the book; to investigation of Milwaukee architecture and historical sites. Prereq: UCCS R and LPA fulfilled.

ENGL 4770. Studies in Literature and Culture. 3 cr. hrs.
Students investigate the relation between literature and its culture from a variety of perspectives that might include the historical, political, or anthropological. Past offerings have included the English Urban Novel, Catholicism and Literature, and Texts, Audiences, and Social Change. Consult Schedule of Classes or the English Department's website for specific topic. Prereq: UCCS R and LPA requirements fulfilled.

ENGL 4775. Literature and Place. 3 cr. hrs.
Explores one or more of the many regional traditions of American literature, ranging from New England to the Deep South, and the Midwest to the Pacific Coast, examining the relations between people and place. Specific sections might take up writing about nature and the environment, ecocritical approaches to literature, focus on the literature of a given region through time, or consider the rise of regionalism and “local color” writing in relation to such historical developments as the end of Reconstruction, Westward expansion, immigration, urbanization and contemporary ecological crisis. Prereq: UCCS R and LPA requirements fulfilled.

ENGL 4785. Gender, Sexuality, Literature. 3 cr. hrs.
Gender and sexuality can be identities, performances, prisons, or fields for exploration. They shape public and private experience – politics, economics, education, families, friendships, even one’s most personal relation to oneself. And literature is one of the central forums where writers and readers both make sense of this experience and imagine how it might be different. Students analyze changing literary representations of gender and sexuality and their intersections with other identities and categories of analysis – for instance, race and ethnicity, nationality, historical location – in order to explore the meaning and the function of these most basic building blocks in our culture. Prereq: UCCS R and LPA requirements fulfilled.

ENGL 4786. Women Writers. 3 cr. hrs.
Students study selected women writers to engage questions, such as: What is the effect of women’s social/cultural positions on their literary aesthetics? and Do women have separate and/or multiple literary traditions? To answer such questions, a range of critical methods will be employed, particularly those instrumental to feminist literary criticism (e.g., historicism, archetypal criticism, psychoanalysis, poststructuralism, formalism, Marxism, and critical race and ethnic criticism). Authors studied vary by instructor. Prereq: UCCS R and LPA requirements fulfilled.

ENGL 4810. Comparative Race and Ethnic Studies. 3 cr. hrs.
Students construct a foundation for further study in the literatures of racialized and “ethnic” groups in the United States (e.g. African American, American Indian, Asian American, Chicana/o, Latina/o, Arab American, etc.). As such, students learn key concepts necessary for more advanced work in comparative race and ethnic studies such as racial formation, varieties of privilege, intersectionality (of race, ethnicity, gender, sexual identity, class, etc.), and settler colonialism, as well as literary theoretical concerns about the relationship between aesthetic form and content, the influence of historical and cultural contexts on literary production and reception, and the political role of literature in society. Prereq: UCCS R and LPA requirements fulfilled.

Explores selected topics in critical race and literary studies with the intent of allowing in-depth exploration and analysis. Topics vary by semester but range from women of color feminism to Asian American literatures to literary captivities. Please consult the English department website each semester for specific foci. Though not required, having taken English 4810 will be advantageous. Prereq: UCCS R and LPA requirements fulfilled.

ENGL 4825. Native American / Indigenous Literatures. 3 cr. hrs.
Although Native Americans were once the most invisible members of American society, and statistically the smallest, the contemporary physical and cultural landscape now testifies in bright casino lights to the presence of tribal nations within the United States and Canada. If you’ve ever asked yourself why indigenous peoples are both politically and culturally distinct from other U.S. and Canadian citizens, this course provides you with the legal and historical contexts to understand that status. Primarily through the consideration of such twentieth-century writers as Sherman Alexie, Charles Eastman and Louise Erdrich, students consider Native critical terms and concepts elucidated through oral literature, non-fiction, poetry, short stories, film and novels, primarily drawn from members of tribal nations in the United States and Canada. Prereq: UCCS R and LPA requirements fulfilled.

ENGL 4830. Africana Literatures. 3 cr. hrs.
Explores literature produced by people of African descent. Topics vary by term: consult the English department website each term for specific foci. Offerings may include the Harlem Renaissance; the Great Migration; Caribbean literatures; Justice, the State, and Citizenship; and Race/Literature in Milwaukee after WWII. Though not required, having taken English 4810 is recommended. Prereq: UCCS R and LPA requirements fulfilled.

ENGL 4840. Postcolonial Literatures. 3 cr. hrs.
Students explore literatures written in English since the 1960s from Africa, Southeast Asia, the Caribbean, and Great Britain. Students discuss a wide range of issues including decolonization and the emergence of neocolonialism, cultural imperialism and literary responses to it by authors from what is sometimes called the Third World, and the value of art in an age defined by a “War on Terror.” Prereq: UCCS R and LPA requirements fulfilled.

ENGL 4850. Global Literatures. 3 cr. hrs.
Students explore authors and texts that have become prominent on a global scale. Students read Anglophone texts as well as literary works in translation focusing on global economic, social, and historical issues. Emphases and texts vary depending on instructor. Some of the topics that may be covered include notions of universal human rights, migrant labor, issues of censorship, and problems of literary translation. Prereq: UCCS R and LPA requirements fulfilled.
ENGL 4931. Topics in Literature. 3 cr. hrs.
Topics vary according to instructor, but past offerings have included the Bible as Literature, Literary Responses to the Vietnam War, Literature and the Environment, Literature of the Holocaust, the Vikings, and Meaning and Identity. Consult the Schedule of Classes or the English Department's website for specific topics. Prereq: UCCS R and LPA requirements fulfilled.

ENGL 4932. Topics in Writing. 3 cr. hrs.
Students study writing topics that vary according to instructor. Consult Schedule of Classes or the English Department's Web site for specific topic. Prereq: UCCS R and LPA requirements fulfilled. This course may not be counted as Literature requirement in Arts and Sciences College Curriculum. Prereq: UCCS R and LPA.

ENGL 4951. MU Led Travel/Study Abroad. 3 cr. hrs.
Course taught in an international setting by Marquette professors and where students earn Marquette credit. Study Abroad expenses apply. Prereq: Cons. of the Office of International Education.

ENGL 4954. Seminar in Creative Writing. 3 cr. hrs.
To paraphrase the Czech writer Milan Kundera, most people would rather believe a simple lie than a complex truth. Students learn how to write complex truths, sometimes (often? mostly?) by making stuff up. Through advanced practice in the techniques and discipline of writing, students develop proficiency with those techniques they first encountered in ENGL 4250 and 4260 and will add additional techniques to their repertoire. They examine fiction, poetry, drama, or nonfiction from technical (as well as critical) viewpoints, and will develop fluency in discussing writing from the practitioner's viewpoint. Offered in fiction, in poetry, in drama, and in nonfiction. Consult schedule of classes or the English department's website for specific genre. Prereq: UCCS R and LPA requirements fulfilled and cons. of instr. May not be counted as Literature requirement in Arts and Sciences College Curriculum.

ENGL 4986. Writing Internship. 3 cr. hrs.
On-the-job experience as writer and/or editor for a local agency; supervised by the agency and by English faculty. Although course is graded S/U, it counts toward the major or minor. May be taken only once. Guidelines and forms available in English department office. S/U grade assessment. Prereq: UCCS R and LPA requirements fulfilled and cons. of instr. May not be counted as a Literature course.

ENGL 4995. Independent Study in English. 3 cr. hrs.
Independent study with a specific faculty member intended to allow student to pursue topics not typically offered in the curriculum; thus, independent studies are not ordinarily allowed on material already addressed by other courses. Prereq: UCCS R and LPA requirements fulfilled, cons. of instr., and cons. of dept. ch.

ENGL 4997. Capstone. 3 cr. hrs.
Students draw together the knowledge and skills developed in previous coursework in order to integrate knowledge and improve knowledge/skill transfer to post-university life. Students will explore how key questions and concerns can be thought of in different ways by designing and producing projects as well as cultivating self-reflection. The focus of course content will vary by instructor, and students should consult the Department of English website for information on specific sections before enrolling (http://www.marquette.edu/english/). Prereq: UCCS R and LPA requirements fulfilled.

ENGL 4999. Senior Thesis. 1-3 cr. hrs.
Concentrated and independent study with a specific faculty member intended to allow the student to write a 40-60 page senior thesis on specific topic of interest to student. Prereq: UCCS R and LPA requirements fulfilled, cons. of instr., and cons. of dept. ch.
Foreign Languages and Literatures

Chairperson: Anne Pasero, Ph.D.
Department of Foreign Languages and Literatures website

Welcome to Marquette, and the Department of Foreign Languages and Literatures! We are nearly forty educators who teach eight different languages, from Arabic to Spanish. All of us are committed to language skills for real communication, and classroom experiences that stimulate, challenge and broaden our students' world.

The Department offers eight languages: Arabic, Chinese (Mandarin), French, German, Classical Greek, Italian, Latin and Spanish. Whether you are beginning our studies in a new language, or continuing one begun in high school, you'll discover that your language classes target useful communicative skills and open new perspectives on the world, including your own. You'll find that our courses range across subjects as diverse as "Late Roman Literature," "The Art of Genocide: Holocaust, Cambodia Rwanda," and "Writing Nature: Environmental Justice in Contemporary Latin American Literature". This diversity reflects our faculty, which includes internationally known scholars, and educators recognized for excellence in teaching, advising and community service. But we know our students, and every semester faculty discover new ways to integrate language learning, community and social activities.

Our majors include Classical Languages, Classical Studies, French, German, Spanish Language and Literature, Spanish for the Professions: Business or Health Professions. It's relatively easy to combine a major (or minor) in a foreign language with a second major–international affairs, international business, biochemistry, biology, history, philosophy–and continue on to pursue careers in law, medicine, business, education, public service–the combinations are many!

Arabic, Chinese and Italian are taught through the advanced intermediate level, but also include courses in civilization and literature in English translation. (The majority of our literature offerings are part of the Marquette University Core of Common Studies.)

The Klingler College of Arts and Sciences also offers the following interdisciplinary areas of study for those students who would like to combine their language skills with other disciplines:

- Arabic Language Studies and Culture minor (p. 218)
- Asian Studies minor (p. 219)
- Latin American Studies major and minor (p. 245)

Our graduates find their way to careers as diverse as the world today. Wherever their path leads, the ability to use other people's language has given it a sure beginning. Browse our website to meet our faculty and staff, explore the work we do and the courses where we will meet. We look forward to having you become part of our community of global learners!

Placement in Foreign Language Courses (p. 64)

The goal of the Department of Foreign Languages and Literatures is to place students in the most appropriate level of foreign language study based on their previous exposure to the language. Refer to the university section (p. 64) of this bulletin: Placement in Foreign Language Courses; Foreign Language Requirement; and Placement Credit in Foreign Languages.
Classics

The Classics Program at Marquette offers a major with three concentrations: Classical Languages, Classical Languages for Education Majors and Classical Studies. Our graduates are well prepared for graduate and professional work in such fields as Classics, Theology, Philosophy, Law, Journalism, Public Service, and Education. We also offer a Minor in Classical Languages and a Minor in Classical Studies.

Major in Classics

Complete one of the following concentrations:

Concentration 1: Classical Languages

Required Courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Description</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>LATN 2001</td>
<td>Intermediate Latin 1</td>
<td>3</td>
</tr>
<tr>
<td>LATN 2002</td>
<td>Intermediate Latin 2</td>
<td>3</td>
</tr>
<tr>
<td>GREK 1001</td>
<td>Elementary Greek 1</td>
<td>4</td>
</tr>
<tr>
<td>GREK 1002</td>
<td>Elementary Greek 2</td>
<td>4</td>
</tr>
</tbody>
</table>

Additional Requirements:

Sixteen additional credit hours in Latin (LATN) or Greek (GREK) or Classics (CLAS), with a maximum of one course in CLAS. 16

Total Credit Hours 30

Concentration 2: Classical Languages for Education Majors

Required Courses:

<table>
<thead>
<tr>
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<th>Description</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>LATN 2001</td>
<td>Intermediate Latin 1</td>
<td>3</td>
</tr>
<tr>
<td>LATN 2002</td>
<td>Intermediate Latin 2</td>
<td>3</td>
</tr>
<tr>
<td>GREK 1001</td>
<td>Elementary Greek 1</td>
<td>4</td>
</tr>
<tr>
<td>GREK 1002</td>
<td>Elementary Greek 2</td>
<td>4</td>
</tr>
<tr>
<td>FOLA 4000</td>
<td>Teaching World Languages and Cultures</td>
<td>3</td>
</tr>
</tbody>
</table>

Additional Requirements:

Sixteen additional credit hours in Latin (LATN) or Greek (GREK) or Classics (CLAS), with a maximum of one course in CLAS. 16

Maintain a minimum 2.75 GPA in LATN courses.

Pass a competence examination in Latin before enrolling in FOLA 4000 (Teaching World Languages and Cultures)

Total Credit Hours 33

Concentration 3: Classical Studies

Required Courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Description</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>LATN 2001</td>
<td>Intermediate Latin 1 and LATN 2002 Intermediate Latin 2</td>
<td>6</td>
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<tr>
<td>OR</td>
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<tr>
<td>GREK 2001</td>
<td>Intermediate Greek 1 and GREK 2002 Intermediate Greek 2</td>
<td>3</td>
</tr>
<tr>
<td>HIST 3201</td>
<td>Ancient Greece and Rome</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 3610</td>
<td>Ancient Philosophy</td>
<td>3</td>
</tr>
</tbody>
</table>

Additional Requirements:

One upper-level LATN or GREK course 3

 Fifteen credit hours in Ancient Languages, Civilization, or the Classical Tradition. Eligible courses include LATN 1001 and LATN 1002 or GREK 1001 and GREK 1002 (taken as a second classical language), any other course in LATN, GREK or CLAS, and such courses as the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>POSC 2801</td>
<td>Justice and Power</td>
</tr>
<tr>
<td>THEO 2100</td>
<td>New Testament Overview</td>
</tr>
<tr>
<td>CMST 3340</td>
<td>Classical Rhetorical Theory</td>
</tr>
<tr>
<td>THAR 4200</td>
<td>History of Theatre 1</td>
</tr>
</tbody>
</table>

Total Credit Hours 30

Minor in Classical Languages

Required Courses:
GREK 1001  Elementary Greek 1  4
GREK 1002  Elementary Greek 2  4
LATN 2001  Intermediate Latin 1  3
LATN 2002  Intermediate Latin 2  3

Additional Requirements:
Six credit hours in Latin (LATN) or Greek (GREK) courses.  6

Total Credit Hours  20

Minor in Classical Studies

Required Courses:
GREK 2001 Intermediate Greek 1 and GREK 2002 Intermediate Greek 2
OR
LATN 2001 Intermediate Latin 1 and LATN 2002 Intermediate Latin 2
HIST 3201  Ancient Greece and Rome  3
PHIL 3610  Ancient Philosophy  3

Additional Requirements:
Six credit hours in Ancient Languages, Civilization or the Classical Tradition. Eligible courses include LATN 1001 and LATN 1002 or GREK 1001 and GREK 1002 (taken as a second classical language), any other course in LATN, GREK, or CLAS, and such courses as the following:  6
POSC 2801  Justice and Power
THEO 2100  New Testament Overview
CMST 3340  Classical Rhetorical Theory
THAR 4200  History of Theatre 1

Total Credit Hours  18

Classics Courses

CLAS 1001. Greek and Latin Origins of Medical and Specialized Terminology. 3 cr. hrs.
Systematic presentation of the most common Greek and Latin words whose derivations are important in medical, scientific and specialized terminology, such as that of psychology and law. Exercises in word-building and analysis of definitions. Study of prefixes, suffixes, and word roots. Knowledge of Greek or Latin not required. Does not count toward fulfillment of the foreign language requirement.

CLAS 3000. Greek and Roman Epic Poetry. 3 cr. hrs.
A study of the origins and development of classical epic, including readings in English translation from the works of Homer and Vergil. Knowledge of Greek or Latin not required. May be counted as part of the Arts and Sciences literature curriculum requirement, but does not count toward fulfillment of the foreign language requirement.

CLAS 3005. Classical Foundations of European Literature. 3 cr. hrs.
An introduction to the classical tradition in Western literature through comparison of ancient and modern texts. Knowledge of Greek or Latin not required. May be counted as part of the Arts and Sciences literature curriculum requirement, but does not count toward fulfillment of the foreign language requirement.

CLAS 3015. Greek and Roman Tragedy. 3 cr. hrs.
A study of the origins and development of classical tragedy, with readings in English translation from the work of Aeschylus, Sophocles, Euripides, and Seneca. Knowledge of Greek or Latin not required. May be counted as part of the Arts and Sciences literature curriculum requirement, but does not count toward fulfillment of the foreign language requirement.

CLAS 3020. Greek and Roman Comedy. 3 cr. hrs.
Origins and development, with readings in English translation of the individual plays of Aristophanes, Menander, Plautus, and Terence. Knowledge of Greek or Latin not required. May be counted as part of the Arts and Sciences literature curriculum requirement, but does not count toward fulfillment of the foreign language requirement.

CLAS 3025. Classical Mythology. 3 cr. hrs.
Greek and Roman myths and legends in ancient literature and religion. Influence of Classical Mythology on the Western literary tradition. The heroic exploits and modern psychological motifs. Survey and viewing of the enormous artistic legacy inspired by the Classical myths. Knowledge of Greek or Latin not required; does not count toward fulfillment of the foreign language requirement.

CLAS 3030. Greek and Roman Rhetoric. 3 cr. hrs.
A study of the origins and development of classical rhetoric, with readings in English translation from the works of Aristotle, Cicero, Seneca, Rhetor, Antiphon, Lysias, Demosthenes, and others. Knowledge of Greek or Latin not required. May be counted as part of the Arts and Sciences literature curriculum requirement, but does not count toward fulfillment of the foreign language requirement.
**CLAS 3200. Greek Civilization and Art. 3 cr. hrs.**
Major achievements of the Ancient Greeks in literature and art presented in a historical framework. Survey of the architectural remains and masterpieces of Greek sculpture. Frequent visual supplementation of art and architecture. Background readings and discussions on such topics as Greek religious cults, the philosophic schools, pan-Hellenic competitions, and the role of the theatre in civic life. Knowledge of Greek not required; does not count toward the foreign language requirement.

**CLAS 3205. Roman Civilization and Art. 3 cr. hrs.**
Major achievements of Ancient Romans in literature, art, and architecture presented in a historical framework. Survey of the architectural remains. Background readings and discussions on such topics as Roman religious cults, the rise of Christianity, Stoicism and Roman Principate, rhetoric and education, and the legacy of Roman law. Knowledge of Latin not required; does not count toward fulfillment of the foreign language requirement.

**CLAS 4931. Topics in Classical Civilization and Literature. 1-3 cr. hrs.**
Topics will vary. Subject to be announced. Prereq: Sr. stndg., or cons. of dept. ch.

**CLAS 4995. Independent Study in Classical Civilization and Literature. 1-3 cr. hrs.**
Independent study with a faculty member centered on a particular topic in Classical Civilization and Literature. Prereq: cons. of dept. ch.

**Greek Courses**

**GREK 1001. Elementary Greek 1. 4 cr. hrs.**
Morphology and syntax of Attic Greek of the 5th-4th centuries B.C., the basis for all later literary dialects, such as Hellenistic and Koine (the language of the New Testament), and extending into the Byzantine period. Grammar exercises and readings of original texts. Open to students with no previous study of Greek or by departmental placement.

**GREK 1002. Elementary Greek 2. 4 cr. hrs.**

**GREK 2001. Intermediate Greek 1. 3 cr. hrs.**
Review of Greek morphology and syntax, with connected readings from Greek prose authors including Plato. Prereq: GREK 1002; or by departmental placement.

**GREK 2002. Intermediate Greek 2. 3 cr. hrs.**
Extensive readings in Greek from Homer's Iliad and Odyssey. Background readings and discussions on the nature of oral epic, the Mycenaean world, and the archaeological evidence for the Trojan War. Study of dactylic hexameter meter and metrical reading of Homeric lines. Prereq: GREK 2001; or by departmental placement.

**GREK 3500. Studies in Classical Greek Literature. 1-3 cr. hrs.**
Variable readings in Classical Greek literature. May be repeated when course content is different. Prereq: GREK 2002; or cons. of dept. ch.

**GREK 4931. Topics in Greek Language, Culture and Literature. 1-3 cr. hrs.**
Topics vary. Subject to be announced. Prereq: Sr. stndg. or cons. of dept. ch.

**GREK 4995. Independent Study in Greek. 1-3 cr. hrs.**
Prereq: Cons. of dept. ch.

**Latin Courses**

**LATN 1001. Elementary Latin 1. 4 cr. hrs.**
Introduction to Latin morphology and syntax, with graded readings and cultural information. Open to students with no previous study of Latin; or by departmental placement.

**LATN 1002. Elementary Latin 2. 4 cr. hrs.**
Continuation of LATN 1001. Exercises in Latin morphology and syntax with graded readings and cultural information. Prereq: LATN 1001; or by departmental placement.

**LATN 2001. Intermediate Latin 1. 3 cr. hrs.**
Exercises in advanced Latin morphology and syntax with graded readings in Latin prose and poetry and cultural information. Prereq: LATN 1002; or by departmental placement.

**LATN 2002. Intermediate Latin 2. 3 cr. hrs.**

**LATN 4100. Latin Prose Composition. 3 cr. hrs.**
LATN 4115. Medieval Latin. 3 cr. hrs.
Reading, translation, and analysis of a wide selection of Medieval Latin texts in prose and verse. Prereq: LATN 2002; or cons. of dept. ch.

LATN 4505. Vergil: Aeneid. 3 cr. hrs.
Translation of selections from Books 1-12 of Vergil's great national epic, the Aeneid, telling of the journey of Aeneas from fallen Troy to the shores of Italy. Background readings and discussions on Vergil's literary debt to Homer, The Aeneid as a national epic, and the Roman view of the Trojan legacy. Prereq: LATN 2002; or cons. of dept. ch.

LATN 4510. Horace: Odes. 3 cr. hrs.
Reading, translation, and analysis of selected lyric poems of Horace. Prereq: LATN 2002; or cons. of dept. ch.

LATN 4515. Roman Elegiac Poetry. 3 cr. hrs.
Translations of selections from the love poems of Tibullus, Propertius, and Ovid. Background readings and discussions on the origin and conventions of Roman elegiac poetry. Study of the elegiac couplet. Prereq: LATN 2002; or cons. of dept. ch.

LATN 4520. Roman Comedy: Plautus and Terence. 3 cr. hrs.
Reading in Latin of several comedies from the works of Plautus and Terence, Rome's surviving comic playwrights. Comedies translated may include Plautus' Miles Gloriosus, Menaechmi, and Mostellaria; and Terence's Adelphi and Woman of Andros. Background readings and discussion on the origin and conventions of Roman comedy and the technicalities of staging a Roman comedy. Prereq: LATN 2002; or cons. of dept. ch.

LATN 4525. Tacitus: Germania and Agricola. 3 cr. hrs.
Reading, translation, and analysis of selections from the shorter works of Tacitus, with additional selections from the Annales. Prereq: LATN 2002; or cons. of dept. ch.

LATN 4530. Cicero: Political and Philosophical Writings. 3 cr. hrs.
Reading, translation, and analysis of selections from the speeches and dialogues of Cicero. Prereq: LATN 2002; or cons. of dept. ch.

LATN 4550. Advanced Studies in Latin Poetry. 3 cr. hrs.
Reading, translation and analysis of a major Latin poet such as Catullus, Ovid or Juvenal. Prereq: LATN 2002; or cons. of instr.

LATN 4560. Advanced Studies in Latin Prose. 3 cr. hrs.
Readings translation and interpretation of a major Latin prose author such as Sallust, Livy, Seneca, Quintilian or St. Augustine. Prereq: LATN 2002; or cons. of instr.

LATN 4931. Topics in Latin Language, Culture and Literature. 1-3 cr. hrs.
Topics vary. Subject to be announced. Prereq: Sr. stdg. or cons. of dept. ch.

LATN 4995. Independent Study in Latin. 1-3 cr. hrs.
Prereq: Cons. of dept. ch.

LATN 4999. Senior Thesis in Latin. 2 cr. hrs.
Introductory thesis guidance for approved students under the direction of a departmental adviser. Prereq: Cons. of dept. ch.
French

The French program at Marquette University provides students with the opportunity to develop linguistic proficiency in one of the most widely spoken languages the world of business and diplomacy while learning about the rich and diverse cultures of Francophone Africa, Asia, America, and Europe. The goal of the undergraduate program is twofold: to master all four skills of language acquisition (speaking, understanding, reading and writing), and to gain in-depth knowledge of content areas related to French language and to the great diversity of Francophone arts, philosophy, politics and history. Majors in French may combine studies with other disciplines in the humanities, social sciences, or sciences. Students considering careers in international business, international affairs, diplomacy, education, philosophy, history, law, or communications are particularly encouraged to pursue a double major or a minor in French. Four distinct concentrations are offered: Francophone Arts and Cultures, Francophone Societies and Civilizations, Francophone Literatures, Cultures and Language for Education Majors, and the interdisciplinary Francophone Studies. Each concentration, with the exception of the additional requirements for Education majors, consists of eleven courses (33-34 credit). This excludes the elementary level language courses and Intermediate French 1 (FREN 1001 Elementary French 1, FREN 1003 Intensive Elementary French, and FREN 2001 Intermediate French 1).

Students may elect to complete a minor in French which consists of seven courses (21-22 credit hours), excluding the elementary language courses and Intermediate French 1 (FREN 1001 Elementary French 1, FREN 1003 Intensive Elementary French and FREN 2001 Intermediate French 1).

Major in French

The major in French consists of eleven courses (33-34 credit hours), excluding elementary level French language courses and Intermediate French 1 (FREN 1001 Elementary French 1, FREN 1003 Intensive Elementary French, and FREN 2001 Intermediate French 1). Students must complete one of the four concentrations as specified below: Francophone Arts and Cultures, Francophone Societies and Civilizations, Francophone Literatures, Cultures and Language for Education Majors or Francophone Studies. One French course (FREN 4250 Francophone Arts and Cultures in English or FREN 4350 Francophone Civilization in English) may be taken in English towards the major.

Concentration 1: Francophone Arts and Cultures

Required Courses: 15-16

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>FREN 2002</td>
<td>Intermediate French 2</td>
</tr>
<tr>
<td>or FREN 2003</td>
<td>Intensive Intermediate French</td>
</tr>
<tr>
<td>FREN 3001</td>
<td>French Composition and Conversation</td>
</tr>
<tr>
<td>FREN 3120</td>
<td>French Phonetics</td>
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<tr>
<td>FREN 3500</td>
<td>Introduction to Textual Analysis in French</td>
</tr>
<tr>
<td>FREN 4110</td>
<td>Advanced Grammar and Written Expression in French</td>
</tr>
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Francophone Arts and Cultures: Choose four of the following. 12

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>FREN 4200</td>
<td>Francophone Literature: Non-Western</td>
</tr>
<tr>
<td>FREN 4210</td>
<td>Francophone Literature: Western</td>
</tr>
<tr>
<td>FREN 4220</td>
<td>Francophone Art or Film: Non-Western</td>
</tr>
<tr>
<td>FREN 4230</td>
<td>Francophone Art or Film: Western</td>
</tr>
<tr>
<td>FREN 4240</td>
<td>Francophone Popular Culture</td>
</tr>
<tr>
<td>FREN 4250</td>
<td>Francophone Arts and Cultures in English</td>
</tr>
<tr>
<td>FREN 4931</td>
<td>Topics in French Language, Culture and Literature</td>
</tr>
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Francophone Societies and Civilizations: Choose two of the following. 6

<table>
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<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>FREN 4300</td>
<td>Francophone History and Politics: Non-Western</td>
</tr>
<tr>
<td>FREN 3705</td>
<td>Advanced French for Business</td>
</tr>
<tr>
<td>FREN 4310</td>
<td>Francophone History and Politics: Western</td>
</tr>
<tr>
<td>FREN 4320</td>
<td>Francophone Critical Theories</td>
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<td>Francophone Studies in Human Rights</td>
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<td>Francophone Civilization in English</td>
</tr>
<tr>
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</tr>
</tbody>
</table>

Total Credit Hours 33-34

Concentration 2: Francophone Societies and Civilizations

Required Courses: 15-16

<table>
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<th>Course</th>
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<tr>
<td>FREN 2002</td>
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<tbody>
<tr>
<td>FREN 3001</td>
<td>French Composition and Conversation</td>
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</tr>
</tbody>
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Francophone Arts and Cultures: Choose two of the following. 6
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<tbody>
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<td>Francophone Literature: Non-Western</td>
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<td>FREN 4210</td>
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</table>

Total Credit Hours 33-34

**Concentration 3: Francophone Literatures, Cultures and Language for Education Majors**

Required Courses: 15-16
<table>
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<tr>
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Total Credit Hours 33-34
Additional requirements for Concentration 3: Francophone Literatures, Cultures and Language for Education Majors:

1. Passing an official Oral Proficiency Interview (OPI) in French at the level of Intermediate-High on the ACTFL Oral Proficiency Scale, as well as an official writing proficiency test (WPT) in French at the Intermediate-High level prior to registering for FOLA 4000 Teaching World Languages and Cultures.

2. Completion of FOLA 4000 Teaching World Languages and Cultures.

3. Maintenance of a minimum 2.750 grade point average in the French major with a minimum of a 3.000 grade point average in the following courses: FREN 2002 Intermediate French 2 or FREN 2003 Intensive Intermediate French, FREN 3001 French Composition and Conversation, FREN 3120 French Phonetics, FREN 3500 Introduction to Textual Analysis in French, and FREN 4110 Advanced Grammar and Written Expression in French, as applicable.

4. Residence in a country in which French is spoken or participation in a structured study abroad program and/or intensive immersion experience. The Department of Foreign Languages and Literatures must approve the program selected.

CONCENTRATION 4: FRANCOPHONE STUDIES

Required Courses:

<table>
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<tr>
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French Courses: Choose two of the following.

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Francophone Studies: Choose four of the following.

<table>
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<tr>
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<tr>
<td>BULA 3040</td>
<td>The Legal and Regulatory Environment of International Business</td>
</tr>
<tr>
<td>ENGL 4830</td>
<td>Africana Literatures</td>
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<td>ENGL 4840</td>
<td>Postcolonial Literatures</td>
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<tr>
<td>HIST 1401</td>
<td>Africa</td>
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<tr>
<td>HIST 4262</td>
<td>Modern France</td>
</tr>
<tr>
<td>HIST 4290</td>
<td>The French Revolution and Napoleon, 1787 to 1815</td>
</tr>
<tr>
<td>HIST 4350</td>
<td>The Caribbean</td>
</tr>
<tr>
<td>HIST 4450</td>
<td>North Africa</td>
</tr>
<tr>
<td>INBU 4931</td>
<td>Topics in International Business</td>
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<tr>
<td>PHIL 3665</td>
<td>Phenomenology and Existentialism</td>
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<tr>
<td>POSC 4501</td>
<td>European Politics</td>
</tr>
<tr>
<td>POSC 4561</td>
<td>Politics of the Developing World</td>
</tr>
<tr>
<td>POSC 4711</td>
<td>International Politics of Europe</td>
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<tr>
<td>POSC 4841</td>
<td>Enlightenment Political Thought</td>
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</table>
THEO 4220  St. Augustine: The Man and the Theologian

Total Credit Hours  33-34

Minor in French

The minor in French consists of seven courses with a minimum of 21-22 credit hours, excluding the elementary language courses and Intermediate French 1 as listed below.

Notes:

- The following FREN courses do not fulfill requirements toward the French minor: FREN 1001 Elementary French 1, FREN 1003 Intensive Elementary French, and FREN 2001 Intermediate French 1.

Required Courses:

<table>
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<tr>
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<th>Credit Hours</th>
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<tbody>
<tr>
<td>FREN 2002</td>
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<td>FREN 3001</td>
<td>French Composition and Conversation</td>
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Electives: Choose two courses from the following:

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<tbody>
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<td></td>
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</table>

Total Credit Hours  21-22

Courses

FREN 1001. Elementary French 1. 3 cr. hrs.
Fundamentals of listening, speaking, reading, and writing in French. Cultural awareness is developed through exposure to a wide range of authentic texts and materials. No previous French experience is accepted. Does not count toward language proficiency requirement. Prereq: No previous study of French.

FREN 1003. Intensive Elementary French. 4 cr. hrs.
First-year French course, and the first course in the core language sequence. Development of active vocabulary, basic grammar, listening, reading, writing and speaking in French through class activities, web-based language practice and online homework assignments. Cultural awareness is enhanced through exposure to authentic texts and materials from French and Francophone cultures. Prereq: No previous French; or by departmental placement. Not open to students with native or near native fluency in French.


Second-year intensive French course. Continuation of FREN 1003. Fulfills language proficiency requirement. A combination of FREN 2001 and FREN 2002, this course allows qualified students to complete the language proficiency requirement at a fast and demanding pace. Continued development of listening, speaking, reading, and writing in French. Cultural readings from the French and Francophone world are discussed. Emphasis on communicative practice and interaction in French, and the development of Intermediate Mid language proficiency required for the major and minor in French. Prereq: FREN 1003 with minimum grade of AB; or by departmental placement. Not open to native or near-native French speakers.

FREN 3001. French Composition and Conversation. 3 cr. hrs.
Development of effective writing proficiency in French for a variety of contexts (descriptions; explanations; letters; e-mails; and papers) with review of linguistic and grammatical structures. Development of culturally, socially, and contextually appropriate conversational skills (oral and aural) about a variety of topics with a focus on linguistic accuracy and fluency. Prereq: FREN 2002 or FREN 2003; or by departmental placement. Not open to students with native or near native fluency.

FREN 3120. French Phonetics. 3 cr. hrs.
Offers an understanding and practice of the basic pronunciation rules of Standard French; the articulation of individual sounds, sound groupings, and speech patterns. Prereq: FREN 3002; or cons. of dept. ch.

FREN 3500. Introduction to Textual Analysis in French. 3 cr. hrs.
A survey of major genres, styles, and periods of French and Francophone literature designed to prepare students for upper level literature courses with a focus on interpretation of poetry, theater, prose and contemporary press. Prereq: FREN 2001 or FREN 2003; or by department placement.

FREN 3705. Advanced French for Business. 3 cr. hrs.
Advanced French for international business in the French-speaking world. Prereq: FREN 3001 and FREN 3500; or cons. of dept. ch.

FREN 4110. Advanced Grammar and Written Expression in French. 3 cr. hrs.
Examines advanced structures, forms and style of the French language through contextual practice. Prereq: FREN 3001 and FREN 3002; or cons. of dept. ch.

FREN 4200. Francophone Literature: Non-Western. 3 cr. hrs.
Study of indigenous and colonial Francophone literature of Africa, the Caribbean, or Asia. Examinations include stylistic techniques, thematic concerns, and place in literary history. Variable subtitles depending on content and focus. Prereq: FREN 3001 and FREN 3500; or cons. of dept. ch.

FREN 4210. Francophone Literature: Western. 3 cr. hrs.
Study of the Francophone literature of Europe or North America. Examinations include stylistic techniques, thematic concerns, and place in literary history. Variable subtitles depending on content and focus. Prereq: FREN 3001 and FREN 3500; or cons. of dept. ch.

FREN 4220. Francophone Art or Film: Non-Western. 3 cr. hrs.
Study of indigenous and colonial Francophone art and film of Sub-Saharan Africa, the Caribbean, or Asia. Examinations include stylistic techniques, thematic concerns, and place in art or cinematic history. Variable subtitles depending on content and focus. Prereq: FREN 3001 and FREN 3500; or cons. of dept. ch.

FREN 4230. Francophone Art or Film: Western. 3 cr. hrs.
Study of Francophone art and film of Europe or North America. Examinations include stylistic techniques, thematic concerns, and place in art or cinematic history. Variable subtitles depending on content and focus. Prereq: FREN 3001 and FREN 3500; or cons. of dept. ch.

FREN 4240. Francophone Popular Culture. 3 cr. hrs.
Study of indigenous and colonial Francophone culture of North Africa and the Middle East. Topics include the study of cuisine, fashion, social norms, and mass media and their relationship to environmental, economic, social, and political factors. Variable subtitles depending on content and focus. Prereq: FREN 3001 and FREN 3500; or cons. of dept. ch.

FREN 4250. Francophone Arts and Cultures in English. 3 cr. hrs.
Topics in Francophone Arts and Cultures taught in English. Topics vary. Subject to be announced.

FREN 4300. Francophone History and Politics: Non-Western. 3 cr. hrs.
Principal political dynamics of Francophone Africa, the Caribbean, or Asia and their interactions with France. Variable subtitles depending on content and focus. Prereq: FREN 3001 and FREN 3500; or cons. of dept. ch.

FREN 4310. Francophone History and Politics: Western. 3 cr. hrs.
Principal political dynamics of Francophone Europe or North Africa their interactions with France. Variable subtitles depending on the content and focus. Prereq: FREN 3001 and FREN 3500; or cons. of dept. ch.

FREN 4320. Francophone Critical Theories. 3 cr. hrs.
Examination of philosophies and critical theories originating from Francophone thinkers and related to the Francophone world. Topics include existentialism, structuralism, post-structuralism, and post-colonial theories. Variable subtitles depending on the content and focus. Prereq: FREN 3001 and FREN 3500; or cons. of dept. ch.

An in-depth analysis of human rights issues of the Francophone world. Topics include ethnic or religious subjugation, immigration, political repression, and genocide. Variable subtitles depending on content and focus. Prereq: FREN 3001 and FREN 3500; or cons. of dept. ch.
FREN 4340. Francophone Studies in Gender or Sexuality. 3 cr. hrs.
An in-depth analysis of issues related to women and gender concerns in Francophone countries. Topics include theory (feminism, écriture féminine, gay and lesbian studies), law (family law regulating non-married couples, marriage, property rights, inheritance), and socio-cultural issues (religion, employment, public and private space, dress, linguistic accessibility, domestic abuse, and genital mutilation). Variable subtitles depending on content and focus. Prereq: FREN 3001 and FREN 3500; or cons. of dept. ch.

FREN 4350. Francophone Civilization in English. 3 cr. hrs.
Topics in Francophone Civilization in English. Topics vary. Subject to be announced.

FREN 4931. Topics in French Language, Culture and Literature. 1-3 cr. hrs.
Topics vary. Subject to be announced. Prereq: FREN 3500; or cons. of dept. ch.

FREN 4995. Independent Study in French. 1-3 cr. hrs.
Prereq: Cons. of dept. ch.

FREN 4999. Senior Thesis in French. 2 cr. hrs.
Introductory thesis guidance for approved students under the direction of a departmental adviser. Prereq: Cons. of dept. ch.
German

Studying German at Marquette develops your ability to use German to immerse yourself in the dramatic story of German literature and history, culture and contemporary society. The multi-disciplinary German Studies track lets you combine intensive language training with courses from across the college that engage German history and politics, intellectual heritage and culture. Recent courses in the traditional concentration in German Language, Literature and Culture have explored the topic of witness and resistance in German literature, the works of Franz Kafka, and the revolutionary aspects of art and music in the Romantic era. As a second major, German offers a unique way of enlarging pre-professional or scientific studies, especially for those who plan careers in law, medicine, business, government and education.

In addition to offering the German major, the faculty also support students preparing for secondary teaching, as well as a popular minor in German which consists of eighteen credit hours above the intermediate language level.

Major in German

The major in German consists of ten or eleven courses with a minimum of 30-33 credit hours: six required courses (18 credit hours) and an additional four courses (12 credit hours) in Concentration 1 or Concentration 2 and five courses (15 credit hours) in Concentration 3 as listed below.

Note:

- Elementary and intermediate level GRMN courses (GRMN 1001 Elementary German 1, GRMN 1003 Intensive Elementary German, GRMN 2001 Intermediate German 1, GRMN 2002 Intermediate German 2 and GRMN 2003 Intensive Intermediate German) do not count toward the major.

Required Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRMN 3000</td>
<td>Introduction to German Studies</td>
<td>3</td>
</tr>
<tr>
<td>GRMN 3001</td>
<td>German Composition and Conversation</td>
<td>3</td>
</tr>
<tr>
<td>GRMN 3500</td>
<td>The Modern German Short Story</td>
<td>3</td>
</tr>
<tr>
<td>GRMN 4961</td>
<td>Workshop in German/English Translation</td>
<td>3</td>
</tr>
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</table>

Surveys in German Literature:

<table>
<thead>
<tr>
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<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRMN 3510</td>
<td>Thematic Surveys in German Literature</td>
<td>3</td>
</tr>
<tr>
<td>GRMN 3520</td>
<td>Selected Genres in German Literature</td>
<td></td>
</tr>
<tr>
<td>GRMN 3530</td>
<td>Individual Authors in German Literature</td>
<td></td>
</tr>
</tbody>
</table>

German Studies workshops in writing and research: Both courses must be taken in combination for 3 credits total.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRMN 4962</td>
<td>Workshop in German Studies Research (1 or 2 credits)</td>
<td>3</td>
</tr>
<tr>
<td>GRMN 4963</td>
<td>Workshop in German Studies Writing (1 or 2 credits)</td>
<td></td>
</tr>
</tbody>
</table>

Total Credit Hours

18

Students must complete four or five additional German courses in one of the concentrations as indicated below:

Concentration 1: German Language, Literature and Culture

Electives: Choose four additional GRMN courses.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>Both the following courses in English may be counted toward the major:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GRMN 3200</td>
<td>Topics in German Culture</td>
<td></td>
</tr>
<tr>
<td>GRMN 3210</td>
<td>German Literature in English Translation</td>
<td></td>
</tr>
</tbody>
</table>

Total Credit Hours

12

Concentration 2: Multidisciplinary German Studies

Electives: Choose four additional courses from at least two different subject areas:

<table>
<thead>
<tr>
<th>Courses</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRMN 3200</td>
<td>Topics in German Culture</td>
<td></td>
</tr>
<tr>
<td>GRMN 3210</td>
<td>German Literature in English Translation</td>
<td></td>
</tr>
<tr>
<td>HIST 3210</td>
<td>The Middle Ages</td>
<td></td>
</tr>
<tr>
<td>HIST 3225</td>
<td>War and Religion in Early Modern Europe, 1500-1650</td>
<td></td>
</tr>
<tr>
<td>HIST 3232</td>
<td>Reaction, Revolution, and Nationalism: 1814 to 1914</td>
<td></td>
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<tr>
<td>HIST 3235</td>
<td>Twentieth Century Europe</td>
<td></td>
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<tr>
<td>HIST 4249</td>
<td>Intellectual History of Modern Europe</td>
<td></td>
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<tr>
<td>HIST 4264</td>
<td>Modern Germany</td>
<td></td>
</tr>
<tr>
<td>HIST 4266</td>
<td>Nazi Germany and the Holocaust</td>
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</tr>
<tr>
<td>PHIL 3660</td>
<td>Marx and Marxism</td>
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</tbody>
</table>
Marquette University - Undergraduate Bulletin

PHIL 3665 Phenomenology and Existentialism
PHIL 3670 Nineteenth-Century German Philosophy
POSC 4461 Comparative Health Politics and Policy
POSC 4501 European Politics
POSC 4711 International Politics of Europe
POSC 4813 Nietzsche and Christianity
POSC 4851 Karl Marx
THEO 4240 Theology in the Reformation Era
THEO 4250 Martin Luther
THAR 4210 History of Theatre II: Modern Theatre

Total Credit Hours 12

Concentration 3: Education Majors

Note:

• GRMN 3210 German Literature in English Translation does not fulfill the elective requirement for Concentration 2: Education majors.

Required Courses:

GRMN 3120 German Phonetics and Advanced Speaking Practice 3
GRMN 3200 Topics in German Culture 3
GRMN 4110 Advanced German Grammar 3

Electives: Choose two additional GRMN courses. 6

Total Credit Hours 15

Additional requirements for Concentration 3: Education Majors:

1. The German section will offer Education Majors an on-going evaluation of the candidates’ abilities to understand and produce German, to read and write the language and to understand the structure of the language. Additionally, an evaluation is made of the candidate’s familiarity with current German culture.

2. Maintenance of a minimum 2.750 grade point average in the German major with a minimum of a 3.000 grade point average in the following courses as applicable: GRMN 3001 German Composition and Conversation, GRMN 3100 Advanced German Composition and Conversation, GRMN 3120 German Phonetics and Advanced Speaking Practice and GRMN 4110 Advanced German Grammar.

3. Passing an official Oral Proficiency Interview (OPI) in German at the level of Intermediate-High on the ACTFL Oral Proficiency Scale before being permitted to register for FOLA 4000 Teaching World Languages and Cultures.

4. Completion of FOLA 4000 Teaching World Languages and Cultures.

5. Residence in a country in which German is spoken or participation in a structured study abroad program and/or intensive immersion experience. The Department of Foreign Languages and Literatures must approve the program selected.

Minor in German

The minor in German consists of six courses (18 credit hours): three required courses (9 credit hours) and three electives (9 credit hours) as listed below.

Note:

• Lower level GRMN courses do not count toward the minor: GRMN 1001 Elementary German 1, GRMN 1003 Intensive Elementary German, GRMN 2001 Intermediate German 1, GRMN 2002 Intermediate German 2 and GRMN 2003 Intensive Intermediate German

Required:

GRMN 3001 German Composition and Conversation 3
GRMN 3500 The Modern German Short Story 3
And one of the following: 3
GRMN 3510 Thematic Surveys in German Literature
GRMN 3520 Selected Genres in German Literature
GRMN 3530 Individual Authors in German Literature

Electives: Choose three GRMN courses. 9
One of the following courses in English may be counted toward the minor:
GRMN 3200 Topics in German Culture
Courses

GRMN 1001. Elementary German 1. 3 cr. hrs.
Fundamentals of listening, speaking, reading, and writing in German. Cultural awareness is developed through exposure to a wide range of authentic texts and materials. No previous German experience is accepted. Does not count toward language proficiency requirement. Prereq: No previous study of German.

GRMN 1003. Intensive Elementary German. 4 cr. hrs.
First year German course, and the first course in the core language sequence. Development of listening, speaking, reading, and writing in German. Cultural awareness is developed through exposure to a wide range of authentic texts and materials. Emphasis on communicative practice and interaction in German. No previous German experience is required. Prereq: No previous German; or by departmental placement.

Second-year German course. Continuation of GRMN 1003. Fulfills language proficiency requirement. Continued development of listening, speaking, reading, and writing in German. Cultural readings from the German-speaking world are discussed. Emphasis on communicative practice and interaction in German, and the development of Intermediate Low language proficiency. Prereq: GRMN 1003; or by departmental placement.

GRMN 2002. Intermediate German 2. 3 cr. hrs.

Second-year intensive German course. Continuation of GRMN 1003. Fulfills language proficiency requirement. A combination of GRMN 2001 and GRMN 2002, this course allows qualified students to complete the language proficiency requirement at a fast and demanding pace. Continued development of listening, speaking, reading, and writing in German. Cultural readings from the German-speaking world are discussed. Emphasis on communicative practice and interaction in German, and the development of Intermediate Mid language proficiency required for the German Studies major and minor. Prereq: GRMN 1003 with minimum grade of AB; or by departmental placement.

GRMN 3000. Introduction to German Studies. 3 cr. hrs.
Selected issues in German history, politics, social issues, contemporary society and European context. Knowledge of German not required. Topic varies.

GRMN 3001. German Composition and Conversation. 3 cr. hrs.
Practice in the oral and written use of the German language. Prereq: GRMN 2002, GRMN 2003; or by departmental placement.

GRMN 3100. Advanced German Composition and Conversation. 3 cr. hrs.
Practice and review of advanced grammatical structures of the German language for further development of oral and written communication skills. Prereq: GRMN 3001; or cons. of dept. ch.

GRMN 3120. German Phonetics and Advanced Speaking Practice. 3 cr. hrs.
German sounds and speech patterns. Prereq: GRMN 3001; or cons. of dept. ch.

GRMN 3200. Topics in German Culture. 3 cr. hrs.
Studies in German culture and cultural history. Knowledge of German not required. Topic varies. May be repeated once when topic varies.

GRMN 3210. German Literature in English Translation. 3 cr. hrs.
Readings in English translation of principal authors from the Middle Ages to the present day. Knowledge of German not required. May be counted as part of the Arts and Sciences literature requirement but not as part of the foreign language requirement.

GRMN 3500. The Modern German Short Story. 3 cr. hrs.
An introduction to textual analysis and interpretation concentrating on the German short story in historical and cultural context. Prereq: GRMN 3030; or cons. of dept. ch.

GRMN 3510. Thematic Surveys in German Literature. 3 cr. hrs.
Survey of selected themes or periods in German literature. Topics to be announced. May be repeated for credit when the topic varies. Prereq: GRMN 3500; or cons. of dept. ch.

GRMN 3520. Selected Genres in German Literature. 3 cr. hrs.
Studies in a specific author of German literature. Topic varies. May be repeated once when the topic varies. Prereq: GRMN 3500; or cons. of dept. ch.

GRMN 3530. Individual Authors in German Literature. 3 cr. hrs.
Studies in a specific author of German literature. Topic varies. May be repeated once when the topic varies. Prereq: GRMN 3500; or cons. of dept. ch.

GRMN 4110. Advanced German Grammar. 3 cr. hrs.
Grammatical structure of the German language in context with other linguistic areas. Prereq: GRMN 3001; or cons. of dept. ch.

GRMN 4525. German Literature: Twelfth to the Eighteenth Century. 3 cr. hrs.
Principal works of the Medieval, Renaissance, and Baroque periods in German literature. Prereq: GRMN 3500; or cons. of dept. ch.
GRMN 4931. Topics in German Language, Culture and Literature. 1-3 cr. hrs.
Topics vary. Subject to be announced. Prereq: Sr. stndg. or cons. of dept. ch.

GRMN 4961. Workshop in German/English Translation. 1-3 cr. hrs.
A Practical workshop to familiarize advanced students with the problems of and processes required in translating from German to English. Different non-literary texts supplied by outside sources will be assigned to each student. Discussions will involve general principles of translating, as well as text-specific problems. Prereq: Cons. of instr.

GRMN 4962. Workshop in German Studies Research. 1-2 cr. hrs.
Research areas, methods and current topics relevant to German Studies, with assistance of university professional library staff. Course culminates in creation of an individual research grant proposal. Prereq: GRMN 3500 or cons. of dept. ch.; Jr. stndg.

GRMN 4963. Workshop in German Studies Writing. 1-2 cr. hrs.
Intensive German language writing experience in text types relevant to German Studies. Prereq: GRMN 3500; or cons. of dept. ch.; Jr. stndg.

GRMN 4995. Independent Study in German. 1-3 cr. hrs.
Prereq: Cons. of dept. ch.

GRMN 4999. Senior Thesis in German. 2 cr. hrs.
Introductory thesis guidance for approved students under the direction of a departmental adviser. Prereq: Cons. of dept. ch.
Spanish

The Spanish program at Marquette provides students with the opportunity to develop linguistic proficiency in one of the most widely spoken languages in the world while learning about the rich and diverse cultures of Latin America, Spain and the Latino communities in the United States. The goal of the undergraduate program is twofold: to master all four skills of language acquisition (speaking, understanding, reading and writing), and to gain in-depth knowledge of content areas related to language, linguistics, literature, culture and film of the Spanish-speaking world. Majors in Spanish may combine studies with other disciplines in the humanities, social sciences or sciences. Students considering careers in education, international business, medicine, law, government or communications are particularly encouraged to pursue a double major or a minor in Spanish. Two distinct majors are offered: Spanish Language, Literature, and Culture, with special concentrations including one for Education majors; and Spanish for the Professions, with concentrations in either Business or Health. Both majors also offer curricular concentrations designed to meet the needs of heritage and native speakers of Spanish.

Minors may also choose to concentrate on Spanish Language, Literature, and Culture or Spanish for the Professions. The minor consists of six to seven courses (18-22 credit hours), excluding SPAN 1001 Elementary Spanish 1, SPAN 1003 Intensive Elementary Spanish, and SPAN 2001 Intermediate Spanish 1.

The Klingler College of Arts and Sciences also offers an Interdisciplinary Latin American Studies major or minor (p. 245) for those students who would like to combine their language skills with other disciplines.

Notes:

- **Heritage learners of Spanish** are students of Hispanic background who have been educated in the United States and have been exposed to Spanish in their homes or communities from an early age, but who consider English their primary language.

- **Native speakers of Spanish** have been primarily educated in Spanish and consider Spanish their first language.

- **Electives:** These are upper-division courses at the 3000 and 4000 levels which were not previously taken to fulfill a requirement. Where there are options listed, if a student wanted to take both instead of choosing only one, such as SPAN 3300 or SPAN 3310, or SPAN 3515 and SPAN 3520, one course could be used to fulfill the requirement and the other course to fulfill an elective.

Major in Spanish Language, Literature and Culture

The major in Spanish Language, Literature and Culture consists of ten to eleven courses (30-34 credit hours), depending on the Concentration 1-4 completed as listed below.

Notes:

- Electives: These are upper-division courses at the 3000 and 4000 levels which were not previously taken to fulfill a requirement. Where there are options listed, if a student wanted to take both instead of choosing only one, such as SPAN 3300 or SPAN 3310, or SPAN 3515 and SPAN 3520, one course could be used to fulfill the requirement and the other course to fulfill an elective.

- The following elementary and intermediate language courses are not counted toward the major.

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 1001</td>
<td>Elementary Spanish 1</td>
</tr>
<tr>
<td>SPAN 1003</td>
<td>Intensive Elementary Spanish</td>
</tr>
<tr>
<td>SPAN 2001</td>
<td>Intermediate Spanish 1</td>
</tr>
</tbody>
</table>

Concentration 1: Spanish Language, Literature and Culture

Required Courses:

- SPAN 2002 Intermediate Spanish 2
- or SPAN 2003 Intensive Intermediate Spanish
- SPAN 3001 Advanced Communication in Spanish
- SPAN 3300 Peoples and Cultures of Spain
- or SPAN 3310 Peoples and Cultures of Spanish America
- SPAN 3500 Introduction to Literary Analysis in Spanish
- SPAN 3515 Masterpieces of Spanish Literature
- or SPAN 3520 Masterpieces of Spanish American Literature

Introduction to Linguistics: Choose one course from the following.

- SPAN 4110 Structure of Spanish from a Linguistic Perspective
- SPAN 4120 Spanish Phonetics
- SPAN 4130 Spanish Applied Linguistics
Electives: Choose five Spanish courses not previously taken.  
Total Credit Hours 33-34

Concentration 2: Spanish Language, Literature and Culture for Heritage Speakers

Notes:

- The following SPAN courses do not count toward the major in Concentration 2: Spanish Language, Literature and Culture for Heritage Speakers:
  - SPAN 2002 Intermediate Spanish 2  
  - SPAN 2003 Intensive Intermediate Spanish  
  - SPAN 3001 Advanced Communication in Spanish  
  - SPAN 3002 Spoken Spanish  
  - SPAN 3500 Introduction to Literary Analysis in Spanish  

- Education majors completing Concentration 2 must complete SPAN 4110 Structure of Spanish from a Linguistic Perspective, SPAN 4120 Spanish Phonetics, and SPAN 4130 Spanish Applied Linguistics or SPAN 4140 Acquisition of Spanish as electives, if not taken previously to fulfill a requirement, as well as the Additional Requirements for Concentration 4: Education Majors.

Required Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>SPAN 3005</td>
<td>Advanced Communication in Spanish for Heritage Speakers</td>
<td>3</td>
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<tr>
<td>SPAN 3300</td>
<td>Peoples and Cultures of Spain</td>
<td>3</td>
</tr>
<tr>
<td>or SPAN 3310</td>
<td>Peoples and Cultures of Spanish America</td>
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<tr>
<td>SPAN 3505</td>
<td>Introduction to Literary Analysis in Spanish for Heritage and Native Speakers</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 3515</td>
<td>Masterpieces of Spanish Literature</td>
<td>3</td>
</tr>
<tr>
<td>or SPAN 3520</td>
<td>Masterpieces of Spanish American Literature</td>
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<tr>
<td>SPAN 4400</td>
<td>U.S. Latino/a Literature</td>
<td>3</td>
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<tr>
<td>or SPAN 4150</td>
<td>Spanish in the United States</td>
<td></td>
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</table>

Introduction to Linguistics: Choose one course from the following.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 4110</td>
<td>Structure of Spanish from a Linguistic Perspective</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 4120</td>
<td>Spanish Phonetics</td>
<td></td>
</tr>
<tr>
<td>SPAN 4130</td>
<td>Spanish Applied Linguistics</td>
<td></td>
</tr>
</tbody>
</table>

Electives: Choose four Spanish courses not previously taken.  
Total Credit Hours 12

Concentration 3: Spanish Language, Literature and Culture for Native Speakers

Note:

- The following SPAN courses do not count toward the major in Concentration 3: Spanish Language, Literature and Culture for Native Speakers:
  - SPAN 2002 Intermediate Spanish 2  
  - SPAN 2003 Intensive Intermediate Spanish  
  - SPAN 3001 Advanced Communication in Spanish  
  - SPAN 3002 Spoken Spanish  
  - SPAN 3100 Advanced Spanish Composition and Conversation  
  - SPAN 3500 Introduction to Literary Analysis in Spanish  
  - SPAN 3515 Masterpieces of Spanish Literature  
  - SPAN 3520 Masterpieces of Spanish American Literature  
  - SPAN 3700 Introduction to Business Spanish  
  - SPAN 3710 Introduction to Spanish for the Health Professions

Required Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>SPAN 3300</td>
<td>Peoples and Cultures of Spain</td>
<td>3</td>
</tr>
<tr>
<td>or SPAN 3310</td>
<td>Peoples and Cultures of Spanish America</td>
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<tr>
<td>SPAN 3505</td>
<td>Introduction to Literary Analysis in Spanish for Heritage and Native Speakers</td>
<td>3</td>
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</table>

Introduction to Linguistics: Choose one course from the following.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 4110</td>
<td>Structure of Spanish from a Linguistic Perspective</td>
<td>3</td>
</tr>
</tbody>
</table>
SPAN 4130   Spanish Applied Linguistics

Literature Courses: Choose two courses in Spanish literature. 6

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>SPAN 4500</td>
<td>Race, Culture and Religion in Early Spanish Literature</td>
</tr>
<tr>
<td>SPAN 4505</td>
<td>The Spanish Renaissance</td>
</tr>
<tr>
<td>SPAN 4510</td>
<td>Cervantes' Don Quijote</td>
</tr>
<tr>
<td>SPAN 4525</td>
<td>Spanish Literature: Eighteenth and Nineteenth Centuries</td>
</tr>
<tr>
<td>SPAN 4550</td>
<td>Twentieth and Twenty-First Century Spanish Literature</td>
</tr>
<tr>
<td>SPAN 4560</td>
<td>Hispanic Theater and Performance</td>
</tr>
</tbody>
</table>

Literature Courses: Choose two courses in Spanish-American literature. 6

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>SPAN 4600</td>
<td>Spanish-American Literature: Pre-Columbian to Baroque</td>
</tr>
<tr>
<td>SPAN 4610</td>
<td>Spanish-American Literature: Eighteenth and Nineteenth Centuries</td>
</tr>
<tr>
<td>SPAN 4615</td>
<td>Spanish-American Literature: Modernismo and Vanguardismo</td>
</tr>
<tr>
<td>SPAN 4620</td>
<td>Spanish-American Literature: The Boom to the Twenty-First Century</td>
</tr>
<tr>
<td>SPAN 4640</td>
<td>Novels and Novelists in Spanish-America</td>
</tr>
<tr>
<td>SPAN 4670</td>
<td>Spanish-American Short Story</td>
</tr>
</tbody>
</table>

Electives: Choose three Spanish courses at the 4000 level not previously taken. 9

Total Credit Hours 30

**Concentration 4: Spanish Language, Literature and Culture for Education Majors**

Required Courses: 15-16

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 2002 or SPAN 2003</td>
<td>Intermediate Spanish 2 or Intensive Intermediate Spanish</td>
</tr>
<tr>
<td>SPAN 3001</td>
<td>Advanced Communication in Spanish</td>
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<tr>
<td>SPAN 3300 or SPAN 3310</td>
<td>Peoples and Cultures of Spain or Peoples and Cultures of Spanish America</td>
</tr>
<tr>
<td>SPAN 3500</td>
<td>Introduction to Literary Analysis in Spanish</td>
</tr>
<tr>
<td>SPAN 3515 or SPAN 3520</td>
<td>Masterpieces of Spanish Literature or Masterpieces of Spanish American Literature</td>
</tr>
</tbody>
</table>

Introduction to Linguistics:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 4110</td>
<td>Structure of Spanish from a Linguistic Perspective</td>
</tr>
<tr>
<td>SPAN 4120</td>
<td>Spanish Phonetics</td>
</tr>
<tr>
<td>SPAN 4130 or SPAN 4140</td>
<td>Spanish Applied Linguistics or Acquisition of Spanish</td>
</tr>
</tbody>
</table>

Electives: Choose three Spanish courses not previously taken. 9

Total Credit Hours 33-34

**Additional Requirements for Concentration 4: Spanish Language, Literature and Culture for Education Majors:**

1. Maintenance of a minimum 2.750 grade point average in the foreign language major with a minimum of a 3.000 grade point average in the following courses: SPAN 3001 Advanced Communication in Spanish or SPAN 3005 Advanced Communication in Spanish for Heritage Speakers, SPAN 3100 Advanced Spanish Composition and Conversation, SPAN 4110 Structure of Spanish from a Linguistic Perspective, SPAN 4120 Spanish Phonetics, SPAN 4130 Spanish Applied Linguistics, and SPAN 4140 Acquisition of Spanish as applicable.

2. Passing an official Oral Proficiency Interview (OPI) in Spanish at the level of Intermediate-High on the ACTFL Oral Proficiency Scale as well as an official writing proficiency test (WPT) in Spanish at the Intermediate High level prior to registering for FOLA 4000 Teaching World Languages and Cultures.

3. Completion of FOLA 4000 Teaching World Languages and Cultures.

4. Residence in a country in which Spanish is spoken or participation in a structured study abroad program and/or intensive immersion experience. The Department of Foreign Languages and Literatures must approve the program selected.

**Major in Spanish for the Professions**

The major in Spanish for the Professions consists of ten to eleven courses (30-34 credit hours) in one of the four concentrations as listed below.

**Notes:**
The following elementary and intermediate level Spanish courses do not count toward fulfilling credit hours in the major in Spanish for the Professions:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 1001</td>
<td>Elementary Spanish 1</td>
</tr>
<tr>
<td>SPAN 1003</td>
<td>Intensive Elementary Spanish</td>
</tr>
<tr>
<td>SPAN 2001</td>
<td>Intermediate Spanish 1</td>
</tr>
</tbody>
</table>

**Electives:** These are upper-division courses at the 3000 and 4000 levels which were not previously taken to fulfill a requirement. Where there are options listed, if a student wanted to take both instead of choosing only one, such as SPAN 3300 or SPAN 3310, one course could be used to fulfill the requirement and the other course to fulfill an elective.

### Concentration 1: Spanish for the Business Professions

**Required Courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 2002</td>
<td>Intermediate Spanish 2</td>
</tr>
<tr>
<td>or SPAN 2003</td>
<td>Intensive Intermediate Spanish</td>
</tr>
<tr>
<td>SPAN 3001</td>
<td>Advanced Communication in Spanish</td>
</tr>
<tr>
<td>SPAN 3100</td>
<td>Advanced Spanish Composition and Conversation</td>
</tr>
<tr>
<td>SPAN 3300</td>
<td>Peoples and Cultures of Spain</td>
</tr>
<tr>
<td>or SPAN 3310</td>
<td>Peoples and Cultures of Spanish America</td>
</tr>
<tr>
<td>SPAN 3500</td>
<td>Introduction to Literary Analysis in Spanish</td>
</tr>
<tr>
<td>SPAN 4320</td>
<td>Contemporary Issues in the Hispanic World</td>
</tr>
</tbody>
</table>

**Professions Focus:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 3700</td>
<td>Introduction to Business Spanish</td>
</tr>
<tr>
<td>SPAN 4705</td>
<td>Advanced Spanish for Business</td>
</tr>
</tbody>
</table>

**Electives - Choose three Spanish courses not previously taken.**

3

Total Credit Hours 33-34

### Concentration 2: Spanish for the Health Professions

**Required Courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 2002</td>
<td>Intermediate Spanish 2</td>
</tr>
<tr>
<td>or SPAN 2003</td>
<td>Intensive Intermediate Spanish</td>
</tr>
<tr>
<td>SPAN 3001</td>
<td>Advanced Communication in Spanish</td>
</tr>
<tr>
<td>SPAN 3100</td>
<td>Advanced Spanish Composition and Conversation</td>
</tr>
<tr>
<td>SPAN 3300</td>
<td>Peoples and Cultures of Spain</td>
</tr>
<tr>
<td>or SPAN 3310</td>
<td>Peoples and Cultures of Spanish America</td>
</tr>
<tr>
<td>SPAN 3500</td>
<td>Introduction to Literary Analysis in Spanish</td>
</tr>
<tr>
<td>SPAN 4320</td>
<td>Contemporary Issues in the Hispanic World</td>
</tr>
</tbody>
</table>

**Professions Focus:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 3710</td>
<td>Introduction to Spanish for the Health Professions</td>
</tr>
<tr>
<td>SPAN 4715</td>
<td>Advanced Spanish for the Health Professions</td>
</tr>
</tbody>
</table>

**Electives - Choose three Spanish courses not previously taken.**

3

Total Credit Hours 33-34

### Concentration 3: Spanish for the Professions for Heritage Speakers

**Note:**

The following SPAN courses do not count as elective courses for the **Concentration 3: Spanish for the Professions for Heritage Speakers**:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 2002</td>
<td>Intermediate Spanish 2</td>
</tr>
<tr>
<td>or SPAN 2003</td>
<td>Intensive Intermediate Spanish</td>
</tr>
<tr>
<td>SPAN 3001</td>
<td>Advanced Communication in Spanish</td>
</tr>
<tr>
<td>SPAN 3002</td>
<td>Spoken Spanish</td>
</tr>
<tr>
<td>SPAN 3500</td>
<td>Introduction to Literary Analysis in Spanish</td>
</tr>
</tbody>
</table>

**Required Courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 3005</td>
<td>Advanced Communication in Spanish for Heritage Speakers</td>
</tr>
</tbody>
</table>

3
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 3100</td>
<td>Advanced Spanish Composition and Conversation</td>
<td>3</td>
</tr>
<tr>
<td>or SPAN 4110</td>
<td>Structure of Spanish from a Linguistic Perspective</td>
<td></td>
</tr>
<tr>
<td>SPAN 3300</td>
<td>Peoples and Cultures of Spain</td>
<td>3</td>
</tr>
<tr>
<td>or SPAN 3310</td>
<td>Peoples and Cultures of Spanish America</td>
<td></td>
</tr>
<tr>
<td>SPAN 3505</td>
<td>Introduction to Literary Analysis in Spanish for Heritage and Native Speakers</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 4320</td>
<td>Contemporary Issues in the Hispanic World</td>
<td>3</td>
</tr>
</tbody>
</table>

**Professions Focus:** Choose either Business or Health Professions sequence.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 3700 &amp; SPAN 4705</td>
<td>Introduction to Business Spanish and Advanced Spanish for Business</td>
<td>6</td>
</tr>
<tr>
<td>SPAN 3710 &amp; SPAN 4715</td>
<td>Introduction to Spanish for the Health Professions and Advanced Spanish for the Health Professions</td>
<td></td>
</tr>
</tbody>
</table>

**Electives:** Choose three Spanish courses not previously taken.

**Total Credit Hours:** 30

### Concentration 4: Spanish for the Professions for Native Speakers of Spanish

**Note:**

- The following SPAN courses do not count as elective courses for the Concentration 4: Spanish for the Professions for Native Speakers of Spanish:
  
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 2002</td>
<td>Intermediate Spanish 2</td>
<td></td>
</tr>
<tr>
<td>or SPAN 2003</td>
<td>Intensive Intermediate Spanish</td>
<td></td>
</tr>
<tr>
<td>SPAN 3001</td>
<td>Advanced Communication in Spanish</td>
<td></td>
</tr>
<tr>
<td>SPAN 3002</td>
<td>Spoken Spanish</td>
<td></td>
</tr>
<tr>
<td>SPAN 3100</td>
<td>Advanced Spanish Composition and Conversation</td>
<td></td>
</tr>
<tr>
<td>SPAN 3500</td>
<td>Introduction to Literary Analysis in Spanish</td>
<td></td>
</tr>
<tr>
<td>SPAN 3515</td>
<td>Masterpieces of Spanish Literature</td>
<td></td>
</tr>
<tr>
<td>SPAN 3520</td>
<td>Masterpieces of Spanish American Literature</td>
<td></td>
</tr>
<tr>
<td>SPAN 3700</td>
<td>Introduction to Business Spanish</td>
<td></td>
</tr>
<tr>
<td>SPAN 3710</td>
<td>Introduction to Spanish for the Health Professions</td>
<td></td>
</tr>
</tbody>
</table>

**Required Courses:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 3300</td>
<td>Peoples and Cultures of Spain</td>
<td>3</td>
</tr>
<tr>
<td>or SPAN 3310</td>
<td>Peoples and Cultures of Spanish America</td>
<td></td>
</tr>
<tr>
<td>SPAN 3505</td>
<td>Introduction to Literary Analysis in Spanish for Heritage and Native Speakers</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 4320</td>
<td>Contemporary Issues in the Hispanic World</td>
<td>3</td>
</tr>
</tbody>
</table>

Introduction to Linguistics: Choose one course from the following.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 4110</td>
<td>Structure of Spanish from a Linguistic Perspective</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 4130</td>
<td>Spanish Applied Linguistics</td>
<td></td>
</tr>
</tbody>
</table>

Professions Focus: Choose either Business or Health.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 4705</td>
<td>Advanced Spanish for Business</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 4715</td>
<td>Advanced Spanish for the Health Professions</td>
<td></td>
</tr>
</tbody>
</table>

**Electives:** Choose five Spanish courses not previously taken.

**Total Credit Hours:** 30

### Minor in Spanish Language, Literature and Culture

The minor in Spanish Language, Literature and Culture consists of six-seven courses (18-22 credit hours) in one of the three concentrations listed below.

**Notes:**

- The following elementary and intermediate level courses do not count toward the minor in any of the concentrations listed below:
  
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 1001</td>
<td>Elementary Spanish 1</td>
<td></td>
</tr>
<tr>
<td>SPAN 1003</td>
<td>Intensive Elementary Spanish</td>
<td></td>
</tr>
<tr>
<td>SPAN 2001</td>
<td>Intermediate Spanish 1</td>
<td></td>
</tr>
</tbody>
</table>
Electives: These are upper-division courses at the 3000 and 4000 levels which were not previously taken to fulfill a requirement. Where there are options listed, if a student wanted to take both instead of choosing only one, such as SPAN 3300 or SPAN 3310, or SPAN 3515 and SPAN 3520, one course could be used to fulfill the requirement and the other course to fulfill an elective.

### Concentration 1: Spanish Language, Literature and Culture

<table>
<thead>
<tr>
<th>Required Courses:</th>
<th>15-16</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 2002 Intermediate Spanish 2</td>
<td></td>
</tr>
<tr>
<td>or SPAN 2003 Intensive Intermediate Spanish</td>
<td></td>
</tr>
<tr>
<td>SPAN 3001 Advanced Communication in Spanish</td>
<td></td>
</tr>
<tr>
<td>SPAN 3300 Peoples and Cultures of Spain</td>
<td></td>
</tr>
<tr>
<td>or SPAN 3310 Peoples and Cultures of Spanish America</td>
<td></td>
</tr>
<tr>
<td>SPAN 3500 Introduction to Literary Analysis in Spanish</td>
<td></td>
</tr>
<tr>
<td>SPAN 3515 Masterpieces of Spanish Literature</td>
<td></td>
</tr>
<tr>
<td>or SPAN 3520 Masterpieces of Spanish American Literature</td>
<td></td>
</tr>
</tbody>
</table>

Electives: Choose two Spanish courses not previously taken. 6

Total Credit Hours 21-22

### Concentration 2: Spanish Language, Literature and Culture for Heritage Speakers

**Note:**

- The following courses do not count as electives for the minor in Concentration 2: Spanish Language, Literature and Culture for Heritage Speakers:
  - SPAN 2002 Intermediate Spanish 2
  - or SPAN 2003 Intensive Intermediate Spanish
  - SPAN 3001 Advanced Communication in Spanish
  - SPAN 3002 Spoken Spanish
  - SPAN 3500 Introduction to Literary Analysis in Spanish

<table>
<thead>
<tr>
<th>Required Courses:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 3005 Advanced Communication in Spanish for Heritage Speakers</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 3300 Peoples and Cultures of Spain</td>
<td>3</td>
</tr>
<tr>
<td>or SPAN 3310 Peoples and Cultures of Spanish America</td>
<td></td>
</tr>
<tr>
<td>SPAN 3505 Introduction to Literary Analysis in Spanish for Heritage and Native Speakers</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 3515 Masterpieces of Spanish Literature</td>
<td>3</td>
</tr>
<tr>
<td>or SPAN 3520 Masterpieces of Spanish American Literature</td>
<td></td>
</tr>
<tr>
<td>SPAN 4400 U.S. Latino/a Literature</td>
<td>3</td>
</tr>
<tr>
<td>or SPAN 4150 Spanish in the United States</td>
<td>3</td>
</tr>
</tbody>
</table>

Elective - Choose one Spanish course not previously taken. 3

Total Credit Hours 18

### Concentration 3: Spanish Language, Literature and Culture for Native Speakers

**Note:**

- The following courses do not count as electives for the minor in Concentration 3: Spanish Language, Literature and Culture for Native Speakers:
  - SPAN 2002 Intermediate Spanish 2
  - or SPAN 2003 Intensive Intermediate Spanish
  - SPAN 3001 Advanced Communication in Spanish
  - SPAN 3002 Spoken Spanish
  - SPAN 3100 Advanced Spanish Composition and Conversation
  - SPAN 3500 Introduction to Literary Analysis in Spanish
  - SPAN 3515 Masterpieces of Spanish Literature
  - SPAN 3520 Masterpieces of Spanish American Literature
  - SPAN 3700 Introduction to Business Spanish
  - SPAN 3710 Introduction to Spanish for the Health Professions

<table>
<thead>
<tr>
<th>Required Courses:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
</tr>
<tr>
<td>-------------</td>
<td>------------------------------------------------------------------</td>
</tr>
<tr>
<td>SPAN 3300</td>
<td>Peoples and Cultures of Spain</td>
</tr>
<tr>
<td>or SPAN 3310</td>
<td>Peoples and Cultures of Spanish America</td>
</tr>
<tr>
<td>SPAN 3505</td>
<td>Introduction to Literary Analysis in Spanish for Heritage and Native Speakers</td>
</tr>
<tr>
<td></td>
<td><strong>Introduction to Linguistics:</strong> Choose one course from the following.</td>
</tr>
<tr>
<td>SPAN 4110</td>
<td>Structure of Spanish from a Linguistic Perspective</td>
</tr>
<tr>
<td>SPAN 4130</td>
<td>Spanish Applied Linguistics</td>
</tr>
<tr>
<td>Literature - Choose one course in Spanish literature:</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 4500</td>
<td>Race, Culture and Religion in Early Spanish Literature</td>
</tr>
<tr>
<td>SPAN 4505</td>
<td>The Spanish Renaissance</td>
</tr>
<tr>
<td>SPAN 4510</td>
<td>Cervantes' Don Quijote</td>
</tr>
<tr>
<td>SPAN 4525</td>
<td>Spanish Literature: Eighteenth and Nineteenth Centuries</td>
</tr>
<tr>
<td>SPAN 4550</td>
<td>Twentieth and Twenty-First Century Spanish Literature</td>
</tr>
<tr>
<td>SPAN 4560</td>
<td>Hispanic Theater and Performance</td>
</tr>
<tr>
<td>Literature - Choose one course in Spanish-American literature:</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 4600</td>
<td>Spanish-American Literature: Pre-Columbian to Baroque</td>
</tr>
<tr>
<td>SPAN 4610</td>
<td>Spanish-American Literature: Eighteenth and Nineteenth Centuries</td>
</tr>
<tr>
<td>SPAN 4615</td>
<td>Spanish-American Literature: Modernismo and Vanguardismo</td>
</tr>
<tr>
<td>SPAN 4620</td>
<td>Spanish-American Literature: The Boom to the Twenty-First Century</td>
</tr>
<tr>
<td>SPAN 4640</td>
<td>Novels and Novelists in Spanish-Amercia</td>
</tr>
<tr>
<td>SPAN 4670</td>
<td>Spanish-American Short Story</td>
</tr>
<tr>
<td>Elective: Choose one Spanish course at the 4000 level.</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credit Hours: 18**

### Minor in Spanish for the Professions

The minor in Spanish for the Professions consists of six to seven courses (18-22 credit hours) in one of the four concentrations as listed below.

**Notes:**

- The following elementary and intermediate level courses do not count toward the minor in Spanish for the Professions:
  - SPAN 1001 Elementary Spanish 1
  - SPAN 1003 Intensive Elementary Spanish
  - SPAN 2001 Intermediate Spanish 1

- **Electives:** These are upper-division courses at the 3000 and 4000 levels which were not previously taken to fulfill a requirement. Where there are options listed, if a student wanted to take both instead of choosing only one, such as SPAN 3300 or SPAN 3310, one course could be used to fulfill the requirement and the other course to fulfill an elective.

#### Concentration 1: Spanish for the Business Professions

**Required Courses:** 12-13

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 2002</td>
<td>Intermediate Spanish 2</td>
<td></td>
</tr>
<tr>
<td>or SPAN 2003</td>
<td>Intensive Intermediate Spanish</td>
<td></td>
</tr>
<tr>
<td>SPAN 3001</td>
<td>Advanced Communication in Spanish</td>
<td></td>
</tr>
<tr>
<td>SPAN 3300</td>
<td>Peoples and Cultures of Spain</td>
<td></td>
</tr>
<tr>
<td>or SPAN 3310</td>
<td>Peoples and Cultures of Spanish America</td>
<td></td>
</tr>
<tr>
<td>SPAN 3500</td>
<td>Introduction to Literary Analysis in Spanish</td>
<td></td>
</tr>
<tr>
<td>Professions Focus:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPAN 3700</td>
<td>Introduction to Business Spanish</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 4705</td>
<td>Advanced Spanish for Business</td>
<td>3</td>
</tr>
<tr>
<td>Elective: Choose one Spanish course not previously taken.</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Total Credit Hours: 21-22**

#### Concentration 2: Spanish for the Health Professions

**Required Courses:** 12-13

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 2002</td>
<td>Intermediate Spanish 2</td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**

- The following elementary and intermediate level courses do not count toward the minor in Spanish for the Professions:
  - SPAN 1001 Elementary Spanish 1
  - SPAN 1003 Intensive Elementary Spanish
  - SPAN 2001 Intermediate Spanish 1

- **Electives:** These are upper-division courses at the 3000 and 4000 levels which were not previously taken to fulfill a requirement. Where there are options listed, if a student wanted to take both instead of choosing only one, such as SPAN 3300 or SPAN 3310, one course could be used to fulfill the requirement and the other course to fulfill an elective.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 2002</td>
<td>Intermediate Spanish 2</td>
</tr>
<tr>
<td>or SPAN 2003</td>
<td>Intensive Intermediate Spanish</td>
</tr>
<tr>
<td>SPAN 3001</td>
<td>Advanced Communication in Spanish</td>
</tr>
<tr>
<td>SPAN 3002</td>
<td>Spoken Spanish</td>
</tr>
<tr>
<td>SPAN 3500</td>
<td>Introduction to Literary Analysis in Spanish</td>
</tr>
<tr>
<td>SPAN 3505</td>
<td>Advanced Communication in Spanish for Heritage Speakers</td>
</tr>
<tr>
<td>or SPAN 3310</td>
<td>Peoples and Cultures of Spanish America</td>
</tr>
<tr>
<td>SPAN 3300</td>
<td>Peoples and Cultures of Spain</td>
</tr>
<tr>
<td>SPAN 3310</td>
<td>Peoples and Cultures of Spanish America</td>
</tr>
<tr>
<td>SPAN 3305</td>
<td>Introduction to Literary Analysis in Spanish for Heritage and Native Speakers</td>
</tr>
</tbody>
</table>

**Professions Focus:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 4320</td>
<td>Contemporary Issues in the Hispanic World</td>
</tr>
</tbody>
</table>

**Total Credit Hours:** 21-22

### Concentration 3: Spanish for the Professions for Heritage Speakers

**Note:**

- The following courses do not count toward Concentration 3: Heritage Speakers of Spanish:
  
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 2002</td>
<td>Intermediate Spanish 2</td>
</tr>
<tr>
<td>or SPAN 2003</td>
<td>Intensive Intermediate Spanish</td>
</tr>
<tr>
<td>SPAN 3001</td>
<td>Advanced Communication in Spanish</td>
</tr>
<tr>
<td>SPAN 3002</td>
<td>Spoken Spanish</td>
</tr>
<tr>
<td>SPAN 3500</td>
<td>Introduction to Literary Analysis in Spanish</td>
</tr>
</tbody>
</table>

**Required Courses:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>SPAN 3005</td>
<td>Advanced Communication in Spanish for Heritage Speakers</td>
</tr>
<tr>
<td>or SPAN 3310</td>
<td>Peoples and Cultures of Spanish America</td>
</tr>
<tr>
<td>SPAN 3505</td>
<td>Introduction to Literary Analysis in Spanish for Heritage and Native Speakers</td>
</tr>
</tbody>
</table>

**Professions Focus:** Choose the Business or Health Professions sequence:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>SPAN 3700 &amp; SPAN 4705</td>
<td>Introduction to Business Spanish and Advanced Spanish for Business</td>
</tr>
<tr>
<td>SPAN 3710 &amp; SPAN 4715</td>
<td>Introduction to Spanish for the Health Professions and Advanced Spanish for the Health Professions</td>
</tr>
</tbody>
</table>

**Total Credit Hours:** 18

### Concentration 4: Spanish for the Professions for Native Speakers of Spanish

**Note:**

- The following courses do not count toward the electives in Concentration 4: Native Speakers of Spanish:
  
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>SPAN 2002</td>
<td>Intermediate Spanish 2</td>
</tr>
<tr>
<td>or SPAN 2003</td>
<td>Intensive Intermediate Spanish</td>
</tr>
<tr>
<td>SPAN 3001</td>
<td>Advanced Communication in Spanish</td>
</tr>
<tr>
<td>SPAN 3002</td>
<td>Spoken Spanish</td>
</tr>
<tr>
<td>SPAN 3100</td>
<td>Advanced Spanish Composition and Conversation</td>
</tr>
<tr>
<td>SPAN 3500</td>
<td>Introduction to Literary Analysis in Spanish</td>
</tr>
<tr>
<td>SPAN 3515</td>
<td>Masterpieces of Spanish Literature</td>
</tr>
<tr>
<td>SPAN 3520</td>
<td>Masterpieces of Spanish American Literature</td>
</tr>
<tr>
<td>SPAN 3700</td>
<td>Introduction to Business Spanish</td>
</tr>
<tr>
<td>SPAN 3710</td>
<td>Introduction to Spanish for the Health Professions</td>
</tr>
</tbody>
</table>

**Required Courses:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>SPAN 3300</td>
<td>Peoples and Cultures of Spain</td>
</tr>
<tr>
<td>or SPAN 3310</td>
<td>Peoples and Cultures of Spanish America</td>
</tr>
<tr>
<td>SPAN 3505</td>
<td>Introduction to Literary Analysis in Spanish for Heritage and Native Speakers</td>
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</tbody>
</table>

**Introduction to Linguistics:** Choose one course from the following.

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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Spanish

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>SPAN 4110</td>
<td>Structure of Spanish from a Linguistic Perspective</td>
</tr>
<tr>
<td>SPAN 4130</td>
<td>Spanish Applied Linguistics</td>
</tr>
</tbody>
</table>

Professions Focus: Choose Business or Health.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 4705</td>
<td>Advanced Spanish for Business</td>
</tr>
<tr>
<td>SPAN 4715</td>
<td>Advanced Spanish for the Health Professions</td>
</tr>
</tbody>
</table>

Electives: Choose two Spanish courses not previously taken.

Total Credit Hours: 18

Courses

SPAN 1001. Elementary Spanish. 3 cr. hrs.
Fundamentals of listening, speaking, reading, and writing in Spanish. Cultural awareness is developed through exposure to a wide range of authentic texts and materials. No previous Spanish experience is accepted. Does not count toward language proficiency requirement. Prereq: No previous study of Spanish.

SPAN 1003. Intensive Elementary Spanish. 4 cr. hrs.
First-year Spanish course, and the first course in the core language sequence. Development of listening, speaking, reading, and writing in Spanish. Cultural awareness is developed through exposure to a wide range of authentic texts and materials. Emphasis on communicative practice and interaction in Spanish. No previous Spanish experience is required. Prereq: No previous Spanish, or by departmental placement. Not open to native or heritage speakers of Spanish.


SPAN 2002. Intermediate Spanish 2. 3 cr. hrs.


SPAN 3001. Advanced Communication in Spanish. 3 cr. hrs.
Development of advanced oral and writing proficiency in Spanish through a variety of texts and in different real-life and simulated contexts. Review and refinement of language structures and linguistic functions for more effective writing and oral proficiency. Focuses on activities and strategies to improve accuracy and fluency. Prereq: SPAN 2002 or 2003; or departmental placement. Not open to students with native or near native fluency.

SPAN 3002. Spoken Spanish. 3 cr. hrs.
Development of oral proficiency in Spanish within a wide range of contexts. Focus on activities and strategies to improve accuracy and fluency. May be taken concurrently with SPAN 3001. Prereq: SPAN 3001; or cons. of dept. ch. Not open to students with native or near native fluency.

SPAN 3005. Advanced Communication in Spanish for Heritage Speakers. 3 cr. hrs.
Focuses on activities and strategies aimed at improving research, writing, presentational skills, grammar accuracy, spelling and vocabulary. Development of linguistic, sociolinguistic, strategic and discourse competence in different real-life and simulated contexts. Special emphasis placed on reading and lexical development, grammar review, orthographic practice and composition. Prereq: Departmental placement or cons. of dept. ch.

SPAN 3100. Advanced Spanish Composition and Conversation. 3 cr. hrs.
Practice and review of advanced grammatical structures of the Spanish language for further development of oral and written communication skills. Prereq: SPAN 3001 or SPAN 3005; or cons. of dept. ch. Not open to students with native fluency.

SPAN 3210. Hispanic Cultures and Literatures in English. 3 cr. hrs.
Readings in English covering the major cultural, social and literary developments in Hispanic literature with emphasis on outstanding literary works and figures. Taught in English, knowledge of Spanish not required. May be counted as part of the Arts and Sciences literature requirement but not as part of the foreign language requirement.

SPAN 3300. Peoples and Cultures of Spain. 3 cr. hrs.
Historical development of the cultures of Spain from early times to the present. The course will explore various topics pertaining to Spanish society, literatures, politics, art, music and film. Prereq: SPAN 3001 or SPAN 3005; or cons. of dept. ch.
SPAN 3310. Peoples and Cultures of Spanish America. 3 cr. hrs.
A multidisciplinary and historical study of the development of the cultures and civilizations of Spanish-speaking America from pre-Columbian days to the present. Emphasis on the gradual evolution of the different artistic forms present in such areas as architecture, music, painting, literature, history, politics, education, art, and film. Prereq: SPAN 3001 or SPAN 3005; or cons. of dept. ch.

SPAN 3500. Introduction to Literary Analysis in Spanish. 3 cr. hrs.
Basic literary concepts and analysis of the four genres, with intensive practice in reading and oral comprehension. Prereq: SPAN 3001; or cons. of dept. ch. Not open to students with native or near native fluency.

SPAN 3505. Introduction to Literary Analysis in Spanish for Heritage and Native Speakers. 3 cr. hrs.
Acquaints heritage speakers of Spanish with basic literary concepts and analysis of the four genres, the principal literary movements, and representative authors in the Hispanic world. Prereq. SPAN 3505; or cons. of dept. ch.

SPAN 3515. Masterpieces of Spanish Literature. 3 cr. hrs.
Major literary trends and figures of Spanish literature through the centuries. Readings may range from selections of the earliest forms of poetry to contemporary works. Prereq: SPAN 3500 or SPAN 3505; or cons. of dept. ch. Not open to students with native or near native fluency.

SPAN 3520. Masterpieces of Spanish American Literature. 3 cr. hrs.
Major literary trends and figures of Spanish American literature through the centuries. Readings may range from selections of the earliest forms of indigenous poetry to contemporary works. Prereq: SPAN 3500 or SPAN 3505; or cons. of dept. ch. Not open to students with native or near native fluency.

SPAN 3700. Introduction to Business Spanish. 3 cr. hrs.
A practical overview of Spanish commercial terminology, vocabulary and correspondence used in modern and contextualized business settings in the Hispanic world. Prereq: SPAN 3001 or SPAN 3005; or cons. of dept. ch. Not open to students with native or near native fluency.

SPAN 3710. Introduction to Spanish for the Health Professions. 3 cr. hrs.
This course is designed to introduce the student to Spanish used in the health professions. Medical terminology, language skills, and cultural awareness and sensitivity are among the areas that will be developed in the course. Prereq: SPAN 3001 or SPAN 3005; or cons. of dept. ch. Not open to students with native or near native fluency.

SPAN 3720. Introduction to Spanish/English Translation. 3 cr. hrs.
Introduction to the field of Translation Studies and to a variety of professional translation areas, including commercial, legal, medical, and scientific texts, from English to Spanish and vice versa. Through the development of the basic techniques of translation and practice, students improve their mastery and control over written expression in both Spanish and English while developing sensitivity to cultural contexts and regionalisms in both languages. Prereq: SPAN 3001 or SPAN 3005; or cons. of dept. chair.

SPAN 4110. Structure of Spanish from a Linguistic Perspective. 3 cr. hrs.
Study of Spanish grammar from a linguistic framework with emphasis on the reasons why Spanish speakers make the structural choices they make. Focuses on the continued mastery of the most difficult points of Spanish grammar, also addressing grammatical variation. Provides an introduction to morphosyntax of Spanish and background for advanced courses in linguistics. Prereq: SPAN 3001 or SPAN 3005; or cons. of dept. ch.

SPAN 4120. Spanish Phonetics. 3 cr. hrs.
Study of Spanish phonetics and phonological systems. The fundamental principles of phonetic analysis are introduced in a simple and concise manner in order to show how Spanish sounds are produced, how they fall into patterns and how they change in different environments. Emphasis on articulation, conditioned, dialectal variation, introductory training in phonetic transcription and the contrast between Spanish and English sound patterns. Prereq: SPAN 3001 or SPAN 3005; or cons. of dept. ch.

SPAN 4130. Spanish Applied Linguistics. 3 cr. hrs.
Introduction to the field of applied linguistics in Spanish. Examines the application of language research to different fields, including language learning theories and processes in relationship to Spanish language learners, teaching, language testing, pragmatics and linguistic variation. Special attention given to identification and discussion of difficult to acquire structures for second language learners of Spanish. Prereq: SPAN 3001 or SPAN 3005; or cons. of dept. ch.

SPAN 4140. Acquisition of Spanish. 3 cr. hrs.
Introduction to the field of second language acquisition. Students participate in a critical examination of second language acquisition theories and research; discussion of the role of individual differences in language learning; consideration of the effect of study abroad on the development of second language acquisition, and discussion of the role of instruction in Spanish second language learning. Prereq: SPAN 3001 or SPAN 3005; or cons. of dept. ch.

SPAN 4150. Spanish in the United States. 3 cr. hrs.
Descriptive and critical overview of the linguistic practices of different Spanish-speaking communities in the United States. Focus on the characteristics of Spanish in contact with English, as well as the role that social factors like age, education, gender, race, nationality, and socioeconomic status have on the use of the language. Also examines social issues such as language attitudes, bilingualism and the role of education. Prereq: SPAN 3001 or SPAN 3005; or cons. of dept. ch.

SPAN 4310. Hispanic Film and Society. 3 cr. hrs.
Focuses on Spain and/or Latin America. Introduces the fundamentals of film history, film analysis and cultural analysis. Examines key elements of twentieth- and twenty first-century cultures of the Spanish-speaking world: national and regional identity formation, transnationalism, territory, technology and modernization, gender, class and race. Prereq: SPAN 3500 or SPAN 3505; or cons. of dept. ch.
SPAN 4320. Contemporary Issues in the Hispanic World. 3 cr. hrs.
Focuses on the study and discussion of current topics, preoccupations, trends and issues pertaining to various Hispanic societies of today in areas such as religion, educational reforms, ethnicity, race, identity, social stratification, and economic development. Prereq: SPAN 3500 and SPAN 3300 OR SPAN 3310; or cons. of dept. ch.

SPAN 4350. Nobel Prize Winners of the Hispanic World. 3 cr. hrs.
Study of the literary achievements and representative works of such Hispanic Nobel Prize recipients as Aleixandre, Asturias, Benavente, Cela, Echegaray, García Márquez, Jiménez, Mistral, Neruda and Paz. Prereq: SPAN 3505, SPAN 3515 or SPAN 3520; or cons. of dept. ch.

SPAN 4400. U.S. Latino/a Literature. 3 cr. hrs.
A comprehensive study of U.S. Latinos/as’ struggle for identity based on the ethnic, economic, historical and cultural position of the Spanish-speaking population in the United States. Readings generally include: Anaya, Castillo, Chévez, Cisneros, Díaz and Rodríguez, among others. Prereq: SPAN 3505, SPAN 3515 or SPAN 3520; or cons. of dept. ch.

SPAN 4450. Afro-Hispanic Literature and Culture. 3 cr. hrs.
Exploration of the literary and cultural production of Afro-Hispanic writers, with a particular focus on themes of slavery, race, class, identity, religion, immigration and politics. Writers studied may include: Manzano, Gómez de Avellaneda, Villaverde, Guillén, Del Cabral, Palés Matos, Duncan, Brindis de Salas, Estupiñán Bass, Ortiz, Zapata Olivella and Santos Febres. Prereq: SPAN 3505, SPAN 3515 or SPAN 3520; or cons. of dept. ch.

SPAN 4500. Race, Culture and Religion in Early Spanish Literature. 3 cr. hrs.
A study of representative literary texts from the Spanish Middle Ages to the 16th century with emphasis on both literary and cultural issues. Works studied generally include Poema del Mío Cid, Libro de Buen Amor, La Celestina and lyrical poetry. Prereq: SPAN 3505, SPAN 3515 or SPAN 3520; or cons. of dept. ch.

SPAN 4505. The Spanish Renaissance. 3 cr. hrs.
Readings and analysis in literary historical context of selected, significant works from representative authors such as Lope de Vega, Calderón de la Barca, Tirso de Molina, Fray Luis de León, San Juan de la Cruz, Santa Teresa de Jesús and Góngora. Prereq: SPAN 3505, SPAN 3515 or SPAN 3520; or cons. of dept. ch.

SPAN 4510. Cervantes' Don Quijote. 3 cr. hrs.
In-depth study and analysis of Cervantes’ masterpiece Don Quijote within the historical, political, and cultural context of the Spanish Golden Age. Special attention to his life, his novelistic theories, his literary works and importance in the creation of the modern novel. Prereq: SPAN 3505, SPAN 3515 or SPAN 3520; or cons. of dept. ch.

SPAN 4525. Spanish Literature: Eighteenth and Nineteenth Centuries. 3 cr. hrs.
The major figures of the Enlightenment, Neoclassic, Romantic, Realist and Naturalist movements in Spain. Readings include: Cadalso, Larra, Pardo Bazán, Clarín and Galdós. Prereq: SPAN 3505, SPAN 3515 or SPAN 3520; or cons. of dept. ch.

SPAN 4550. Twentieth and Twenty-First Century Spanish Literature. 3 cr. hrs.
Non-dramatic literature after 1898 with emphasis on the social significance of literary production in contemporary Spain. Readings include Unamuno, Lafuente, Matute, Deibies, Goytisolo, and Vázquez Montalbán. Prereq: SPAN 3505, SPAN 3515 or SPAN 3520; or cons. of dept. ch.

SPAN 4560. Hispanic Theater and Performance. 3 cr. hrs.
Studies the major formal and thematic developments in peninsular Spanish theater and/or Spanish American theater with emphasis on the works of such dramatists as Sor Juana, Marqués, Triana, García Lorca, Valle Inclán, and Sanchis Sinisterra, among others. Texts and authors vary per term. Prereq: SPAN 3505, SPAN 3515 or SPAN 3520; or cons. of dept. ch.

SPAN 4600. Spanish-American Literature: Pre-Columbian to Baroque. 3 cr. hrs.
This course presents a panoramic overview of the major writers and relevant literary manifestations present in the Hispanic World from the pre-Columbian days (e.g. Aztecs, Mayans and Incas), the Baroque. Writers studied generally include: Colón, Cortés, Las Casas, Inca Garcilaso de la Vega, Sor Juana, among others. Prereq: SPAN 3505, SPAN 3515 or SPAN 3520; or cons. of dept. ch.

SPAN 4610. Spanish-American Literature: Eighteenth and Nineteenth Centuries. 3 cr. hrs.
Overview of the development of literature in Spanish America during the 18th and 19th centuries. Major movements studied include Romanticism, Realism, and Naturalism. Topics of particular interest include the promotion of independence, the search for national identity, and efforts to reform colonial practices such as slavery. Writers studied generally include: Fernandez de Lizardi, Bolívar, Echeverría, Isaacs, Gómez de Avellaneda, Sarmiento, and Martí, among others. Prereq: SPAN 3505, SPAN 3515 or SPAN 3520; or cons. of dept. ch.

SPAN 4615. Spanish-American Literature: Modernismo and Vanguardismo. 3 cr. hrs.
Study of Modernismo and the avant-garde movements in Spanish America. Writers studied include: Dario, Rodó, Huidoboro, Storni, Vallejo and Borges among others. Prereq: SPAN 3505, SPAN 3515 or SPAN 3520; or cons. of dept. ch.

SPAN 4620. Spanish-American Literature: The Boom to the Twenty-First Century. 3 cr. hrs.
Study of various literary modes of thought and tendencies present in the Spanish America throughout the 20th century to the present in areas such as poetry, the short story, the short novel and the essay. Emphasis on the Boom and post-Boom tendencies. Writers studied generally include: Paz, Borges, Fuentes García Márquez, Allende, Poniatowska and MENCHÚ, among others. Prereq: SPAN 3505, SPAN 3515 or SPAN 3520; or cons. of dept. ch.
SPAN 4640. Novels and Novelists in Spanish-America. 3 cr. hrs.
This course focuses on the different trends, forms, and contents of the Spanish American novel as a genre, with emphasis on the works of such modern and cosmopolitan writers as Sabato, Fuentes, Carpentier, Ferré, Allende, Esquivel, Vargas Llosa and García Márquez. Prereq: SPAN 3505, SPAN 3515 or SPAN 3520; or cons. of dept. ch.

SPAN 4670. Spanish-American Short Story. 3 cr. hrs.
Study of the evolution of the Spanish-American short story. Writers studies include Borges, Cortázar, Donoso, Ferré, Fuentes, García, Marquéz, Quiroga, Rulfo and Valenzuela, among others. Prereq: SPAN 3505, SPAN 3515 or SPAN 3520; or cons. of dept. ch.

SPAN 4705. Advanced Spanish for Business. 3 cr. hrs.
An advanced course designed to train students to deal successfully with a linguistic, geographic and commercial context with business components and practices closely related to the Hispanic business world of today. Prereq: SPAN 3700 for non-native speakers of Spanish or SPAN 3005; or cons. of dept. ch.

SPAN 4715. Advanced Spanish for the Health Professions. 3 cr. hrs.
An advanced course in medical Spanish to train students who plan to work in a health-related area to communicate effectively in their field. Service Learning is required. Prereq: SPAN 3710 for non-native speakers of Spanish or SPAN 3005; or cons. of dept. ch.

SPAN 4931. Topics in Spanish Language, Culture and Literature. 1-3 cr. hrs.
Topics vary. Subject to be announced. Prereq: SPAN 3505, SPAN 3515 or SPAN 3520; or cons. of dept. ch.

SPAN 4951. MU Led Travel/Study Abroad. 3 cr. hrs.
Course taught in an international setting by Marquette professors and where students earn Marquette credit. Study Abroad expenses apply. Prereq: cons. of the Office of International Education.

SPAN 4960. Senior Seminar in Spanish. 3 cr. hrs.
Advanced study of a cultural, linguistic or literary theme in Spanish. Seminar will fulfill the College of Arts and Sciences Senior Experience Curriculum requirement. Specific topic of the seminar to be announced in the Schedule of Classes. Prereq: Major or minor in Spanish and Sr. stndg.; or cons. of dept. ch.

SPAN 4995. Independent Study in Spanish. 1-3 cr. hrs.
Prereq: Cons. of dept. ch.

SPAN 4999. Senior Thesis in Spanish. 2 cr. hrs.
Introductory thesis guidance for approved students under the direction of a departmental adviser. Prereq: Cons. of dept. ch.
Other Language Courses Offered

Arabic, Chinese and Italian:

Elementary and intermediate level language courses are offered in Arabic, Chinese and Italian as well as courses taught in English about culture, civilization and literature.

FOLA Courses:

Interdisciplinary courses within the department are listed under the FOLA subject heading. These courses cover such topics as women in foreign literature and the methodology for teaching world languages and cultures.

Arabic Courses

ARBC 1001. Elementary Arabic 1. 4 cr. hrs.
Introduction to fundamentals of Modern Standard Arabic, including basic grammar, pronunciation and writing system. Emphasis on development of basic language skills: reading, writing, speaking, listening and comprehension. Open to students with no previous study of Arabic; or by departmental placement.

ARBC 1002. Elementary Arabic 2. 4 cr. hrs.
Continuation of ARBC 1001. Introduction to spoken and written Modern Standard Arabic. The course focuses on the fundamental language skills: speaking, listening, reading and writing. Prereq: ARBC 1001.

Continuation of the study of Modern Standard Arabic, with emphasis on further development of all language skills: reading, writing, speaking and listening. Prereq: ARBC 1002; or by departmental placement.

ARBC 2002. Intermediate Arabic 2. 3 cr. hrs.
Continuation of ARBC 2001. Study of Modern Standard Arabic, with emphasis on further development of all language skills: reading, writing, speaking and listening. Prereq: ARBC 2001; or by departmental placement.

ARBC 3001. Grammar Review and Skills Development. 3 cr. hrs.
Review of grammar for continuing development of language skills with special emphasis on reading, speaking and writing. Prereq: ARBC 2002 or department consent.

ARBC 3002. Spoken Arabic. 3 cr. hrs.
Focuses on the development of students' oral proficiency in Arabic, with attention to communicative skills in a variety of contexts. Introduces students to the differences between Modern Standard Arabic and various regional dialects. Prereq: ARBC 2002 or cons. of dept.

ARBC 3200. Culture and Civilization of the Middle East. 3 cr. hrs.
Introduction to the most important cultural aspects of the Middle East. Topics may include historical, political and economical developments, social issues, gender, religion, literature, music and art. Knowledge of Arabic language not required.

Chinese Courses

CHNS 1001. Elementary Chinese 1. 4 cr. hrs.
Introduction to fundamentals of Mandarin Chinese, including basic grammar, pronunciation and Chinese characters, with emphasis on reading, writing, speaking, listening and comprehension. Open to students with no previous study of Chinese or by departmental placement.

CHNS 1002. Elementary Chinese 2. 4 cr. hrs.
Continuation of CHNS 1001. Introduction to spoken and written Mandarin Chinese. Course focuses on the fundamental language skills: speaking, listening, reading and writing. Prereq: CHNS 1001.

Continuation of the study of Mandarin Chinese, with emphasis on further development of all language skills: reading, writing, speaking and listening. Prereq: CHNS 1002; or by departmental placement.

Continuation of CHNS 2001. Study of Mandarin Chinese, with emphasis on further development of all language skills: reading, writing, speaking and listening. Prereq: CHNS 2001; or by departmental placement.

CHNS 3200. Chinese Culture and Civilization. 3 cr. hrs.
Introduction to the most important aspects of Chinese culture and civilization. Topics may include historical and political development of Chinese society, Chinese language, literature, art, film, religions and philosophy. Course taught in English, knowledge of Chinese language not required.
CHNS 3210. Chinese Literature in English Translation. 3 cr. hrs.
Readings in English translation of selected masterpieces of Chinese literature. Knowledge of Chinese language not required. May be counted as part of the Arts and Sciences literature college requirement but not as part of the foreign language requirement.

Topics vary. Subject to be announced.

CHNS 4951. MU Led Travel/Study Abroad. 3 cr. hrs.
Course taught in an international setting by Marquette professors and where students earn Marquette credit. Study Abroad expenses apply. Prereq: cons. of the Office of International Education.

Foreign Language Courses
FOLA 3210. Women in Foreign Literature. 3 cr. hrs.
Focus on a major area of literary study concerned with women writers and/or women's issues in foreign literatures. Taught in English, knowledge of a foreign language not required. Counts toward Women's Studies; may not be counted toward fulfillment of the foreign language requirement.

FOLA 4000. Teaching World Languages and Cultures. 3 cr. hrs.
Study and application of the fundamental principles of effective second language instruction through the exploration of second language acquisition theory, the development of skills for selecting, organizing, providing, and assessing effective second language learning opportunities; practice of instructional technique within clinical contexts; and reflection on teaching performance. Clinical experience requirement: three hours per week for a total of forty hours. Required of all Education majors. Prereq: Sr. stndg. and intermediate high performance on an official Oral Proficiency Interview (OPI), and on an official writing proficiency test (WPT) in Spanish; or cons. of dept. ch.

FOLA 4931. Topics in Foreign Language, Culture and Literature. 3 cr. hrs.
An umbrella course to offer occasional cross-language topics taught in a foreign language or in English about languages, literatures and cultures.

FOLA 4951. MU Led Travel/Study Abroad. 3 cr. hrs.
Course taught in an international setting by Marquette professors and where students earn Marquette credit. Study Abroad expenses apply. Prereq: Cons. of the Office of International Education.

FOLA 4960. Undergraduate Seminar in Foreign Languages and Literatures. 1-3 cr. hrs.
Designed to initiate qualified undergraduates in the techniques and discipline of scholarly literary or linguistic research by concentrated work in an interdisciplinary field. Emphasis on the critical reading and analysis of primary and/or secondary sources in English translation. Specific subjects of seminar to be announced. Does not count toward fulfillment of academic major or minor. Prereq: Sr. stndg. or cons. of dept. ch.

FOLA 4995. Independent Study in Foreign Languages and Literatures. 1-3 cr. hrs.
Prereq: Cons. of dept. ch.

Italian Courses
ITAL 1001. Elementary Italian 1. 4 cr. hrs.
Introduction to the Italian language Fundamentals of comprehension, speaking, reading and writing. Open to students with no previous study of Italian; or by departmental placement.

ITAL 1002. Elementary Italian 2. 4 cr. hrs.
Continuation of ITAL 1001 with emphasis on further development of vocabulary, and basic conversation through supplemental readings. Prereq: ITAL 1001.

Grammar review, oral and written practice, and supplemental readings and activities to develop cultural awareness. Prereq: ITAL 1002; or by departmental placement.

ITAL 2002. Intermediate Italian 2. 3 cr. hrs.
Continuation of ITAL 2001 plus further development and practice of all language skills. Prereq: ITAL 2001; or by departmental placement.

ITAL 3001. Italian Composition and Conversation. 3 cr. hrs.
Grammar review and practice in the oral and written use of the Italian language. Prereq: ITAL 2002; or by departmental placement.

ITAL 3100. Advanced Italian Composition and Conversation. 3 cr. hrs.
Practice and review of advanced grammatical structures of the Italian language for further development of oral and written communication skills. Prereq: ITAL 3001; or cons. of dept. ch.

ITAL 3200. Italian Culture and Civilization. 3 cr. hrs.
Readings and lectures in English dealing with different aspects of Italian culture as seen through its history, art, literature, culinary traditions, and film. Knowledge of Italian not required. Variable subtitles depending on the content and focus.

ITAL 3210. Italian Literature in English Translation. 3 cr. hrs.
Readings in English translation of selected masterpieces of Italian literature. Knowledge of Italian not required. May be counted as part of the Arts and Sciences literature college requirement but not as part of the foreign language requirement.
ITAL 4931. Topics in Italian Language, Culture and Literature. 3 cr. hrs.
Topics vary. Subject to be announced. Prereq: ITAL 3001; or cons. of dept. ch.
History

Chairperson: James A. Marten, Ph.D.
Department of History website (http://www.marquette.edu/history)

History illuminates every aspect of the human experience—politics, economics, religion, social issues, art and war—shaping our memory and equipping us to think critically and constructively about the present and our connections to the past. The history curriculum orders the study of the past in logical and meaningful ways. Beginning with surveys that offer general approaches to broad periods of history, students move on to upper division classes that challenge students to read and write about specific subjects and places in more depth. They finish their degrees by reading deeply, conducting archival research and writing major papers on specialized topics in seminar-style readings and research courses. Students interested in further developing their understanding of history can write senior theses or undertake internships at museums, archives and other public history sites.

Major in History

The major in history consists of 33 credit hours: two required courses (6 credit hours), Option 1 or Option 2 (6 credit hours) and seven courses (21 credit hours) of upper-division history courses from Group I - III as listed below.

Required Courses:

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<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>HIST 1001</td>
<td>Growth of Western Civilization to 1715</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1002</td>
<td>Growth of Western Civilization since 1715</td>
<td>3</td>
</tr>
</tbody>
</table>

Choose Option 1 or Option 2:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 1101</td>
<td>Introduction to American History</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1301</td>
<td>Survey of Latin America</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1401</td>
<td>Africa</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1501</td>
<td>East Asia</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 2101</td>
<td>Growth of the American Nation 1</td>
<td>3</td>
</tr>
<tr>
<td>HIST 2102</td>
<td>Growth of the American Nation 2</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 4953</td>
<td>Readings in History</td>
<td>3</td>
</tr>
<tr>
<td>HIST 4955</td>
<td>Undergraduate Seminar in History</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours

* Upper-division history: Group I-III

Upper-division history courses: Seven courses (21 credit hours) with at least one course from each of the three groups listed below:

- **Group I**, United States: Courses HIST 3101-3199, HIST 4103-4199
- **Group II**, Europe: Courses HIST 3201-3299, HIST 3751, HIST 4200-4299
- **Group III**, Asia, Africa and Latin America: Courses HIST 3300-3499, HIST 4300-4600

The 21 credit hours selected must also include one HIST 4953 course and one HIST 4955 Undergraduate Seminar in History course. HIST 4953 Readings in History and HIST 4955 Undergraduate Seminar in History may be used to satisfy the group distribution requirement based on course content.

Notes:

- Students may enroll in HIST 5000-level graduate courses (cross-listed for undergraduates at the HIST 4000-level) with permission of the instructor.
- At the discretion of the department, credit in history may be allowed in exceptional cases for courses taken in other departments of the university.

Department of Public Instruction Certification - Major in History

Major in History for Primary Education Majors

College of Education students majoring in Primary Education must complete the same requirements for the History major as listed above.

Major in History for Secondary Education Majors

Students majoring in Secondary Education must complete a total of 36 credit hours for the major in History: two required Western Civilization courses (6 credit hours), Survey Option 1 or Option 2 (6 credit hours); six elective upper-division history courses (18 credits) from Distribution groups I-IV; a Reading course (3 credits) and a Senior Seminar (3 credits).

I. Required Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 1001</td>
<td>Growth of Western Civilization to 1715</td>
<td>3</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
</tr>
<tr>
<td>------------</td>
<td>--------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>HIST 1002</td>
<td>Growth of Western Civilization since 1715</td>
<td>3</td>
</tr>
</tbody>
</table>

II. Survey Option 1 or Option 2:  

Option 1:  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 1101</td>
<td>Introduction to American History</td>
</tr>
</tbody>
</table>

And one of the following courses:  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 1301</td>
<td>Survey of Latin America</td>
</tr>
<tr>
<td>HIST 1401</td>
<td>Africa</td>
</tr>
<tr>
<td>HIST 1501</td>
<td>East Asia</td>
</tr>
</tbody>
</table>

Option 2:  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 2101</td>
<td>Growth of the American Nation 1</td>
</tr>
<tr>
<td>HIST 2102</td>
<td>Growth of the American Nation 2</td>
</tr>
</tbody>
</table>

III. Distribution requirement for Upper-division History Courses: Group I - IV  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Distribution Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Readings and Seminar Courses:</td>
<td>6</td>
</tr>
<tr>
<td>HIST 4953</td>
<td>Readings in History</td>
<td></td>
</tr>
<tr>
<td>HIST 4955</td>
<td>Undergraduate Seminar in History</td>
<td></td>
</tr>
</tbody>
</table>

Total Credit Hours: 36

* Distribution requirement for Upper-division History Courses  

6 courses (18 credit hours) with at least one course in each of the following categories:  

- **Group I**, United States: Courses HIST 3101-3199, HIST 4103-4199: at least one course  
- **Group II**, Europe: Courses HIST 3201-3299, HIST 3751, HIST 4200-4299: two courses (one ancient/medieval and one modern)  
- **Group III**, Asia, Africa and Latin America: Courses HIST 3300-3499, HIST 4300-4600: at least one course  
- **Group IV**, Ancient/Medieval: HIST 3200-3210, HIST 4200-4213

Note:  

- Based on course content, HIST 4953 Readings in History and HIST 4955 Undergraduate Seminar in History may be used to satisfy the group distribution requirement.

**Major in American Military History**

The American Military History major consists of 35-36 credit hours as listed below.

Required Courses:  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 1001</td>
<td>Growth of Western Civilization to 1715</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1002</td>
<td>Growth of Western Civilization since 1715</td>
<td>3</td>
</tr>
<tr>
<td>HIST 3118</td>
<td>American Military History</td>
<td>3</td>
</tr>
<tr>
<td>NASC 3161</td>
<td>Evolution of the Art of War</td>
<td>3</td>
</tr>
<tr>
<td>NASC 3181</td>
<td>Amphibious Warfare</td>
<td></td>
</tr>
</tbody>
</table>

Choose one of the following 6-credit course combinations:  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 1101</td>
<td>Introduction to American History</td>
<td></td>
</tr>
<tr>
<td>&amp; HIST 1301</td>
<td>and Survey of Latin America</td>
<td>6</td>
</tr>
<tr>
<td>HIST 1101</td>
<td>Introduction to American History</td>
<td></td>
</tr>
<tr>
<td>&amp; HIST 1401</td>
<td>and Africa</td>
<td></td>
</tr>
<tr>
<td>HIST 1101</td>
<td>Introduction to American History</td>
<td></td>
</tr>
<tr>
<td>&amp; HIST 1501</td>
<td>and East Asia</td>
<td></td>
</tr>
<tr>
<td>HIST 2101</td>
<td>Growth of the American Nation 1</td>
<td></td>
</tr>
<tr>
<td>&amp; HIST 2102</td>
<td>and Growth of the American Nation 2</td>
<td></td>
</tr>
</tbody>
</table>

Choose from the following:  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFAS 2021</td>
<td>Evolution of the Air Force/Air and Space Power 1</td>
<td></td>
</tr>
<tr>
<td>&amp; AFAS 2022</td>
<td>and Evolution of the Air Force/Air and Space Power 2</td>
<td></td>
</tr>
<tr>
<td>or NASC 1022</td>
<td>Sea Power and Maritime Affairs</td>
<td></td>
</tr>
</tbody>
</table>

Electives: Choose five of the following courses:  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 3102</td>
<td>Revolutionary America: 1707-1787</td>
</tr>
<tr>
<td>HIST 3104</td>
<td>The Civil War Era</td>
</tr>
<tr>
<td>HIST 3127</td>
<td>The Vietnam War Era</td>
</tr>
</tbody>
</table>
HIST 3295  "The Great War": World War I, 1914-18
HIST 3297  World War II
HIST 4113  American Foreign Relations 1
HIST 4114  American Foreign Relations 2
HIST 4298  The Cold War

Total Credit Hours 35-36

Notes:

• HIST 4931 Topics in History, HIST 4953 Readings in History, HIST 4955 Undergraduate Seminar in History and HIST 4995 Independent Study in History may be used toward the upper-division HIST elective requirement, depending upon course content and approval of the department chair.

• A HIST major cannot be used as a second major with American Military History (AMMH).

Minor in History

The minor in history consists of 18 credit hours: two courses (6 credit hours) from the following list of surveys and four upper-division (3000-4000 level) history courses (12 credit hours).

Two survey courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 1001</td>
<td>Growth of Western Civilization to 1715</td>
</tr>
<tr>
<td>HIST 1002</td>
<td>Growth of Western Civilization since 1715</td>
</tr>
<tr>
<td>HIST 1101</td>
<td>Introduction to American History</td>
</tr>
<tr>
<td>HIST 1301</td>
<td>Survey of Latin America</td>
</tr>
<tr>
<td>HIST 1401</td>
<td>Africa</td>
</tr>
<tr>
<td>HIST 1501</td>
<td>East Asia</td>
</tr>
</tbody>
</table>

Four upper-division History courses:

Total Credit Hours 18

Note:

• Requirements for the Interdisciplinary Minor in Public History (p. 264) can be found in the Undergraduate Bulletin under Interdisciplinary Majors and Minors.

Department of Public Instruction Certification

To pursue Department of Public Instruction certification, College of Education students are required to complete eight courses (24 credit hours): two required courses (6 credit hours), Option 1 or Option 2 (6 credit hours) and four upper-division history courses from Groups I - III (12 credit hours) as listed below.

Required Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 1001</td>
<td>Growth of Western Civilization to 1715</td>
</tr>
<tr>
<td>HIST 1002</td>
<td>Growth of Western Civilization since 1715</td>
</tr>
</tbody>
</table>

Choose Option 1 or 2:

Option 1:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 1101</td>
<td>Introduction to American History</td>
</tr>
</tbody>
</table>

and one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 1301</td>
<td>Survey of Latin America</td>
</tr>
<tr>
<td>HIST 1401</td>
<td>Africa</td>
</tr>
<tr>
<td>HIST 1501</td>
<td>East Asia</td>
</tr>
</tbody>
</table>

Option 2:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 2101</td>
<td>Growth of the American Nation 1</td>
</tr>
<tr>
<td>HIST 2102</td>
<td>Growth of the American Nation 2</td>
</tr>
</tbody>
</table>

* Upper-division courses in History: Groups I-III

Total Credit Hours 24

* Upper-division courses: Four courses (12 credit hours) with at least one course from each of the three groups listed below. One of the upper-division courses must be either HIST 4953 Readings in History or HIST 4955 Undergraduate Seminar in History.

• Group I, United States: Courses HIST 3101-3199, HIST 4103-4199
• **Group II, Europe:** Courses HIST 3201-3299, HIST 3751, HIST 4200-4299

• **Group III, Asia, Africa and Latin America:** Courses HIST 3300-3499, HIST 4300-4600

**Notes:**

• HIST 4931 Topics in History, HIST 4953 Readings in History, HIST 4955 Undergraduate Seminar in History and HIST 4995 Independent Study in History, courses whose content varies from term to term, will satisfy group distribution requirements according to the course title and content.

• At the discretion of the department, credit in history may be allowed in exceptional cases for courses taken in other departments of the university.

**Courses**

**HIST 1001. Growth of Western Civilization to 1715. 3 cr. hrs.**
An interpretative survey of Western Civilization from its beginnings to the Early Modern period.

**HIST 1002. Growth of Western Civilization since 1715. 3 cr. hrs.**
An interpretative survey of Western Civilization from the Early Modern period to the contemporary era.

**HIST 1101. Introduction to American History. 3 cr. hrs.**
A survey of American history from the colonial origins to the present.

**HIST 1201. History of Western Art 1. 3 cr. hrs.**
Historical survey of painting, sculpture, architecture, and the minor arts representative of the main contributions of western civilization. Illustrated lectures and discussions: Prehistory, the Ancient Near East, Greco-Roman Antiquity through the Middle Ages. Does not count toward history major or minor.

**HIST 1202. History of Western Art 2. 3 cr. hrs.**
Historical survey of painting, sculpture, architecture, and the minor arts representative of the main contributions of western civilization. Illustrated lectures and discussions: Renaissance and Modern, to the present. Does not count toward history major or minor.

**HIST 1301. Survey of Latin America. 3 cr. hrs.**
Survey of Latin American history and culture from pre-Columbian times to the present, emphasizing the historical development of modern traditions, such as multi-ethnic identities and political authoritarianism, and the skills and sources for doing Latin American history.

**HIST 1401. Africa. 3 cr. hrs.**
Survey of African peoples and cultures, including the Sudanic empires, Islamic influences, European colonialism, and national independence, that also emphasizes the skills and sources for doing African history.

**HIST 1501. East Asia. 3 cr. hrs.**
Survey of major political, social and economic themes in Chinese and Japanese cultures from ancient times to the present, emphasizing major cultural and historical events which have significantly influenced the development of Asian civilization and the skills and sources for doing Asian history.

**HIST 2001H. Honors The World and the West. 3 cr. hrs.**
Offers a global perspective on the development of moral frameworks and explores the ethical dimensions of a series of challenging historical questions. Prereq: Admission to Marquette University Honors Program.

**HIST 2101. Growth of the American Nation 1. 3 cr. hrs.**
The United States from colonial origins through the Civil War era, with consideration of political, cultural, and economic institutions and ideas.

**HIST 2102. Growth of the American Nation 2. 3 cr. hrs.**
The United States from the Civil War era to the present, with consideration of political, cultural, and economic institutions and ideas.

**HIST 3101. The British Atlantic World to 1713. 3 cr. hrs.**
The founding of colonies from Newfoundland to Virginia to Barbados, the transformation of landscapes, the struggle to create viable societies, the development of political and social institutions, relations between church and state, attempts to centralize control of the colonies, the Indian Wars, the rise of African slavery.

**HIST 3102. Revolutionary America: 1707-1787. 3 cr. hrs.**
The development of an American nationality, international wars on the North American continent and in the West Indies, imperial reform, the Loyalist response, the causes and consequences of the War for Independence, the Articles of Confederation. Prereq: Soph. stdg.

**HIST 3103. The New American Nation, 1787-1836. 3 cr. hrs.**
The reasons for the independence movement, the hopes and failures of the founding generation, the debates over the Constitution, the roots of an American empire, westward expansion, slavery, the rise of democracy, the formation of a distinctly American identity and culture, and the endless optimism of the young republic. Prereq: Soph. stdg.

**HIST 3104. The Civil War Era. 3 cr. hrs.**
An examination of American history from 1831-1877, focusing on the political, social, economic, and cultural differences between the North and the South. Includes discussions of the black experience during the Civil War era, of military events during the War itself, and of the resolution or continuation of sectional tensions through Reconstruction. Prereq: Soph. stdg.

**HIST 3106. Gilded Age to the Progressive Era, 1876-1920. 3 cr. hrs.**
United States history from the end of the Civil War to World War I, emphasizing America’s shift from an agrarian country to an urban, industrial, and imperial nation. Prereq: Soph. stdg.
HIST 3107. United States in the Twentieth Century 1. 3 cr. hrs.
The United States since 1900, emphasizing the Progressive Movement, the New Deal, the role of the United States in world affairs, and the role of the presidency and intelligence community. Prereq: Soph. stndg.

HIST 3108. United States in the Twentieth Century 2. 3 cr. hrs.
The United States since 1900, emphasizing the Progressive Movement, the New Deal, the role of the United States in world affairs, and the role of the presidency and intelligence community. Begins with World War II. Prereq: Soph. stndg.

HIST 3118. American Military History. 3 cr. hrs.
The nature and history of the military in the United States from the American Revolution to the present, with emphasis on its role and significance in American life and foreign affairs. Prereq: Soph. stndg.

HIST 3127. The Vietnam War Era. 3 cr. hrs.
Examination of the political, social, cultural, and military history of both the Vietnamese and American sides of the war in Vietnam. Prereq: Soph. stndg.

HIST 3165. History of Rock and Roll. 3 cr. hrs.
Examination of rock and roll as a political, social, and economic as well as cultural allegory for twentieth-century American history. Special attention is given to artists who epitomized styles or genres. Prereq: Soph. stndg.

HIST 3201. Ancient Greece and Rome. 3 cr. hrs.
The course traces Greek history from the Minoans and Mycenaeans to the Hellenistic world, with stress on politics, literature and art; the rise of Rome, the decay of the Roman republic, the high civilization of the Emperors, the rise of Christianity, and the Fall of the Empire. Prereq: Soph. stndg.; HIST 1001 and HIST 1002 recommended.

HIST 3205. The Byzantine Empire. 3 cr. hrs.
History of Byzantine Empire bridging from late antiquity to early modernity and stretching over three continents. Surveys imperial political, economic, social and cultural policies and developments and especially the empire's encounters and interactions with Slavs, Western Europeans, Persians, Berbers, Arabs, and Turks. Prereq: Soph. standing; HIST 1001 recommended.

HIST 3210. The Middle Ages. 3 cr. hrs.
This course examines the emergence and development of a distinct medieval society from a mixture of Roman, Christian, and Germanic cultures. Specific topics include political fragmentation and reorganization, the growth of towns and commerce, innovative religious movements, as well as later medieval upheavals. It also considers the sibling Mediterranean cultures of the Islamic world and the Byzantine Empire. HIST 1001 and HIST 1002 recommended.

HIST 3220. The Renaissance. 3 cr. hrs.
Europe from the Black Death to Erasmus, with stress on Western Europe, especially Italy, and the intellectual and artistic achievements of the age. Prereq: Soph. stndg.; HIST 1001 and HIST 1002 recommended.

HIST 3225. War and Religion in Early Modern Europe, 1500-1650. 3 cr. hrs.
The course, which stresses political and religious history, begins with the late medieval church, then studies Luther and Calvin and the rise of Protestantism, the Catholic Reformation, and the Wars of Religion. Prereq: Soph. stndg.; HIST 1001 and HIST 1002 recommended.

HIST 3232. Reaction, Revolution, and Nationalism: 1814 to 1914. 3 cr. hrs.
A survey of the political, economic and cultural institutions of the Western European States in the aftermath of the French Revolution and Napoleon. Principal states include Great Britain, France, Germany, Italy, the Low Countries and Spain. Prereq: Soph. stndg.; HIST 1001 and HIST 1002 recommended.

HIST 3235. Twentieth Century Europe. 3 cr. hrs.
Europe from 1914 to the present, including: World War I and the consequences of the peace settlement, the growth of totalitarianism, World War II, and the development of collective security. Prereq: Soph. stndg.; HIST 1001 and HIST 1002 recommended.

A survey of the causes, course and consequences of the First World War. Beginning with events and military operations in Europe, the course also will treat the war outside of Europe and at sea, as well as the political, social, economic and intellectual impact of the "war to end all wars." Prereq: Soph. stndg.; HIST 1001 and HIST 1002 recommended.

HIST 3297. World War II. 3 cr. hrs.
A survey of the causes, course and consequences of the Second World War. Focuses on the European theater including military developments, propaganda, the defeat of German and Japanese imperialism, the impact of the war on society, and the origins of the Cold War. Prereq: Soph. stndg.; HIST 1001 and HIST 1002 recommended.

HIST 3455. Modern Middle East Since 1500. 3 cr. hrs.
A survey of the Arab, Turkish and Iranian peoples since 1500 emphasizing the Islamic backgrounds and the Middle East in world affairs, especially during the 20th century. Prereq: Soph. stndg.; HIST 1001 and HIST 1002 recommended.

HIST 3751. History and Philosophy of Crime and Punishment. 3 cr. hrs.
A study of crime and punishment from both the historical and philosophical perspectives. The course will emphasize the European experience as a foundation for understanding American developments. Emphasis will be placed on the interdisciplinary aspects of crime and punishment. Prereq: Soph. stndg. and PHIL 1001; same as PHIL 3751 and CRLS 3751. May be counted toward the core curriculum requirement in either Philosophy or Social-behavioral Science.
An introduction to the field of environmental history, examining the role of social structures in shaping the natural environment as well as the role of environmental factors in shaping historical change. Topics include: climate change and ecological crises; the dynamic relationship between empires and colonies; the rise of market economies and modern states; shifting attitudes toward technology, sustainability, and preservation; idealized images of a bucolic nature before the advent of industrialization; the emergence of environmental activism. Prereq: Soph. stndg.

HIST 4100. Public History. 3 cr. hrs.
An examination of the means by which the skills and methods of history are applied by professionals outside the classroom. Topics include public history as a sub-discipline of history, historic preservation, and the emergence of history museums and historical societies. Prereq: Soph. stndg.

HIST 4101. Applied History. 3 cr. hrs.
An examination of technologies for researching, presenting and preserving historical materials. Students will learn to apply historic methods through digital media technologies. Topics will include systems and tools for: researching and collecting documents and materials: digitizing, editing and manipulating materials; presenting content to local and distant audiences; and preserving materials in appropriate formats. Digital imaging, multimedia and Web page creation, streaming technologies, presentations systems and CD/DVD production will be investigated. The unique capabilities of collaboration and distribution over high-speed networks (Internet2) will also be explored. Requirements include a final project on a historical topic that incorporates some or all of the technologies introduced in the course. This project will demonstrate mastery of content as well as technology. Prereq: Jr. stndg.

HIST 4113. American Foreign Relations 1. 3 cr. hrs.
American foreign relations from the American Revolution to the emergence of the United States as a world power. This course gives equal emphasis to the conduct of American diplomacy by agents of the U.S. government and the social, economic, and cultural forces that shape foreign policies. Prereq: Soph. stndg.

HIST 4114. American Foreign Relations 2. 3 cr. hrs.
American foreign relations from the American Revolution to the emergence of the United States as a world power. This course gives equal emphasis to the conduct of American diplomacy by agents of the U.S. government and the social, economic, and cultural forces that shape foreign policies. Begins with World War I. Prereq: Soph. stndg.

HIST 4115. The American West. 3 cr. hrs.
American westward expansion from colonial days to the 20th century, emphasizing the impact of the frontier on the development of American culture and institutions. Prereq: Soph. stndg.

HIST 4120. American Immigration. 3 cr. hrs.

HIST 4130. Religion and American Life. 3 cr. hrs.
Survey of the historical impact of religious belief and institutions on the intellectual, cultural, and public life of the United States. Prereq: Soph. stndg.

HIST 4135. African-American History. 3 cr. hrs.

HIST 4140. American Urban History. 3 cr. hrs.
History of the American city from the colonial era to the present. Topics include the economic, political, and cultural effects of cities on American society, as well as America's philosophical and moral response to urbanization. Prereq: Soph. stndg.

HIST 4145. A History of Women in America. 3 cr. hrs.
Survey of the history of women and the variety of women's experiences in America from pre-European contact to the present. The historical construction of gender and the ways that diverse women have shaped and contested their various experiences as mothers, daughters, wives, and partners; as farmers and workers; as slaves and conquered peoples; as reformers and political activists; and as immigrants and citizens are analyzed. Prereq: Soph. stndg.

HIST 4150. Childhood in America. 3 cr. hrs.
The history of children and childhood in the United States from colonial times to the present, with an emphasis on child rearing, race, gender, class, and popular culture. Prereq: Soph. stndg.

HIST 4155. A History of Native America. 3 cr. hrs.
A survey of Native American history from 1491 (before Columbus's "Discovery") to the present. Explores the diverse cultures and histories of indigenous peoples in the present-day United States and focuses on particular themes such as colonization and decolonization, settler colonialism, intimacy and violence, removal and "survivance," assimilation and allotment, along with sovereignty and self-determination. Grapples with contemporary issues related to Native mascots, treaties, casinos, cultural representation and more. Prereq: Soph. stndg.

HIST 4160. Cultural and Intellectual History of the United States. 3 cr. hrs.
A survey of American thought and culture from the first contacts between indigenous peoples and Europeans, through the development of the United States, to the present. Particular attention will be paid to those moments of intellectual and cultural conflict that illuminate and define the process by which a variety of Americans have shaped a distinct but malleable American culture. Prereq: Soph stndg.
HIST 4210. The Black Death. 3 cr. hrs.
Examines the 14th century global pandemic as a case study for examining its social, political and cultural impact on medieval societies. Investigates the relationship between the spread of plague and the physical environment, as well as assesses how modern scientific knowledge impacts our understanding of the event. Prereq: Soph. stndg.

HIST 4212. The Crusades. 3 cr. hrs.
Western European and Middle Eastern relations from the 11th through the 13th centuries; includes Arabic, Byzantine, Turkish, and Mongol areas. Prereq: Soph. stndg. HIST 1001 and HIST 1002 recommended.

HIST 4245. Women in Western Civilization. 3 cr. hrs.
Survey of women's experiences in western civilization from prehistory to the present. Focusing primarily on Europe, the course analyzes the changing roles and responsibilities of women in the family, in the work force, and in the community, and highlights the impact of phenomena such as religion, science, technology, and democracy on the shifting perceptions and definitions of gender in western civilization. Prereq: Soph. stndg.; HIST 1001 and HIST 1002 recommended.

HIST 4247. Comparative Homefronts during the Second World War. 3 cr. hrs.
Explores state policies, gender ideologies, daily realities and the role(s) of civilians, particularly women, on select home fronts of World War II. The conflict was a "watershed" in the use of violence aimed at civilians, who were targeted via air raids, food blockades, deportation, rape and mass murder. Using comparative framework, the course examines Germany, Italy, France, the concentration camps, and the United States. Prereq: Soph. stndg.; HIST 1001 and HIST 1002 recommended.

HIST 4249. Intellectual History of Modern Europe. 3 cr. hrs.
The lives and works of prominent European scientists, philosophers and artists from the Enlightenment to the present. Prereq: Soph. stndg.

HIST 4250. Tudor England 1485 to 1603. 3 cr. hrs.
The political, socio-economic, religious and cultural developments in Renaissance and Reformation England with particular attention to the personalities who dominate the Tudor court; the effects of the establishment of Caesaro-Papism by Henry VIII upon the art, architecture, literature, and social life of the country.

HIST 4251. War and Revolution in Britain: 1603-1815. 3 cr. hrs.
This course focuses on Britain's development as a constitutional monarchy and a commercial and imperial power. Particular attention is given to the Civil War, Glorious Revolution, American Revolution, and escalating rivalry with France climaxing in the Napoleonic Wars. Prereq: Soph. stndg.; HIST 1001 and HIST 1002 recommended.

HIST 4252. Modern Britain. 3 cr. hrs.
This course focuses on the democratization of Britain, the creation of the welfare state, and the erosion of Victorian Britain's commercial and political global primacy reflected in the disintegration of the British empire and fragmentation of the United Kingdom. Prereq: Soph. stndg.; HIST 1001 and HIST 1002 recommended.

HIST 4255. The British Empire. 3 cr. hrs.
Survey of the creation, expansion and dismantling of the world's largest empire from the 16th century to the present. Exploration of political, social, economic and cultural factors. Emphasis on contrasting the views and experiences of Britons and of natives of various colonized areas. Prereq: Soph. stndg.; HIST 1001 and HIST 1002 recommended.

HIST 4260. Modern Ireland. 3 cr. hrs.
A survey of the political and cultural history of Ireland since the Grattan parliament, focusing upon the dual legacy of constitutional and revolutionary nationalism in Irish life. Prereq: Soph. stndg.; HIST 1001 and HIST 1002 recommended.

HIST 4262. Modern France. 3 cr. hrs.
France from the fall of Napoleon to the present, especially emphasizing the development of French democracy and the nation's enduring impact on world affairs. Prereq: Soph. stndg.

HIST 4264. Modern Germany. 3 cr. hrs.
Survey of the major political, cultural, social and intellectual developments in modern Germany history since the Napoleonic period. Topics include nationalism, unification, the German (Wilhelmine) Empire, the Weimar Republic, the rise of the Nazi Party, the Third Reich, the two world wars, division, reunification and Germany's post-reunification role in Europe. Prereq: Soph. stndg.

HIST 4266. Nazi Germany and the Holocaust. 3 cr. hrs.
Overview of the history of Nazi Germany between 1933 and 1945. Primarily focuses on the origins and development of the Holocaust and the attempted genocide of the Jews of Europe. Concentrates on the conception and implementation of Nazi extermination policies in German-occupied Europe during World War II, paying attention to both ideological and practical aspects of the "Final Solution." Prereq: Soph. stndg.; HIST 1001 and 1002 recommended.

HIST 4270. Russia to 1861. 3 cr. hrs.
The Slavs, the Kievan Rus Empire, the Mongol invasion, the rise of Muscovy, and the Russian empire of Peter the Great and his successors down to the emancipation of the serfs in 1861. Prereq: Soph. stndg.; HIST 1001 and HIST 1002 recommended.

HIST 4271. The Russian Revolution and the Soviet Union. 3 cr. hrs.
Pre-revolutionary Russia from 1861, the Revolution of 1917, Soviet economic growth and totalitarianism, and the emergence of the USSR as a world power and its subsequent collapse. Prereq: Soph. stndg.; HIST 1001 and HIST 1002 recommended.
HIST 4290. The French Revolution and Napoleon, 1787 to 1815. 3 cr. hrs.
A survey of Revolutionary Europe with emphasis on the causes and consequences of the Revolution, the Reign of Terror, the counter-revolutionary movements, the conquest of Europe, and the relation between revolution and religion. Prereq: Soph. stdgd; HIST 1001 and HIST 1002 recommended.

HIST 4298. The Cold War. 3 cr. hrs.
The origins, nature and consequences of the Cold War, with emphasis on the 1945-1970 period. Topics will include the continuing effects of the Cold War, prospects for new international rivalries, and the domestic consequences of the Cold War. Prereq: Soph. stdgd.; HIST 1001 and HIST 1002 recommended.

HIST 4310. Colonial Latin America. 3 cr. hrs.
Examines the creation of “Latin America” as a result of Spanish and Portuguese colonialism in the Americas, from the late fifteenth through the eighteenth century. Focuses on the meeting points of distinctly different cultures (primarily Amerindian, European and African); the often violent insertion of the Americas into the early modern global economy; and some of the legacies of Latin America’s colonial experience in the modern world. Prereq: Soph. stdgd.; HIST 1301 recommended.

HIST 4320. United States-Latin American Relations. 3 cr. hrs.
Analyzes the symbiotic relationship between the United States and Latin America from 1776 to the present, focusing on the key themes of race, colonialism, resistance, transculturation, dependency, revolution, the drug trade and immigration. Students will examine how the United States’ changing global status has affected its political, economic and cultural relationship with other countries in the Americas. Prereq: Soph. stdgd.; HIST 1301 and HIST 1101 recommended.

HIST 4350. The Caribbean. 3 cr. hrs.
This course focuses on the contours of Caribbean history, 1400 to present. It examines Native American culture, colonialism, slavery, international trade, the politics of independence, economic development, national identity, and ethnicity. Prereq: Soph. stdgd.; HIST 1001 and HIST 1002 recommended.

HIST 4355. History of Mexico. 3 cr. hrs.
Mexico from pre-Columbian times to the present, with emphasis on ancient civilizations, the conquest, colonial society, independence, nineteenth-century development, Porfirian dictatorship, the Revolution of 1910, and modern society since 1920. Prereq: Soph. stdgd.; HIST 1001 and HIST 1002 recommended.

HIST 4450. North Africa. 3 cr. hrs.
North Africa from the 7th century to the present, emphasizing Islamic and European influences. Prereq: Soph. stdgd.; HIST 1001 and HIST 1002 recommended.

HIST 4460. Modern South Africa. 3 cr. hrs.
Survey of the major political, economic and social developments in modern South African history since the Dutch settlement to the present. Topics include: European settlement and colonization, mineral discoveries and their impact, industrialization and social change, the establishment of the apartheid system, African resistance and post-apartheid South African society. Particular attention is given to how the state-dictated system of racial segregation and discrimination affected the lived experience of South Africa’s diverse population. Prereq: Soph. stdgd.; HIST 1001 and HIST 1002 recommended.

HIST 4500. Modern Japan. 3 cr. hrs.
Major events, people and debates in Japanese history from 1800 to the present. Includes examinations of the “margins” of Japanese history: the countryside, the common people, ethnic minorities, marginal identities, etc., in order to understand how individuals dealt with changes in Japan from its early modernity to the present day. Prereq: Soph. stdgd.

HIST 4525. Age of the Samurai. 3 cr. hrs.
Examines the basic themes in pre-1900 Japanese history, in particular, the time when Japan was ruled by samurai. Topics include: the rise of the military government, regional and global interaction, as well as changes in culture, economy and society throughout ancient, medieval and early modern Japan. Also examines modern-day issues. Prereq: Soph. stdgd.; HIST 1401 recommended.

HIST 4550. Medieval East Asia. 3 cr. hrs.
Examines the tremendous flourishing of Chinese and Japanese cultures between the 7th and 14th centuries and the influence Mongol conquests played on the diffusion of these cultures to the west. Prereq: Soph. stdgd.

HIST 4555. Modern China. 3 cr. hrs.
The history of China from 1800-1976, emphasizing national responses to imperial decline, western intervention, civil wars, foreign occupation, and political turmoil. Prereq: Soph. stdgd.

HIST 4600. Comparative Twentieth-Century Genocides. 3 cr. hrs.
Examines the emergence, development, underlying causes and uses of genocide, ethnic cleansing and the other crimes against humanity in the twentieth-century. Case studies include colonial genocides; the Armenian genocide; the Holocaust; the Cambodian genocide; the Rwandan genocide; and the ethnic cleansings in the former Yugoslavia. Explores responses to these crimes, denial and memory, justice and redress, and strategies of prevention and intervention will be explored. Prereq: Soph. stdgd.; HIST 1001 and HIST 1002 recommended.

HIST 4931. Topics in History. 3 cr. hrs.
A lecture course on various areas and themes. The specific topics of 4931 courses will be designated in the Schedule of Classes. Prereq: Soph. stdgd.

HIST 4951. MU Led Travel/Study Abroad. 3 cr. hrs.
Course taught in an international setting by Marquette professors and where students earn Marquette credit. Study Abroad expenses apply.
HIST 4953. Readings in History. 3 cr. hrs.
Readings and discussion course designed to introduce a small group of undergraduates to topics, problems and methodologies in history which are not taught in the regular lecture courses. The topics will be designated in the Schedule of Classes. Prereq: Jr. stndg.

HIST 4955. Undergraduate Seminar in History. 3 cr. hrs.
Designed to initiate a small group of undergraduates in the techniques of scholarly historical study by concentrated work in a specialized field. Prereq: Sr. stndg.

HIST 4986. Internship in History. 1-3 cr. hrs.
Professional experience outside of the classroom in public history (details below), editorial, teaching, public service, research, or digital humanities. Students must arrange the internship in consultation with the department chair or designate. Students work three hours per week per credit hour and submit an annotated time sheet and a 3-5 page reflection paper on the work experience at the end of the term. Note: Students with an Interdisciplinary Minor in Public History must complete a 3-credit Internship in History at an archive, art or history museum, historical society or other approved institution. Students must arrange the internship in consultation with the department chair or designate and complete an internship agreement. S/U grade assessment. Prereq: Cons. of dept. ch. or designate.

HIST 4995. Independent Study in History. 1-3 cr. hrs.
Prereq: Jr. stndg., cons. of instr., and cons. of dept. ch.

HIST 4999. Senior Thesis. 3 cr. hrs.
Prereq: 3.500 MU GPA and cons. of dept. ch.
Interdisciplinary Majors and Minors

The Klingler College of Arts and Sciences is committed to the fundamental goal of integrating diverse areas of learning into a coherent whole. This integration lies at the heart of the liberal arts education provided at Marquette University. Achieving this goal involves two steps. First, as part of the college curriculum, students are required to study material from the wide variety of disciplines comprising the arts and sciences. Second, by majoring and perhaps minoring in a specific discipline of their choice, students pursue learning in more depth and are then challenged to integrate this into their broader understanding of the world acquired through the college curriculum. For students whose interests go beyond the boundaries of traditional disciplines, the college offers the following interdisciplinary majors and minors:

- Interdisciplinary Major/Minor in Africana Studies (p. 213)
- Interdisciplinary Major in Applied Mathematical Economics (p. 216)
- Interdisciplinary Major in Bioinformatics (p. 220)
- Interdisciplinary Major in Broad Field Science (p. 222) (for students who are seeking education certification)
- Interdisciplinary Major in Environmental Studies (p. 230)
- Interdisciplinary Major/Minor in International Affairs (p. 236)
- Interdisciplinary Major/Minor in Latin American Studies (p. 245)
- Major/Minor in Leadership and Organizations (p. 249)
- Interdisciplinary Major/Minor in Peace Studies (p. 259)
- Interdisciplinary Major/Minor in Women’s and Gender Studies (p. 266)
- Interdisciplinary Minor in Arabic Language Studies and Culture (p. 218)
- Interdisciplinary Minor in Asian Studies (p. 219)
- Interdisciplinary Minor in Broad Field Social Science (p. 225) (for students who are seeking education certification)
- Interdisciplinary Minor in Culture, Health and Illness (p. 227)
- Interdisciplinary Minor in Environmental Ethics (p. 229)
- Interdisciplinary Minor in Ethics (p. 233)
- Interdisciplinary Minor in Family Studies (p. 234)
- Interdisciplinary Minor in Law and Society (p. 248)
- Interdisciplinary Minor in Medieval Studies (p. 258)
- Interdisciplinary Minor in Public History (p. 264)
- Interdisciplinary Minor in Urban Affairs (p. 265)

Individualized Interdisciplinary Major or Minor

Students for whom particular interests may be better served by a flexible grouping of courses from several areas can create an individualized interdisciplinary major or minor. Examples of self-designed majors or minors include Arabic Studies, Italian Studies, and Middle Eastern and North African Studies. Students should consult the college office regarding the creation of the individualized major or minor, and to acquire the guidelines and the form that must be submitted. The student must work with a faculty adviser in their area of interest. With this adviser, the student writes a proposal explaining the relationship between educational objectives and the choice of an interdisciplinary major or minor, as well as develop a list of courses to be included with the sequence in which they will be taken. Two letters of recommendation are required: one from the faculty adviser, and the second, from a faculty member that is familiar with the student’s academic work. Such proposals, as well as any subsequent modifications, must be approved by the college’s associate dean.
Africana Studies

Director: Heather Hathaway, Ph.D.

Students who pursue the major/minor in Africana Studies come from all racial, ethnic and cultural backgrounds. They are unified by a common desire to enlarge and enrich their intellectual horizons by learning about the artistic, economic, historical, literary, philosophical, political, economic, sociological, scientific and theological contributions of people of African descent to U.S. society and culture. Students take core courses in English, history, philosophy, sociology and theology and augment these with at least five electives to complete the major.

Students are encouraged to develop 5-course concentrations in areas of particular interest. Possibilities include a disciplinary focus such as literature or sociology or an area focus such as American urban studies. Concentrations should be designed with a major adviser and require approval by the director of the program.

Africana Studies Major

The major consists of 30 credit hours: five core courses, including at least one course from each group (15 credit hours) and five electives (15 credit hours) from the course listings below.

Core Courses:

<table>
<thead>
<tr>
<th>Group A - English</th>
<th>3</th>
</tr>
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<tbody>
<tr>
<td>ENGL 4810 Comparative Race and Ethnic Studies</td>
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<tr>
<td>ENGL 4820 Studies in Critical Race and Ethnic Studies</td>
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<tr>
<td>ENGL 4830 Africana Literatures</td>
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<table>
<thead>
<tr>
<th>Group B - History</th>
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<tbody>
<tr>
<td>HIST 1401 Africa</td>
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<tr>
<td>HIST 4135 African-American History</td>
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<table>
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<tr>
<th>Group C - Sociology</th>
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</thead>
<tbody>
<tr>
<td>SOCI 3250 Race and Ethnic Relations</td>
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<tr>
<td>SOCI 4250 African-American Social Thought</td>
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</table>

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<tr>
<th>Group D - Theology</th>
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<tbody>
<tr>
<td>THEO 4490 Studies in Moral Theology (when topic is approved by program director)</td>
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</tbody>
</table>

Additional Course - Choose one from one of the Groups listed above. 3

Elective Courses - Choose five from the list below: 15

<table>
<thead>
<tr>
<th>ANTH 3100 Urban Anthropology</th>
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<tbody>
<tr>
<td>ARSC 3986 Internship</td>
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<tr>
<td>COMM 4500 Race and Gender Issues in Mass Media</td>
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<tr>
<td>CMST 3410 Intercultural Communication</td>
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<tr>
<td>CMST 4400 Cross-Cultural Communication in the United States</td>
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<tr>
<td>ECON 4012 Urban and Regional Economics</td>
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<tr>
<td>ENGL 4840 Postcolonial Literatures</td>
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<tr>
<td>HEAL 1025 Culture and Health</td>
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<tr>
<td>HIST 4140 American Urban History</td>
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<tr>
<td>HIST 4350 The Caribbean</td>
<td></td>
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<tr>
<td>HIST 4450 North Africa</td>
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<tr>
<td>MANA 3035 Diversity in Organizations</td>
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<tr>
<td>MUSI 2440 History of Jazz</td>
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<tr>
<td>PHIL 3780 Africana Philosophy</td>
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<tr>
<td>POSC 4281 Urban Public Policy</td>
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<tr>
<td>POSC 4291 Urban Politics</td>
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<tr>
<td>POSC 4361 Politics of Race, Ethnicity, and Gender</td>
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<tr>
<td>PSYC 3210 The Psychology of Prejudice</td>
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<tr>
<td>SOCI 3280 Race and Family</td>
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<tr>
<td>SOCI 3550 Race, Gender and Medicine</td>
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<tr>
<td>SOCI 4100 Urban Life</td>
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<tr>
<td>SOCI 4270 Urban Sociology</td>
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<tr>
<td>SOCI 4400 Social Inequality</td>
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</table>
SOWJ 1001  Introduction to Social Welfare and Justice
SPAN 4320  Contemporary Issues in the Hispanic World
SPAN 4400  U.S. Latino/a Literature
SPPA 4610  Multicultural Issues for Speech-Language Pathologists

Total Credit Hours 30

Notes:

• Any of the core courses listed above which are not taken to fulfill the core course requirement may be taken as an elective.
• "Special Topics," seminars or colloquia courses with an Africana Studies focus will also be considered for approval by the program director.

Africana Studies Minor

The minor consists of 18 credit hours: three core courses (9 credit hours) and three elective courses (9 credit hours) from the listings below.

Core Courses - Choose three courses from the Groups listed below:

<table>
<thead>
<tr>
<th>Group</th>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>ENGL 4810</td>
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</tr>
<tr>
<td>A</td>
<td>ENGL 4820</td>
<td>Studies in Critical Race and Ethnic Studies</td>
</tr>
<tr>
<td>A</td>
<td>ENGL 4830</td>
<td>Africana Literatures</td>
</tr>
<tr>
<td>B</td>
<td>HIST 1401</td>
<td>Africa</td>
</tr>
<tr>
<td>B</td>
<td>HIST 4135</td>
<td>African-American History</td>
</tr>
<tr>
<td>C</td>
<td>SOCI 3250</td>
<td>Race and Ethnic Relations</td>
</tr>
<tr>
<td>C</td>
<td>SOCI 4250</td>
<td>African-American Social Thought</td>
</tr>
<tr>
<td>D</td>
<td>THEO 4490</td>
<td>Studies in Moral Theology (when topic is approved by program director)</td>
</tr>
</tbody>
</table>

Elective Courses - Choose three from the list below:

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<tr>
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<tbody>
<tr>
<td>ANTH 3100</td>
<td>Urban Anthropology</td>
</tr>
<tr>
<td>ARSC 3986</td>
<td>Internship</td>
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<tr>
<td>COMM 4500</td>
<td>Race and Gender Issues in Mass Media</td>
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<td>CMST 3410</td>
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<td>HEAL 1025</td>
<td>Culture and Health</td>
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<td>HIST 4140</td>
<td>American Urban History</td>
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<td>History of Jazz</td>
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<tr>
<td>POSC 4281</td>
<td>Urban Public Policy</td>
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<tr>
<td>SPAN 4320</td>
<td>Contemporary Issues in the Hispanic World</td>
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<td>Course Code</td>
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</tr>
<tr>
<td>SPPA 4610</td>
<td>Multicultural Issues for Speech-Language Pathologists</td>
</tr>
</tbody>
</table>

**Total Credit Hours** 18

**Notes:**

- Any of the core courses listed above which are not taken to fulfill the core course requirement may be taken as an elective.
- Special topics, seminars or colloquia courses with an Africana Studies focus will also be considered for approval by the program director.
Applied Mathematical Economics

**Director: Andrew Meyer, Ph.D.**

This interdisciplinary major blends mathematics and economics to provide the quantitative tools necessary for modern economic analysis. Economics students will find this major to be excellent training for employment as a business economist or excellent preparation for graduate study. The mathematics, engineering or science student who wants to use mathematical expertise to learn a business discipline will find this major to be an interesting and useful application of mathematics.

### Applied Mathematical Economics Major

The major consists of 42 credit hours divided according to the following: 18 credit hours in economics courses and 15 credit hours in math, from the required course list below. Electives include one upper-division economics course (3 credit hours) and two mathematics courses (6 credit hours) from the elective course listing below.

#### Required Economics Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1103</td>
<td>Principles of Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 1104</td>
<td>Principles of Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 3003</td>
<td>Intermediate Microeconomic Analysis</td>
<td>3</td>
</tr>
<tr>
<td>ECON 3004</td>
<td>Intermediate Macroeconomic Analysis</td>
<td>3</td>
</tr>
<tr>
<td>ECON 4060</td>
<td>Introduction to Econometrics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 4065</td>
<td>Introduction to Mathematical Economics</td>
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</table>

#### Required Mathematics Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
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<tbody>
<tr>
<td>MATH 1450</td>
<td>Calculus 1</td>
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<tr>
<td>MATH 1451</td>
<td>Calculus 2</td>
<td>4</td>
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<tr>
<td>MATH 2450</td>
<td>Calculus 3</td>
<td>4</td>
</tr>
<tr>
<td>MATH 4710</td>
<td>Mathematical Statistics</td>
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</tr>
<tr>
<td>or MATH 4720</td>
<td>Statistical Methods</td>
<td></td>
</tr>
</tbody>
</table>

#### Elective Economic Courses: Choose one from the following courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 3001</td>
<td>Applied Business Economics</td>
</tr>
<tr>
<td>ECON 4006</td>
<td>Public Policies Toward American Industry</td>
</tr>
<tr>
<td>ECON 4008</td>
<td>Economics and Law</td>
</tr>
<tr>
<td>ECON 4010</td>
<td>Public Finance</td>
</tr>
<tr>
<td>ECON 4012</td>
<td>Urban and Regional Economics</td>
</tr>
<tr>
<td>ECON 4016</td>
<td>Environmental and Natural Resource Economics</td>
</tr>
<tr>
<td>ECON 4020</td>
<td>Economics of Labor Markets</td>
</tr>
<tr>
<td>ECON 4040</td>
<td>International Economic Issues</td>
</tr>
<tr>
<td>ECON 4042</td>
<td>International Antitrust and Competition Policy</td>
</tr>
<tr>
<td>ECON 4044</td>
<td>International Currency Markets</td>
</tr>
<tr>
<td>ECON 4045</td>
<td>Comparative Economic Systems</td>
</tr>
<tr>
<td>ECON 4046</td>
<td>International Trade</td>
</tr>
<tr>
<td>ECON 4047</td>
<td>Development Economics</td>
</tr>
<tr>
<td>ECON 4070</td>
<td>Economics and Ethics</td>
</tr>
<tr>
<td>ECON 4080</td>
<td>Money, Banking and Monetary Policy</td>
</tr>
<tr>
<td>ECON 4931</td>
<td>Topics in Economics</td>
</tr>
<tr>
<td>ECON 4953</td>
<td>Seminar in Economics</td>
</tr>
</tbody>
</table>

#### Elective Mathematics Courses: Choose two from the following courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 2451</td>
<td>Differential Equations</td>
</tr>
<tr>
<td>or MATH 4500</td>
<td>Theory of Differential Equations</td>
</tr>
<tr>
<td>MATH 3100</td>
<td>Linear Algebra and Matrix Theory</td>
</tr>
<tr>
<td>MATH 4630</td>
<td>Mathematical Modeling and Analysis</td>
</tr>
<tr>
<td>MATH 4650</td>
<td>Theory of Optimization</td>
</tr>
<tr>
<td>MATH 4700</td>
<td>Theory of Probability</td>
</tr>
<tr>
<td>MATH 4760</td>
<td>Time Series Analysis</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
</tr>
<tr>
<td>-------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>MATH 4780</td>
<td>Regression Analysis</td>
</tr>
</tbody>
</table>

Total Credit Hours 42
Arabic Language Studies and Culture

Program Director: Enaya Othman, Ph.D.

The interdisciplinary Arabic Language Studies and Culture Minor provides students with an understanding of the importance of the Arab world and Islamic cultures in today's global community. Students will acquire intermediate proficiency in speaking, listening, reading, and writing in modern standard Arabic language and Levantine vernacular. Proficiency in the Arabic language and culture equips students for professional opportunities, which can be found in education, international business, law, nursing, social work, government and armed forces. It trains students in all aspects of language skills and connects language learning with other disciplines. The interdisciplinary minor includes an array of classes that provide students with knowledge of the major Arabic literary genres, linguistic skills, historical, religious, cultural, political, and geographical aspects of the Arab world and Islamic civilization. The Arabic Language Studies and Culture Minor is one of the important avenues that articulates Marquette's Jesuit values and mission through enhancing students' skills and awareness of world religion, language, and cultures, and thus prepares them as global citizens. Students in this program will acknowledge their role as peace and interfaith messengers and educators who willingly contribute to and promote understanding between American and Arab cultures through outreach and collaboration at local, national and international levels with communities, organizations and study abroad programs.

Arabic Language Studies and Culture Minor

The minor in Arabic Language Studies and Culture consists of six courses (19 cr. hrs.): four required Arabic language courses (13 cr. hrs.), and two elective courses (6 cr. hrs.) as listed below. The minor excludes ARBC 1001 Elementary Arabic 1.

Required Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARBC 1002</td>
<td>Elementary Arabic 2</td>
<td>4</td>
</tr>
<tr>
<td>ARBC 2001</td>
<td>Intermediate Arabic 1</td>
<td>3</td>
</tr>
<tr>
<td>ARBC 2002</td>
<td>Intermediate Arabic 2</td>
<td>3</td>
</tr>
<tr>
<td>ARBC 3001</td>
<td>Grammar Review and Skills Development</td>
<td>3</td>
</tr>
</tbody>
</table>

Elective Courses: Choose two of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARBC 3002</td>
<td>Spoken Arabic</td>
</tr>
<tr>
<td>ARBC 3200</td>
<td>Culture and Civilization of the Middle East</td>
</tr>
<tr>
<td>ARBC 3210</td>
<td>Arabic Literature in English Translation</td>
</tr>
<tr>
<td>FOLA 4931</td>
<td>Topics in Foreign Language, Culture and Literature</td>
</tr>
<tr>
<td>HIST 3455</td>
<td>Modern Middle East Since 1500</td>
</tr>
<tr>
<td>THEO 4530</td>
<td>Islam: Faith and Practice</td>
</tr>
<tr>
<td>POSC 4721</td>
<td>International Politics of the Middle East</td>
</tr>
<tr>
<td>SOWJ 3450</td>
<td>Arabs and Muslims in Global Context</td>
</tr>
</tbody>
</table>

Total Credit Hours: 19

Note:

FOLA 4931 can fulfill an elective only if offered as an approved Arabic Language Studies and Culture topic.
Asian Studies

Director: Michael Wert, Ph.D.

Early Jesuit pioneers, like Francis Xavier and Mateo Ricci, were among the first Europeans to engage Asians in intellectual exchanges. Asian Studies at Marquette continues the long and rich tradition of Jesuit interest in Asia. The interdisciplinary minor in Asian Studies introduces students to the culture, history, politics, economics, geography, anthropology, sociology, philosophies and religions of Asia. This knowledge prepares students to meet the challenge of global careers that are increasingly focused on the developed and developing nations of this region.

Asian Studies Minor

The minor consists of 6 courses (18-20 credit hours): a required introductory History course (3 credit hours) and five courses (15-17 credit hours) to be chosen from the elective courses listed below. A maximum of two language courses *(6-8 credit hours) may be counted toward the Asian Studies minor.

Required Introductory Course:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 1501</td>
<td>East Asia</td>
<td>3</td>
</tr>
</tbody>
</table>

Elective Courses: Choose five courses from the following.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMST 3410</td>
<td>Intercultural Communication</td>
<td></td>
</tr>
<tr>
<td>CHNS 3200</td>
<td>Chinese Culture and Civilization</td>
<td></td>
</tr>
<tr>
<td>CHNS 1001</td>
<td>Elementary Chinese 1 *</td>
<td></td>
</tr>
<tr>
<td>CHNS 1002</td>
<td>Elementary Chinese 2 *</td>
<td></td>
</tr>
<tr>
<td>CHNS 2001</td>
<td>Intermediate Chinese 1 *</td>
<td></td>
</tr>
<tr>
<td>CHNS 2002</td>
<td>Intermediate Chinese 2 *</td>
<td></td>
</tr>
<tr>
<td>CHNS 3210</td>
<td>Chinese Literature in English Translation</td>
<td></td>
</tr>
<tr>
<td>CHNS 4931</td>
<td>Topics in Chinese Language, Literature and Civilization</td>
<td></td>
</tr>
<tr>
<td>HIST 3127</td>
<td>The Vietnam War Era</td>
<td></td>
</tr>
<tr>
<td>HIST 4500</td>
<td>Modern Japan</td>
<td></td>
</tr>
<tr>
<td>HIST 4525</td>
<td>Age of the Samurai</td>
<td></td>
</tr>
<tr>
<td>HIST 4555</td>
<td>Modern China</td>
<td></td>
</tr>
<tr>
<td>HIST 4931</td>
<td>Topics in History (depending on content and director's approval)</td>
<td></td>
</tr>
<tr>
<td>HIST 4953</td>
<td>Readings in History (depending on content and director's approval)</td>
<td></td>
</tr>
<tr>
<td>HIST 4955</td>
<td>Undergraduate Seminar in History (depending on content and director's approval)</td>
<td></td>
</tr>
<tr>
<td>PHIL 3380</td>
<td>Asian Philosophy</td>
<td></td>
</tr>
<tr>
<td>POSC 4521</td>
<td>Chinese Politics</td>
<td></td>
</tr>
<tr>
<td>POSC 4731</td>
<td>International Politics of Asia</td>
<td></td>
</tr>
<tr>
<td>THEO 4510</td>
<td>Survey of World Religions</td>
<td></td>
</tr>
<tr>
<td>THEO 4530</td>
<td>Islam: Faith and Practice</td>
<td></td>
</tr>
<tr>
<td>THEO 4540</td>
<td>Hinduism, Yoga, and Buddhism</td>
<td></td>
</tr>
</tbody>
</table>

Total Credit Hours: 18-20

Notes:

- *A maximum of two language courses (6-8 credit hours) may be counted toward the Asian Studies minor.
- HIST 4931 Topics in History, HIST 4953 Readings in History and HIST 4955 Undergraduate Seminar in History may be chosen dependent on content and prior approval of the director of the Asian Studies minor.
- Any exceptions to the courses listed must have prior approval of the director of the Asian Studies minor to be counted toward the minor.
Bioinformatics

Director: Dennis Brylow, Ph.D.

Bioinformatics is a field that lies at the intersection of biology, statistics and computer science and is focused on the analysis of large biological datasets. This interdisciplinary major gives students training of sufficient depth in both biology and computer science that they are competent to approach problems in bioinformatics from the perspective of both parent fields.

Bioinformatics Major

The major consists of nine required courses in Biological Sciences (26-27 credit hours), six required courses in Computer Science (20 credit hours) and three required courses in Math and Statistics (10 credit hours) for a total of 59-60 credit hours as well as three required cognate courses in Chemistry (12 credit hours).

Required Courses

Biology courses:

- BIOL 1001 General Biology 1 3
- BIOL 1002 General Biology 2 3
- BIOL 2301 Cell Biology 3
- BIOL 2201 Genetics 3
- BIOL 4101 Biochemistry and the Molecular Basis of Biology 3
- BIOL 4201 Genomics and Bioinformatics 3
- Upper division BIOL course 3

Biology lab courses: choose two from the following: 5-6

- BIOL 1101 Foundations in Biological Inquiry
- BIOL 3202 Experimental Genetics
- BIOL 3302 Experimental Cell Biology
- BIOL 4102 Experimental Molecular Biology

Computer Science courses:

- COSC 1010 Introduction to Computer Programming 4
- COSC 1020 Object-Oriented Software Design 4
- COSC 2100 Data Structures and Algorithms 1 3
- COSC 4610 Data Mining 3
- COSC 4800 Principles of Database Systems 3

Introduction to Bioinformatics (New 2017) 3

Bioinformatics Capstone course (New 2017) 3

Mathematics and Statistics courses:

- MATH 1450 Calculus 1 4
- MATH 4740 Biostatistical Methods and Models 3
  or MATH 4720 Statistical Methods
- MATH 2100 Discrete Mathematics 3
  or MATH 2350 Foundations of Mathematics

Total Credit Hours 59-60

Required Cognate Courses:

- CHEM 1001 General Chemistry 1 4
  or CHEM 1013 General Chemistry 1 for Majors
- CHEM 1002 General Chemistry 2 4
  or CHEM 1014 General Chemistry 2 for Majors
- CHEM 2111 Organic Chemistry 1 4
  or CHEM 2113 Organic Chemistry for Majors 1

Total Credit Hours 12
## Typical Program for Bioinformatics Majors

### Freshman

<table>
<thead>
<tr>
<th></th>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1001</td>
<td></td>
<td>3</td>
<td>BIOL 1002</td>
<td>3</td>
</tr>
<tr>
<td>COSC 1010</td>
<td></td>
<td>4</td>
<td>COSC 1020</td>
<td>4</td>
</tr>
<tr>
<td>ENGL 1001</td>
<td></td>
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<td>ENGL 1002</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1450</td>
<td></td>
<td>4</td>
<td>MATH 2100</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>BIOL 1101 (or UCCS-Hist. of Cultures &amp; Soc.)&lt;sup&gt;1&lt;/sup&gt;</td>
<td>2-3</td>
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<tr>
<td></td>
<td></td>
<td>14</td>
<td></td>
<td>15-16</td>
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</table>

### Sophomore

<table>
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<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>BIOL 2301</td>
<td></td>
<td>3</td>
<td>BIOL 2201</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1001 or 1013</td>
<td></td>
<td>4</td>
<td>CHEM 1002 or 1014</td>
<td>4</td>
</tr>
<tr>
<td>MATH 4740</td>
<td></td>
<td>3</td>
<td>COSC 2100</td>
<td>3</td>
</tr>
<tr>
<td>THEO 1001</td>
<td></td>
<td>3</td>
<td>PHIL 1001</td>
<td>3</td>
</tr>
<tr>
<td>UCCS-Indv. &amp; Soc. Behav</td>
<td></td>
<td>3</td>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>16</td>
<td></td>
<td>16</td>
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</tbody>
</table>

### Junior

<table>
<thead>
<tr>
<th></th>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Bioinformatics</td>
<td></td>
<td>3</td>
<td>COSC 4610</td>
<td>3</td>
</tr>
<tr>
<td>COSC 4800</td>
<td></td>
<td>3</td>
<td>BIOL upper division elective</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 4101</td>
<td></td>
<td>3</td>
<td>BIOL lab course</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 2111 or 2113</td>
<td></td>
<td>4</td>
<td>PHIL 2310</td>
<td>3</td>
</tr>
<tr>
<td>UCCS-Lit./Performing Arts</td>
<td></td>
<td>3</td>
<td>Elective&lt;sup&gt;2&lt;/sup&gt;</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>16</td>
<td></td>
<td>15</td>
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</table>

### Senior

<table>
<thead>
<tr>
<th></th>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 4201</td>
<td></td>
<td>3</td>
<td>Bioinformatics Capstone course</td>
<td>3</td>
</tr>
<tr>
<td>BIOL lab course or UCCS-Hist. of Cultures &amp; Soc.</td>
<td></td>
<td>3</td>
<td>UCCS-Diverse Cultures</td>
<td>3</td>
</tr>
<tr>
<td>UCCS-Theology</td>
<td></td>
<td>3</td>
<td>Electives</td>
<td>7</td>
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<tr>
<td></td>
<td></td>
<td>6</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>15</td>
<td></td>
<td>13</td>
</tr>
</tbody>
</table>

Total credit hours: 120-121

<sup>1</sup> BIOL 1101 is a recommended lab course and, if taken, should be taken in this term.

<sup>2</sup> Possible electives include COSC 4600 Fundamentals of Artificial Intelligence, MATH 3100 Linear Algebra and Matrix Theory, MATH 4780 Regression Analysis, BIOL 3601 Animal Development, BIOL 3501 Neurobiology, BIOL 3406 Plant Biology, CHEM 2112 Organic Chemistry 2 or CHEM 2114 Organic Chemistry for Majors 2, and Introductory Physics.
Broad Field Science

This major is open only to students enrolled in the College of Education. Students who complete this major with licensure in grades 6 through 12 may be employed to teach:

1. All science in grades 6 through 9 and general science including physical science in grades 10 through 12.
2. Biology, chemistry or physics (area of minor).

Interested students should see the chairpersons of biology, chemistry or physics, their advisers and the College of Education's director of undergraduate advising.

Broad Field Science Major

The Broad Field Science major consists of nine required common courses for broad field science (32 credit hours) and a minor for teaching certification in either biology, chemistry or physics which consists of an additional five to six courses (17-20 credit hours) for a total of 49-52 credit hours.

Required Courses for all Broad Field Science Majors:

<table>
<thead>
<tr>
<th>Biology Courses:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1001 General Biology 1</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 1002 General Biology 2</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 2001 Principles of Biological Investigation</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemistry Courses:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 1001 General Chemistry 1</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 1002 General Chemistry 2</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 2111 Organic Chemistry 1</td>
<td>4</td>
</tr>
<tr>
<td>or CHEM 2113 Organic Chemistry for Majors 1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Physics Courses:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 1001 General Physics 1</td>
<td>4</td>
</tr>
<tr>
<td>or PHYS 1003 General Physics with Introductory Calculus 1</td>
<td></td>
</tr>
<tr>
<td>or PHYS 1013 Classical and Modern Physics with Calculus 1</td>
<td></td>
</tr>
<tr>
<td>PHYS 1002 General Physics 2</td>
<td>4</td>
</tr>
<tr>
<td>or PHYS 1004 General Physics with Introductory Calculus 2</td>
<td></td>
</tr>
<tr>
<td>or PHYS 1014 Classical and Modern Physics with Calculus 2</td>
<td></td>
</tr>
<tr>
<td>PHYS 1009 Earth and Environmental Physics</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours: 32

In addition, Broad Field Science majors must complete an area of concentration in biology, chemistry or physics.

Biology minor for teaching certification requirements

<table>
<thead>
<tr>
<th>Biology Courses:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 2201 Genetics</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 2301 Cell Biology</td>
<td>3</td>
</tr>
</tbody>
</table>

and two additional courses in Biology: 6-7

<table>
<thead>
<tr>
<th>Biology Courses:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1410 Biology of Human Disease</td>
<td></td>
</tr>
<tr>
<td>BIOL 2401 Ecology</td>
<td></td>
</tr>
<tr>
<td>BIOL 3404 Evolutionary Biology</td>
<td></td>
</tr>
<tr>
<td>BIOL 3406 Plant Biology</td>
<td></td>
</tr>
<tr>
<td>BIOL 3501 Neurobiology</td>
<td></td>
</tr>
<tr>
<td>BIOL 3701 Human Physiology</td>
<td></td>
</tr>
<tr>
<td>BIOL 3801 Microbiology</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MATH / COSC Courses:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1410 Calculus for the Biological Sciences</td>
<td>3-4</td>
</tr>
<tr>
<td>or MATH 1450 Calculus 1</td>
<td></td>
</tr>
<tr>
<td>MATH 4740 Biostatistical Methods and Models</td>
<td>3</td>
</tr>
</tbody>
</table>
or MATH 1700  Modern Elementary Statistics

Total Credit Hours 18-20

**Chemistry minor for teaching certification requirements**

Chemistry Courses:
- CHEM 2112  Organic Chemistry 2  4
- or CHEM 2114  Organic Chemistry for Majors 2  4
- CHEM 3201  Quantitative Analysis  4

Biology Course:
- BIOL 4101  Biochemistry and the Molecular Basis of Biology  3

Math / COSC Course(s):
- MATH 1440  Calculus for the Biological Sciences  3
- or MATH 1450  Calculus 1  3
- COSC 1000  Introduction to Computer Science  3

Total Credit Hours 17

**Physics minor for teaching certification requirements**

Physics Courses:
- PHYS 2004  Modern Physics: Atoms, Particles, and Quanta  3
- PHYS 2005  Modern Physics: The States of Matter  3

Math Courses:
- MATH 1440  Calculus 1  4
- MATH 1451  Calculus 2  4
- MATH 2450  Calculus 3  4

Total Credit Hours 18

**Science Major For Elementary/Middle Education**

The Science major consists of nine required courses (30 credit hours) and two courses (6 credits) in electives chosen from the biology, chemistry or physics courses listed below for a total of 36 credit hours.

Required Courses:

**ARSC Courses:**
- ARSC 1020  Major Concepts in Modern Science 1  4
- ARSC 1021  Major Concepts in Modern Science 2  4

**Biology Courses:**
- BIOL 1001  General Biology 1  3
- BIOL 1002  General Biology 2  3
- BIOL 2001  Principles of Biological Investigation  3

**Chemistry Course:**
- CHEM 1001  General Chemistry 1  4

**Physics Courses:**
- PHYS 1007  Survey of Meteorology  3
- PHYS 1008  Astronomy and Space Physics  3
- PHYS 1009  Earth and Environmental Physics  3

**Electives:** 6 credits from the following:

**Biology Courses:**
- BIOL 1406  Plants, Pathogens and People
- BIOL 2301  Cell Biology
- BIOL 2401  Ecology
- BIOL 3601  Animal Development

**Chemistry Course:**
- CHEM 1002  General Chemistry 2
Physics Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 1001</td>
<td>General Physics 1</td>
</tr>
<tr>
<td>PHYS 1002</td>
<td>General Physics 2</td>
</tr>
</tbody>
</table>

Total Credit Hours: 36
# Broad Field Social Science

**Director: Daniel Meissner, Ph.D.**

The interdisciplinary minor in Broad Field Social Science is open only to students from the College of Education who have a second major in history, political science (only Concentration I: Politics, according to the directions given in the Political Science section of this bulletin), psychology or sociology. This minor allows students to prepare for the license extension offered by the Wisconsin Department of Public Instruction for Broad Field Social Science.

The interdisciplinary minor in Broad Field Social Science consists of seven courses (21 credit hours). Students must choose seven courses from among the six groups of courses listed below. Courses for the minor must come from five of the six groups. None of the seven courses taken for the minor can be in a group that corresponds to the student’s major. (For example, if the student is majoring in anthropology, the student should not take any courses listed in the anthropology area)

## Broad Field Social Science Minor

The Interdisciplinary Minor in Broad Field Social Science is open only to students majoring in education with a second major in history, political science (only Concentration I: Politics, according to the Political Science section of this bulletin), psychology or sociology. This minor allows students to prepare for the license extension offered by the Wisconsin Department of Public Instruction for Broad Field Social Studies and one additional area of licensure. In order to complete the minor, students must complete five of the required courses (15 credits) and then choose four courses (12 credits) from one of the concentrations. Courses completed for the concentration cannot be in an area that corresponds with the student’s major.

### Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1001</td>
<td>Introduction to Economics</td>
<td>3</td>
</tr>
<tr>
<td>or ECON 1103</td>
<td>Principles of Microeconomics</td>
<td></td>
</tr>
<tr>
<td>or ECON 1104</td>
<td>Principles of Macroeconomics</td>
<td></td>
</tr>
<tr>
<td>EDUC 1220</td>
<td>Psychology of Human Development in Children and Adolescents in a Diverse Society</td>
<td>3</td>
</tr>
<tr>
<td>or PSYC 3101</td>
<td>Developmental Psychology: Conception Through Adolescence</td>
<td></td>
</tr>
<tr>
<td>HIST 1001</td>
<td>Growth of Western Civilization to 1715</td>
<td>3</td>
</tr>
<tr>
<td>or HIST 1002</td>
<td>Growth of Western Civilization since 1715</td>
<td></td>
</tr>
<tr>
<td>POSC 2201</td>
<td>American Politics</td>
<td>3</td>
</tr>
<tr>
<td>or POSC 2401</td>
<td>Comparative Politics</td>
<td></td>
</tr>
<tr>
<td>or POSC 2601</td>
<td>International Politics</td>
<td></td>
</tr>
<tr>
<td>SOCI 1001</td>
<td>Principles of Sociology</td>
<td>3</td>
</tr>
</tbody>
</table>

Complete one of the following concentrations:

<table>
<thead>
<tr>
<th>Concentration</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON Concentration</td>
<td>ECON 1103 Principles of Microeconomics, ECON 1104 Principles of Macroeconomics</td>
</tr>
<tr>
<td></td>
<td>Two ECON Upper Division Electives</td>
</tr>
<tr>
<td>HIST Concentration</td>
<td>HIST 1101 Introduction to American History, HIST 1301 Survey of Latin America, or HIST 1401 Africa, or HIST 1501 East Asia</td>
</tr>
<tr>
<td></td>
<td>Two HIST Upper Division Electives</td>
</tr>
<tr>
<td>POSC Concentration</td>
<td>Two of the following: POSC 2201 American Politics, or POSC 2401 Comparative Politics, or POSC 2601 International Politics</td>
</tr>
<tr>
<td></td>
<td>And two POSC Upper Division Electives</td>
</tr>
<tr>
<td>PSYC Concentration</td>
<td>PSYC 1001 General Psychology, Three PSYC Upper Division Electives</td>
</tr>
</tbody>
</table>

**Total Credit Hours** 27

A person with a Broad Field Social Studies license may teach any social studies class at the early adolescence-adolescence level, up through grade 10 and any basic or fusion social studies class in grades 11-12 that is not: A) a semester-long discrete course in a social studies subcategory – e.g.
psychology; B) an honors, IB, or advanced placement course; C) part of the college preparatory sequence and/or an elective course with more depth of content than basic courses. To teach a course under the criteria in A, B, or C (above), the candidate must hold a license in that subject area.
Culture, Health and Illness

Director: Jane Peterson, Ph.D.

The Culture, Health and Illness minor is designed to provide students the opportunity to examine health and illness from an integrated, social science perspective. Students pursuing this minor learn to identify and analyze the social and cultural factors that influence how people from diverse backgrounds perceive and experience health and illness.

A minor in Culture, Health and Illness provides students an appreciation for the social determinants of health. This prepares them not only for advanced degrees in medical and nursing professions, but also for future careers and degrees in public health, health advocacy, health policy, health ethics, health care administration and gerontology.

Culture, Health and Illness Minor

The Interdisciplinary minor in Culture, Health and Illness consists of a total of six courses (18 credits); two required courses (6 credits) and four elective courses (12 credits) as listed below.

Required Courses

Choose one of the following: 

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 1001</td>
<td>Introductory Anthropology</td>
</tr>
<tr>
<td>ANTH 1201</td>
<td>Introduction to Biological Anthropology</td>
</tr>
<tr>
<td>SOCI 1001</td>
<td>Principles of Sociology</td>
</tr>
</tbody>
</table>

Choose one of the following: 

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOCI 3500</td>
<td>Culture, Health and Illness</td>
</tr>
<tr>
<td>SOCI 3550</td>
<td>Race, Gender and Medicine</td>
</tr>
</tbody>
</table>

Elective Courses

Choose four courses from the following. At least two of the following disciplines must be represented: ANTH, CRLS, POSC/BISC, PSYC, SOCI, SOWJ.

Theories and Practice of Health and Intervention:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 3153</td>
<td>Demography</td>
</tr>
<tr>
<td>ANTH 4251</td>
<td>Human Osteology and Odontology</td>
</tr>
<tr>
<td>POSC 4381</td>
<td>Politics of U.S. Health Care</td>
</tr>
<tr>
<td>or BISC 4381</td>
<td>Politics of U.S. Health Care</td>
</tr>
<tr>
<td>POSC 4461</td>
<td>Comparative Health Politics and Policy</td>
</tr>
<tr>
<td>or BISC 4461</td>
<td>Comparative Health Politics and Policy</td>
</tr>
<tr>
<td>PSYC 3220</td>
<td>Human Sexuality</td>
</tr>
<tr>
<td>PSYC 3401</td>
<td>Abnormal Psychology</td>
</tr>
<tr>
<td>SOCI 3300</td>
<td>Sociology of the Life Course</td>
</tr>
<tr>
<td>SOWJ 2200</td>
<td>Human Behavior in the Social Environment</td>
</tr>
<tr>
<td>SOCI 4680</td>
<td>Sociology of Mental Illness</td>
</tr>
</tbody>
</table>

Social and Structural Determinants of Health:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 3100</td>
<td>Urban Anthropology</td>
</tr>
<tr>
<td>ANTH 4316</td>
<td>Culture Change and Development</td>
</tr>
<tr>
<td>PSYC 3420</td>
<td>Health Psychology</td>
</tr>
<tr>
<td>SOCI 3200</td>
<td>Social Problems in Urban Society</td>
</tr>
<tr>
<td>SOCI 3280</td>
<td>Race and Family</td>
</tr>
<tr>
<td>SOCI 3570</td>
<td>Men, Masculinities and Health</td>
</tr>
<tr>
<td>SOCI 4270</td>
<td>Urban Sociology</td>
</tr>
<tr>
<td>SOWJ 2150</td>
<td>Immigrants and their Communities</td>
</tr>
<tr>
<td>SOWJ 4700</td>
<td>Global Aid and Humanitarianism</td>
</tr>
</tbody>
</table>

Epidemiology of Violence:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRLS 3600</td>
<td>Victimology</td>
</tr>
<tr>
<td>CRLS 3640</td>
<td>Domestic Violence in the United States</td>
</tr>
<tr>
<td>CRLS 3660</td>
<td>Sex Offenses and Offenders</td>
</tr>
<tr>
<td>PSYC 3210</td>
<td>The Psychology of Prejudice</td>
</tr>
<tr>
<td>SOCI 4300</td>
<td>Sociology of Aging</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
</tr>
<tr>
<td>------------</td>
<td>------------------------------</td>
</tr>
<tr>
<td>SOCI 4400</td>
<td>Social Inequality</td>
</tr>
<tr>
<td>SOWJ 3320</td>
<td>Victim Services and Policies</td>
</tr>
</tbody>
</table>

Total Credit Hours 18
Environmental Ethics

Director: Jame Schaefer, Ph.D.
Interdisciplinary Minor in Environmental Ethics website (http://www.inee.mu.edu)

Students who opt for this minor acquire the intellectual resources needed to reflect on the ethical dimensions of environmental issues. Five courses develop the knowledge and skills in the natural sciences, the theological and philosophical traditions, and applied disciplines that are relevant to the minor. It culminates in a capstone seminar during which a particular issue is selected, investigated from the perspectives of the various disciplines, and reflected upon to identify ethical concerns and ways of addressing them. When appropriate and feasible, the capstone incorporates student service in public or private organizations, government agencies, and businesses that are addressing the problem. Students are encouraged to take additional courses that complement the minor and to draw upon them during their capstone experience.

Faculty work together to schedule the required courses so the minor can be completed in two years. Faculty also identify students in their courses who are seeking the minor, guide their learning toward its goals, and help students understand how their courses relate to the minor.

Students pursuing the minor gather at least once a year to discuss the program or a pertinent topic. Upon completion of the minor, each student is presented with a certificate listing the required and complementary courses taken and service learning completed. Consult the program director to declare and track courses toward this minor as early as possible.

Environmental Ethics Minor

The Interdisciplinary Minor in Environmental Ethics consists of six courses (18 credit hours) from the courses listed below.

Required Course:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>INEE 4997</td>
<td>Capstone Seminar in Environmental Ethics</td>
<td>3</td>
</tr>
</tbody>
</table>

Science Courses: Choose at least one of the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 2401</td>
<td>Ecology</td>
<td>3</td>
</tr>
<tr>
<td>or BIOL 3401</td>
<td>Advanced Ecology</td>
<td></td>
</tr>
<tr>
<td>CHEM 1080</td>
<td>Chemistry in the World</td>
<td></td>
</tr>
<tr>
<td>PHYS 1009</td>
<td>Earth and Environmental Physics</td>
<td></td>
</tr>
<tr>
<td>CEEN 3510</td>
<td>Environmental Engineering (CEEN majors only)</td>
<td>3</td>
</tr>
</tbody>
</table>

Humanities Courses: Choose at least one of the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 3350</td>
<td>Philosophy of the Environment</td>
<td>3</td>
</tr>
<tr>
<td>THEO 4440</td>
<td>Foundations of Ecological Ethics</td>
<td>3</td>
</tr>
</tbody>
</table>

Applied Disciplines Courses: Choose at least one of the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 4330</td>
<td>Health, Science and Environmental Communication</td>
<td>3</td>
</tr>
<tr>
<td>ECON 4016</td>
<td>Environmental and Natural Resource Economics</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 4931</td>
<td>Topics in Literature (Nature Writing)</td>
<td>3</td>
</tr>
<tr>
<td>POSC 4193</td>
<td>Environmental Politics and Policy</td>
<td>3</td>
</tr>
</tbody>
</table>

Electives - Choose two courses from areas listed above.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>6</td>
</tr>
</tbody>
</table>

Total Credit Hours

<table>
<thead>
<tr>
<th>Required Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>INEE 4997</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours 18

Note:

- Recommended complementary courses: ANTH 2203 Human Geography and THEO 4430 Religion and Science.
- ENGL 4931 Topics in Literature may be chosen from the Applied Disciplines Courses when the topic covered is Nature Writing.
Environmental Studies

Director: Stefan Schnitzer, Ph.D.

The major and minor offer interdisciplinary studies on issues related to the environment. Students take core and elective courses that address the environment from a wide range of fields, including biology and ecology, chemistry and physics, theology and ethics, economics, political science, sociology, anthropology, and history. The major is ideal for students who intend to pursue a career that focuses on the environment (e.g., environmental management, restoration, mitigation, consulting, policy, economics), or who intend to pursue graduate or professional school in environmental science, law, business, policy, economics, philosophy, theology, or ethics.

The specific learning outcomes for graduates of the Environmental Studies major are to:

• understand the basic organization of ecosystems and their response to environmental factors
• quantitatively analyze scientific and economic data related to the environment
• have a fundamental understanding of the social, economic, political, and historical components that influence the decision-making process with respect to the environment
• understand philosophical and ethical aspects of environmental issues
• gain practical experience working on environmental issues via internships
• understand and synthesize the study of the environment from the perspective of multiple disciplines

Environmental Studies Major

The goal of the major is to provide a comprehensive and in-depth education in environmental studies, which includes the study of the ecology of natural ecosystems and the processes by which humans influence, exploit, evaluate, value, mitigate and restore their environment. Students learn to understand and address pressing environmental issues through an interdisciplinary approach. Students complete 16 required courses (48-49 credits) and two elective courses (6-7 credits) that cover subjects from the sciences, social sciences and humanities.

Required courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1001</td>
<td>General Biology 1</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 1002</td>
<td>General Biology 2</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1700</td>
<td>Modern Elementary Statistics 1</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1080</td>
<td>Chemistry in the World</td>
<td>3-4</td>
</tr>
<tr>
<td>or PHYS 1009</td>
<td>Earth and Environmental Physics</td>
<td></td>
</tr>
<tr>
<td>BIOL 2401</td>
<td>Ecology</td>
<td>3</td>
</tr>
</tbody>
</table>

Required Experimental Biology course

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 3402</td>
<td>Experimental Ecology and Field Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 3802</td>
<td>Experimental Microbiology</td>
<td></td>
</tr>
<tr>
<td>PHIL 3350</td>
<td>Philosophy of the Environment</td>
<td>3</td>
</tr>
<tr>
<td>or THEO 4440</td>
<td>Foundations of Ecological Ethics</td>
<td></td>
</tr>
</tbody>
</table>

Environmental Studies Internship or approved research experience (New 2017)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Environmental Studies Capstone course (New 2017)</td>
<td>3</td>
</tr>
</tbody>
</table>

Required Economics courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1103</td>
<td>Principles of Microeconomics</td>
<td></td>
</tr>
<tr>
<td>ECON 1104</td>
<td>Principles of Macroeconomics</td>
<td></td>
</tr>
<tr>
<td>ECON 4016</td>
<td>Environmental and Natural Resource Economics</td>
<td></td>
</tr>
</tbody>
</table>

Required Political Science courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>POSC 2601</td>
<td>International Politics</td>
<td>6</td>
</tr>
<tr>
<td>or POSC 2201</td>
<td>American Politics</td>
<td></td>
</tr>
<tr>
<td>POSC 4193</td>
<td>Environmental Politics and Policy</td>
<td></td>
</tr>
</tbody>
</table>

Required Environment and Society courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 2203</td>
<td>Human Geography</td>
<td>6</td>
</tr>
<tr>
<td>SOCI 3720</td>
<td>Environment and Society</td>
<td></td>
</tr>
<tr>
<td>or SOCI 3750</td>
<td>Food, Water and Society</td>
<td></td>
</tr>
<tr>
<td>or HIST 3800</td>
<td>Environmental History: Ecology and Society in the Modern World</td>
<td></td>
</tr>
</tbody>
</table>

Elective Courses: Choose two courses not already completed as required courses from the following, including at least one upper division course. 2

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Environment and Society</td>
<td>6-7</td>
</tr>
</tbody>
</table>


1. Some courses may have prerequisites.
2. Upper division courses typically require more than 15 credits.

Environment and Society
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOWJ 4700</td>
<td>Global Aid and Humanitarianism</td>
</tr>
<tr>
<td>COMM 4330</td>
<td>Health, Science and Environmental Communication</td>
</tr>
<tr>
<td>ENGL 4775</td>
<td>Literature and Place</td>
</tr>
<tr>
<td>ENGL 4765</td>
<td>Material Cultures</td>
</tr>
<tr>
<td>HIST 3800</td>
<td>Environmental History: Ecology and Society in the Modern World</td>
</tr>
<tr>
<td>SOCI 3750</td>
<td>Food, Water and Society</td>
</tr>
<tr>
<td>or SOCI 3720</td>
<td>Environment and Society</td>
</tr>
<tr>
<td>THEO 4440</td>
<td>Foundations of Ecological Ethics</td>
</tr>
<tr>
<td>or PHIL 3350</td>
<td>Philosophy of the Environment</td>
</tr>
</tbody>
</table>

Environmental Science and Anthropology

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 3401</td>
<td>Advanced Ecology</td>
</tr>
<tr>
<td>BIOL 3404</td>
<td>Evolutionary Biology</td>
</tr>
<tr>
<td>BIOL 3406</td>
<td>Plant Biology</td>
</tr>
<tr>
<td>BIOL 3801</td>
<td>Microbiology</td>
</tr>
<tr>
<td>PHYS 1007</td>
<td>Survey of Meteorology</td>
</tr>
<tr>
<td>PHYS 1009</td>
<td>Earth and Environmental Physics</td>
</tr>
<tr>
<td>or CHEM 1080</td>
<td>Chemistry in the World</td>
</tr>
<tr>
<td>ANTH 2201</td>
<td>Human Evolutionary Process</td>
</tr>
<tr>
<td>or ANTH 1201</td>
<td>Introduction to Biological Anthropology</td>
</tr>
<tr>
<td>ANTH 3153</td>
<td>Demography</td>
</tr>
<tr>
<td>ANTH 4144</td>
<td>The Rise of Agriculture</td>
</tr>
<tr>
<td>ANTH 4245</td>
<td>Archaeology of Complex Societies</td>
</tr>
<tr>
<td>ANTH 4316</td>
<td>Culture Change and Development</td>
</tr>
</tbody>
</table>

Political Science

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>POSC 4221</td>
<td>Interest Group Politics</td>
</tr>
<tr>
<td>POSC 4331</td>
<td>Politics and Regulation</td>
</tr>
<tr>
<td>POSC 4661</td>
<td>The Political Economy of Development</td>
</tr>
</tbody>
</table>

Economics

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 3003</td>
<td>Intermediate Microeconomic Analysis</td>
</tr>
<tr>
<td>ECON 4012</td>
<td>Urban and Regional Economics</td>
</tr>
<tr>
<td>ECON 4047</td>
<td>Development Economics</td>
</tr>
</tbody>
</table>

Total Credit Hours 54-56

1. MATH 4720, MATH 4740, PSYC 2001 or SOCI 2060 can be substituted to fulfill this requirement.
2. Additional courses may be counted as electives with permission of the program director.

Environmental Studies Minor

The goal of the minor is to provide an overview of environmental studies, which includes the study of the ecology of natural ecosystems and the processes by which humans influence, exploit, evaluate, value, mitigate and restore their environment. Students learn to understand and address pressing environmental issues through an interdisciplinary approach. Students complete 4 required courses (12-13 credits) and three elective courses (9-10 credits) that cover subjects from the sciences, social sciences and humanities.

Required courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1001</td>
<td>General Biology 1</td>
</tr>
<tr>
<td>BIOL 2401</td>
<td>Ecology</td>
</tr>
<tr>
<td>CHEM 1080</td>
<td>Chemistry in the World</td>
</tr>
<tr>
<td>or PHYS 1009</td>
<td>Earth and Environmental Physics</td>
</tr>
<tr>
<td>PHIL 3350</td>
<td>Philosophy of the Environment</td>
</tr>
<tr>
<td>or THEO 4440</td>
<td>Foundations of Ecological Ethics</td>
</tr>
</tbody>
</table>

Elective courses (choose one from each category, excluding those completed as required courses)

Category 1: Environmental Science

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 3401</td>
<td>Advanced Ecology</td>
</tr>
<tr>
<td>BIOL 3402</td>
<td>Experimental Ecology and Field Biology</td>
</tr>
<tr>
<td>Category 2: Anthropology/Sociology</td>
<td>3</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>---</td>
</tr>
<tr>
<td>BIOL 3802 Experimental Microbiology</td>
<td></td>
</tr>
<tr>
<td>PHYS 1009 Earth and Environmental Physics</td>
<td></td>
</tr>
<tr>
<td>or CHEM 1080 Chemistry in the World</td>
<td></td>
</tr>
<tr>
<td>PHYS 1007 Survey of Meteorology</td>
<td></td>
</tr>
<tr>
<td>ANTH 2203 Human Geography</td>
<td></td>
</tr>
<tr>
<td>ANTH 3153 Demography</td>
<td></td>
</tr>
<tr>
<td>ANTH 4316 Culture Change and Development</td>
<td></td>
</tr>
<tr>
<td>SOCI 3720 Environment and Society</td>
<td></td>
</tr>
<tr>
<td>SOCI 3750 Food, Water and Society</td>
<td></td>
</tr>
<tr>
<td>SOWJ 4700 Global Aid and Humanitarianism</td>
<td></td>
</tr>
<tr>
<td>Category 3: Economics/Policy/Humanities</td>
<td>3</td>
</tr>
<tr>
<td>COMM 4330 Health, Science and Environmental Communication</td>
<td></td>
</tr>
<tr>
<td>ECON 4016 Environmental and Natural Resource Economics</td>
<td></td>
</tr>
<tr>
<td>ECON 4047 Development Economics</td>
<td></td>
</tr>
<tr>
<td>HIST 3800 Environmental History: Ecology and Society in the Modern World</td>
<td></td>
</tr>
<tr>
<td>POSC 4193 Environmental Politics and Policy</td>
<td></td>
</tr>
<tr>
<td>POSC 4661 The Political Economy of Development</td>
<td></td>
</tr>
<tr>
<td>THEO 4440 Foundations of Ecological Ethics</td>
<td></td>
</tr>
<tr>
<td>or PHIL 3350 Philosophy of the Environment</td>
<td></td>
</tr>
</tbody>
</table>

Total Credit Hours: 21-23
Ethics

*Director: Susanne Foster, Ph.D.*

The interdisciplinary minor in ethics provides an opportunity for students to explore the moral dimensions of human life and to develop the ability for critical ethical analysis in their personal and professional lives. By encouraging students to seek values across the curriculum in a formal and disciplined way, it prepares graduates not only for the modern workplace, but for the world in its most urgent and deepest complexity. First-level courses introduce the basis of ethical reasoning within philosophy and Christian faith. Second-level courses engage students in the application of ethical theories to particular ethical issues or problems (e.g., business ethics, environmental ethics, poverty). Third-level courses allow students to explore the contexts of various institutions and social domains (e.g., the legal system, social and institutional dimensions of race and gender, mass communication) in which ethical decisions must be made.

**Ethics Minor**

The Ethics minor consists of seven courses (21 credits) chosen from the areas listed below:

<table>
<thead>
<tr>
<th>Ethical Theory Courses: Choose two of the following courses:</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 2310 Theory of Ethics</td>
<td></td>
</tr>
<tr>
<td>THEO 2400 Christian Discipleship</td>
<td></td>
</tr>
<tr>
<td>or THEO 4400 Christian Faith and Justice</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Applied Ethics Courses: Choose two courses, at least one philosophy:</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 3900 Ethical Problems of Mass Communications</td>
<td></td>
</tr>
<tr>
<td>PHIL 4320 Contemporary Ethical Problems</td>
<td></td>
</tr>
<tr>
<td>PHIL 4330 Business Ethics</td>
<td></td>
</tr>
<tr>
<td>PHIL 4335 Biomedical Ethics</td>
<td></td>
</tr>
<tr>
<td>THEO 4440 Foundations of Ecological Ethics</td>
<td></td>
</tr>
<tr>
<td>THEO 4450 Medical Ethics</td>
<td></td>
</tr>
<tr>
<td>THEO 4490 Studies in Moral Theology</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contemporary Interfaces with Ethics: Choose two courses:</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 4400 Mass Communication Theory and Research</td>
<td></td>
</tr>
<tr>
<td>HEAL 2100 Primary Health Care Concepts</td>
<td></td>
</tr>
<tr>
<td>MANA 3002 Business and Its Environment</td>
<td></td>
</tr>
<tr>
<td>MARK 4070 Marketing and Society</td>
<td></td>
</tr>
<tr>
<td>PHIL 3350 Philosophy of the Environment</td>
<td></td>
</tr>
<tr>
<td>PHIL 3710 Political Philosophy</td>
<td></td>
</tr>
<tr>
<td>PHIL 3750 Philosophy of Law</td>
<td></td>
</tr>
<tr>
<td>PHIL 3751 Philosophy and History of Crime and Punishment</td>
<td></td>
</tr>
<tr>
<td>PHIL 3770 Feminist Philosophy</td>
<td></td>
</tr>
<tr>
<td>PHIL 3780 Africana Philosophy</td>
<td></td>
</tr>
<tr>
<td>POSC 2801 Justice and Power</td>
<td></td>
</tr>
<tr>
<td>POSC 4812 Ethics and Politics</td>
<td></td>
</tr>
<tr>
<td>SOCI 3200 Social Problems in Urban Society</td>
<td></td>
</tr>
<tr>
<td>SOCI 4130 Sociology of Human Values</td>
<td></td>
</tr>
<tr>
<td>THEO 2500 Theology, Violence, and Nonviolence</td>
<td></td>
</tr>
</tbody>
</table>

**Required Capstone Course:**

| INET 4953 Capstone Seminar in Ethics                            | 3 |

**Total Credit Hours**: 21

**Notes:**

- Other courses subject to approval of director of the Ethics minor.
- Additional courses subject to special approval by the director of the Center of Ethics Study.
Family Studies

**Director:** Lynn Turner, Ph.D.

Interdisciplinary Minor in Family Studies website (http://www.marquette.edu/family)

The interdisciplinary minor in family studies allows students to combine theoretical and practical perspectives on the family and to become familiar with the various methodologies academic disciplines use to develop insights into the family.

### Family Studies Minor

The minor consists of six courses (18 credit hours/17 credits for nursing students taking the NURS 3400-3401 sequence): two required courses (6 credit hours) and four courses (12 credit hours) of electives with at least one course from categories I-III listed below. Any substitutions must be approved by the program coordinator. For more information regarding declaring the minor and updates of approved courses see the Family Studies website (http://www.marquette.edu/family/requirements.html).

**Notes:**

- SOCI 2200 The Family should be taken before other courses in the minor, or at least as soon as the student has selected the minor.
- INFS 4953 Interdisciplinary Seminar in Family Studies should be taken last after the other five courses have been completed or during the student’s last year of study.
- Additional courses may be acceptable toward the requirements. See the program coordinator to receive prior approval for any courses not listed above or for any substitutions.

#### Required Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOCI 2200</td>
<td>The Family</td>
<td>3</td>
</tr>
<tr>
<td>INFS 4953</td>
<td>Interdisciplinary Seminar in Family Studies</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Elective Courses: Choose four courses with at least one from each category listed below:

<table>
<thead>
<tr>
<th>Category I - Family as Experience</th>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ANTH 3330</td>
<td>Women and Men in Cross-Cultural Perspective</td>
</tr>
<tr>
<td></td>
<td>ENGL 4710</td>
<td>Studies in Genre</td>
</tr>
<tr>
<td></td>
<td>HEAL 1025</td>
<td>Culture and Health</td>
</tr>
<tr>
<td></td>
<td>HIST 4150</td>
<td>Childhood in America</td>
</tr>
<tr>
<td></td>
<td>HIST 4245</td>
<td>Women in Western Civilization</td>
</tr>
<tr>
<td></td>
<td>SOCI 3280</td>
<td>Race and Family</td>
</tr>
<tr>
<td></td>
<td>THEO 4410</td>
<td>Family, Church, and Society</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category II - Family as System Within Society:</th>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>COMM 4100</td>
<td>Mass Media and the American Family</td>
</tr>
<tr>
<td></td>
<td>CMST 4130</td>
<td>Communication and Urban Families</td>
</tr>
<tr>
<td></td>
<td>CMST 4953</td>
<td>Seminar in Communication Studies</td>
</tr>
<tr>
<td></td>
<td>EDUC 1220</td>
<td>Psychology of Human Development in Children and Adolescents in a Diverse Society (Education majors only)</td>
</tr>
<tr>
<td></td>
<td>PSYC 2101</td>
<td>Introduction to Life-Span Developmental Psychology for Nursing Students</td>
</tr>
<tr>
<td></td>
<td>PSYC 3101</td>
<td>Developmental Psychology: Conception Through Adolescence</td>
</tr>
<tr>
<td></td>
<td>PSYC 3120</td>
<td>Developmental Psychology: Adulthood and Aging</td>
</tr>
<tr>
<td></td>
<td>PSYC 3550</td>
<td>Psychology of Gender Roles (for non-PSYC majors)</td>
</tr>
<tr>
<td></td>
<td>PSYC 4720</td>
<td>Psychology of Marriage and Family (PSYC majors only)</td>
</tr>
<tr>
<td></td>
<td>SOCI 4300</td>
<td>Sociology of Aging</td>
</tr>
<tr>
<td></td>
<td>SOCI 4450</td>
<td>Sociology of Sex and Gender</td>
</tr>
<tr>
<td></td>
<td>SOCI 4931</td>
<td>Topics in Sociology</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category III - Family As Resource For Human Needs:</th>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CMST 4110</td>
<td>Family Communication</td>
</tr>
<tr>
<td></td>
<td>CRLS 2100</td>
<td>Juvenile Delinquency and Juvenile Justice</td>
</tr>
<tr>
<td></td>
<td>CRLS 4640</td>
<td>Family Violence and Public Intervention</td>
</tr>
<tr>
<td></td>
<td>EDUC 4217</td>
<td>Methods of Teaching Children/Youth with Exceptional Needs</td>
</tr>
<tr>
<td></td>
<td>PHTH 7515</td>
<td>Pathophysiology</td>
</tr>
<tr>
<td></td>
<td>PSYC 3130</td>
<td>The Psychology of the Exceptional Child</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td></td>
</tr>
<tr>
<td>------------</td>
<td>----------------------------------</td>
<td></td>
</tr>
<tr>
<td>PSYC 3410</td>
<td>Childhood Psychopathology</td>
<td></td>
</tr>
<tr>
<td>SOWJ 3001</td>
<td>Social Welfare Policy and Programs</td>
<td></td>
</tr>
<tr>
<td>SOWJ 3370</td>
<td>Family Practice</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Total Credit Hours</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>18</td>
<td></td>
</tr>
</tbody>
</table>
International Affairs

Director: Barrett McCormick, Ph.D.
Interdisciplinary Major in International Affairs (http://www.marquette.edu/inia)

The major or minor offers interdisciplinary study of international affairs. Students take core courses in international politics and economics and, for the major, additional courses in history, languages, culture and other areas to complete one of the following concentrations based either on a theme or a region: Area Studies (Asian Studies, Developing Countries, European Studies, Latin American Studies, Middle East Studies), Cross-Cultural Studies, International Economic Relations, International Political-Military Relations, International Communication or Peace Studies. Students may also work with the director of INIA to design a concentration on a special topic in which they are interested.

By graduation, students will have gained a solid base of knowledge regarding international affairs and the ability to integrate the diverse perspectives of several disciplines to gain subtle understandings of complex problems.

For more information visit the Interdisciplinary Major/Minor in International Affairs website (http://www.marquette.edu/inia).

International Affairs Major

The major consists of ten courses (30 credit hours), including six courses (18 credit hours) for the INIA core, and four courses (12 credit hours) in a concentration. Students must complete one of the seven concentrations as listed below: Area Studies (Asian Studies, Developing Countries, European Studies, Latin American Studies, Middle East Studies), Cross-Cultural Studies, International Economic Relations, International Political-Military Relations, International Communication, Peace Studies or an approved Special Topics Concentration.

In addition, students must complete seven background courses (21-22 credit hours) in history, economics, political science and statistics, as listed below.

Students must also have a demonstrated competency in a foreign language through the intermediate (2002 or 2003) level. Students are encouraged to take at least two language courses beyond the intermediate level, and preferably to minor in a foreign language.

Notes:

- INIA 4997 Senior Capstone Seminar in International Affairs is usually completed during the final spring semester of study at Marquette.
- Other courses may satisfy concentration requirements (especially for students who study abroad) but that any substitutions must be approved by the director of INIA.
- ECON 4953 Seminar in Economics – must be pre-approved by the director of INIA.
- No more than two courses (6 credit hours) counted to fulfill the International Affairs (INIA) major or minor may be counted toward any other major or minor.

Background requirements:

History (Western Civilization):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 1001</td>
<td>Growth of Western Civilization to 1715</td>
<td>3</td>
</tr>
<tr>
<td>or HIST 1002</td>
<td>Growth of Western Civilization since 1715</td>
<td>3</td>
</tr>
</tbody>
</table>

History Courses: Choose one of the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 1301</td>
<td>Survey of Latin America</td>
</tr>
<tr>
<td>HIST 1401</td>
<td>Africa</td>
</tr>
<tr>
<td>HIST 1501</td>
<td>East Asia</td>
</tr>
</tbody>
</table>

Economics Courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1103</td>
<td>Principles of Microeconomics</td>
</tr>
<tr>
<td>ECON 1104</td>
<td>Principles of Macroeconomics</td>
</tr>
</tbody>
</table>

Political Science Courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>POSC 2401</td>
<td>Comparative Politics</td>
</tr>
<tr>
<td>POSC 2601</td>
<td>International Politics</td>
</tr>
</tbody>
</table>

Statistics Courses: Choose one of the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUAD 1560</td>
<td>Introduction to Statistics and Business Analytics</td>
</tr>
<tr>
<td>MATH 1700</td>
<td>Modern Elementary Statistics</td>
</tr>
<tr>
<td>PSYC 2001</td>
<td>Psychological Measurements and Statistics</td>
</tr>
<tr>
<td>SOCI 2060</td>
<td>Social Statistics</td>
</tr>
</tbody>
</table>

Total Credit Hours 21-22
## Concentration I: Area Studies

### Required Political Science Core Courses: Choose three of the following: 9

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>POSC 4601</td>
<td>International Law</td>
</tr>
<tr>
<td>POSC 4611</td>
<td>International Organizations</td>
</tr>
<tr>
<td>POSC 4631</td>
<td>World Conflict and Security</td>
</tr>
<tr>
<td>POSC 4633</td>
<td>Human Security</td>
</tr>
</tbody>
</table>

### Required International Political Economy Core Course: Choose one of the following: 3

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>POSC 4621</td>
<td>Politics of the World Economy</td>
</tr>
<tr>
<td>POSC 4661</td>
<td>The Political Economy of Development</td>
</tr>
</tbody>
</table>

### Required International Economics Core Course: Choose one of the following: 3

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 4040</td>
<td>International Economic Issues (recommended option)</td>
</tr>
<tr>
<td>ECON 4044</td>
<td>International Currency Markets</td>
</tr>
<tr>
<td>ECON 4045</td>
<td>Comparative Economic Systems</td>
</tr>
<tr>
<td>ECON 4046</td>
<td>International Trade</td>
</tr>
<tr>
<td>ECON 4047</td>
<td>Development Economics</td>
</tr>
</tbody>
</table>

### Required Senior Capstone Seminar: 3

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>INIA 4997</td>
<td>Senior Capstone Seminar in International Affairs</td>
</tr>
</tbody>
</table>

### Area Studies Concentration Requirement: Choose one of the following five Areas. 12

#### Asian Studies Concentration: Choose four of the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHNS 3200</td>
<td>Chinese Culture and Civilization</td>
</tr>
<tr>
<td>HIST 4500</td>
<td>Modern Japan</td>
</tr>
<tr>
<td>HIST 4525</td>
<td>Age of the Samurai</td>
</tr>
<tr>
<td>HIST 4555</td>
<td>Modern China</td>
</tr>
<tr>
<td>PHIL 3380</td>
<td>Asian Philosophy</td>
</tr>
<tr>
<td>POSC 4521</td>
<td>Chinese Politics</td>
</tr>
<tr>
<td>POSC 4731</td>
<td>International Politics of Asia</td>
</tr>
<tr>
<td>THEO 4530</td>
<td>Islam: Faith and Practice</td>
</tr>
<tr>
<td>THEO 4540</td>
<td>Hinduism, Yoga, and Buddhism</td>
</tr>
</tbody>
</table>

#### Developing Countries Concentration: Choose four of the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 3360</td>
<td>People and Cultures of the Middle East</td>
</tr>
<tr>
<td>ANTH 4144</td>
<td>The Rise of Agriculture</td>
</tr>
<tr>
<td>ANTH 4316</td>
<td>Culture Change and Development</td>
</tr>
<tr>
<td>ARBC 3200</td>
<td>Culture and Civilization of the Middle East</td>
</tr>
<tr>
<td>ECON 4047</td>
<td>Development Economics</td>
</tr>
<tr>
<td>ENGL 4840</td>
<td>Postcolonial Literatures</td>
</tr>
<tr>
<td>HIST 3455</td>
<td>Modern Middle East Since 1500</td>
</tr>
<tr>
<td>HIST 4355</td>
<td>History of Mexico</td>
</tr>
<tr>
<td>HIST 4450</td>
<td>North Africa</td>
</tr>
<tr>
<td>HIST 4555</td>
<td>Modern China</td>
</tr>
<tr>
<td>HIST 4460</td>
<td>Modern South Africa</td>
</tr>
<tr>
<td>POSC 4521</td>
<td>Chinese Politics</td>
</tr>
<tr>
<td>POSC 4541</td>
<td>Latin American Politics</td>
</tr>
<tr>
<td>POSC 4561</td>
<td>Politics of the Developing World</td>
</tr>
<tr>
<td>SOWJ 4700</td>
<td>Global Aid and Humanitarianism</td>
</tr>
<tr>
<td>THEO 4530</td>
<td>Islam: Faith and Practice</td>
</tr>
<tr>
<td>THEO 4540</td>
<td>Hinduism, Yoga, and Buddhism</td>
</tr>
</tbody>
</table>

#### European Studies Concentration: Choose four of the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 3232</td>
<td>Reaction, Revolution, and Nationalism: 1814 to 1914</td>
</tr>
<tr>
<td>HIST 3235</td>
<td>Twentieth Century Europe</td>
</tr>
<tr>
<td>HIST 3295</td>
<td>“The Great War”: World War I, 1914-18</td>
</tr>
<tr>
<td>HIST 3297</td>
<td>World War II</td>
</tr>
<tr>
<td>HIST 4249</td>
<td>Intellectual History of Modern Europe</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
</tr>
<tr>
<td>--------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>HIST 4252</td>
<td>Modern Britain</td>
</tr>
<tr>
<td>HIST 4255</td>
<td>The British Empire</td>
</tr>
<tr>
<td>HIST 4260</td>
<td>Modern Ireland</td>
</tr>
<tr>
<td>HIST 4262</td>
<td>Modern France</td>
</tr>
<tr>
<td>HIST 4264</td>
<td>Modern Germany</td>
</tr>
<tr>
<td>HIST 4266</td>
<td>Nazi Germany and the Holocaust</td>
</tr>
<tr>
<td>HIST 4271</td>
<td>The Russian Revolution and the Soviet Union</td>
</tr>
<tr>
<td>HIST 4290</td>
<td>The French Revolution and Napoleon, 1787 to 1815</td>
</tr>
<tr>
<td>POSC 4406</td>
<td>Public Policy in Industrial Democracies</td>
</tr>
<tr>
<td>POSC 4501</td>
<td>European Politics</td>
</tr>
<tr>
<td>POSC 4511</td>
<td>Russian and Post-Soviet Politics</td>
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<tr>
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<td>International Politics of Europe</td>
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<tr>
<td>ANTH 3242</td>
<td>Prehistory of South America</td>
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<td>HIST 4310</td>
<td>Colonial Latin America</td>
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<tr>
<td>HIST 4320</td>
<td>United States-Latin American Relations</td>
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<tr>
<td>HIST 4350</td>
<td>The Caribbean</td>
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<tr>
<td>HIST 4355</td>
<td>History of Mexico</td>
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<tr>
<td>POSC 4541</td>
<td>Latin American Politics</td>
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<td>POSC 4741</td>
<td>United States-Latin American Relations</td>
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<tr>
<td>SPAN 3310</td>
<td>Peoples and Cultures of Spanish America</td>
</tr>
<tr>
<td>SPAN 4320</td>
<td>Contemporary Issues in the Hispanic World</td>
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<tr>
<td>SPAN 4450</td>
<td>Afro-Hispanic Literature and Culture</td>
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<tr>
<td>SPAN 4600</td>
<td>Spanish-American Literature: Pre-Columbian to Baroque</td>
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<tr>
<td>SPAN 4610</td>
<td>Spanish-American Literature: Eighteenth and Nineteenth Centuries</td>
</tr>
<tr>
<td>SPAN 4640</td>
<td>Novels and Novelists in Spanish-America</td>
</tr>
<tr>
<td>ANTH 3360</td>
<td>People and Cultures of the Middle East</td>
</tr>
<tr>
<td>ARBC 3200</td>
<td>Culture and Civilization of the Middle East</td>
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<td>ARBC 3210</td>
<td>Arabic Literature in English Translation</td>
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<tr>
<td>HIST 3455</td>
<td>Modern Middle East Since 1500</td>
</tr>
<tr>
<td>HIST 4450</td>
<td>North Africa</td>
</tr>
<tr>
<td>POSC 4721</td>
<td>International Politics of the Middle East</td>
</tr>
<tr>
<td>THEO 4530</td>
<td>Islam: Faith and Practice</td>
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**Total Credit Hours** 30

**Concentration II: Cross-Cultural Studies**

Required Political Science Core Courses: Choose three of the following. 9

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<th>Course Title</th>
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<tbody>
<tr>
<td>POSC 4601</td>
<td>International Law</td>
</tr>
<tr>
<td>POSC 4611</td>
<td>International Organizations</td>
</tr>
<tr>
<td>POSC 4631</td>
<td>World Conflict and Security</td>
</tr>
<tr>
<td>POSC 4633</td>
<td>Human Security</td>
</tr>
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Required International Political Economy Core Course: Choose one of the following. 3

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>POSC 4621</td>
<td>Politics of the World Economy</td>
</tr>
<tr>
<td>POSC 4661</td>
<td>The Political Economy of Development</td>
</tr>
</tbody>
</table>

Required International Economics Core Course: Choose one of the following. 3

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<tbody>
<tr>
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<td>International Economic Issues (recommended option)</td>
</tr>
<tr>
<td>ECON 4044</td>
<td>International Currency Markets</td>
</tr>
<tr>
<td>ECON 4045</td>
<td>Comparative Economic Systems</td>
</tr>
<tr>
<td>ECON 4046</td>
<td>International Trade</td>
</tr>
<tr>
<td>ECON 4047</td>
<td>Development Economics</td>
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Required Senior Capstone Seminar: 3
INIA 4997  
Senior Capstone Seminar in International Affairs

Cross-Cultural Studies Concentration: Choose four of the following courses.  

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<tbody>
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<td>ANTH 2101</td>
<td>Cultural Anthropology</td>
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<td>ANTH 2203</td>
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<td>ANTH 3312</td>
<td>Anthropology of Religion</td>
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<td>Culture Change and Development</td>
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<td>ARBC 3200</td>
<td>Culture and Civilization of the Middle East</td>
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<tr>
<td>CHNS 3200</td>
<td>Chinese Culture and Civilization</td>
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<td>CMST 3410</td>
<td>Intercultural Communication</td>
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<tr>
<td>ENGL 4810</td>
<td>Comparative Race and Ethnic Studies</td>
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<td>Postcolonial Literatures</td>
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<td>GRMN 3200</td>
<td>Topics in German Culture</td>
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<td>ITAL 3200</td>
<td>Italian Culture and Civilization</td>
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<td>PHIL 3380</td>
<td>Asian Philosophy</td>
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<td>PHIL 3660</td>
<td>Marx and Marxism</td>
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<tr>
<td>POSC 4431</td>
<td>Modern Revolutions</td>
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<td>POSC 4561</td>
<td>Politics of the Developing World</td>
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<td>POSC 4651</td>
<td>The Politics of Human Rights</td>
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<tr>
<td>POSC 4633</td>
<td>Human Security</td>
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<tr>
<td>SOCI 4400</td>
<td>Social Inequality</td>
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<td>SOWJ 2150</td>
<td>Immigrants and their Communities</td>
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<td>SOWJ 4700</td>
<td>Global Aid and Humanitarianism</td>
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<td>Peoples and Cultures of Spanish America</td>
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<td>SPAN 4450</td>
<td>Afro-Hispanic Literature and Culture</td>
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<tr>
<td>THEO 2410</td>
<td>Christian Faith in Cultural Contexts</td>
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<td>THEO 2500</td>
<td>Theology, Violence, and Nonviolence</td>
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<td>THEO 4210</td>
<td>History and Theology of the Christian East</td>
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<td>THEO 4330</td>
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<td>THEO 4370</td>
<td>Protestant Thought and Practice</td>
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<td>THEO 4405</td>
<td>Christian Theology in Global Contexts</td>
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<td>THEO 4500</td>
<td>Christ and World Religions: Theology of Interreligious Dialogue</td>
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<td>Survey of World Religions</td>
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<td>THEO 4520</td>
<td>Jewish Thought and Practice</td>
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<td>THEO 4530</td>
<td>Islam: Faith and Practice</td>
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<tr>
<td>THEO 4540</td>
<td>Hinduism, Yoga, and Buddhism</td>
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Total Credit Hours 30

**Concentration III: International Economic Relations**

Required Political Science Core Courses: Choose three of the following.  

<table>
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<th>Course Title</th>
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<tbody>
<tr>
<td>POSC 4601</td>
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<tr>
<td>POSC 4611</td>
<td>International Organizations</td>
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<tr>
<td>POSC 4631</td>
<td>World Conflict and Security</td>
</tr>
<tr>
<td>POSC 4633</td>
<td>Human Security</td>
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Required International Political Economy Core Course: Choose one of the following.  

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>POSC 4621</td>
<td>Politics of the World Economy</td>
</tr>
<tr>
<td>POSC 4661</td>
<td>The Political Economy of Development</td>
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Required International Economic Core Courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
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<td>International Currency Markets</td>
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<tr>
<td>ECON 4046</td>
<td>International Trade</td>
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Required Senior Capstone
<table>
<thead>
<tr>
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<th>Course Title</th>
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<tbody>
<tr>
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<tr>
<td>ECON 4016</td>
<td>Environmental and Natural Resource Economics</td>
<td>3</td>
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<td>ECON 4042</td>
<td>International Antitrust and Competition Policy</td>
<td>3</td>
</tr>
<tr>
<td>ECON 4045</td>
<td>Comparative Economic Systems</td>
<td>3</td>
</tr>
<tr>
<td>ECON 4047</td>
<td>Development Economics</td>
<td>3</td>
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<tr>
<td>ECON 4080</td>
<td>Money, Banking and Monetary Policy</td>
<td>3</td>
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<tr>
<td>ECON 4953</td>
<td>Seminar in Economics (may be taken if topic is relevant)</td>
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<td>BULA 3040</td>
<td>The Legal and Regulatory Environment of International Business</td>
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<td>ECON 4016</td>
<td>Environmental and Natural Resource Economics</td>
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<tr>
<td>ECON 4042</td>
<td>International Antitrust and Competition Policy</td>
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<td>ECON 4045</td>
<td>Comparative Economic Systems</td>
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<td>ECON 4047</td>
<td>Development Economics</td>
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<tr>
<td>ECON 4080</td>
<td>Money, Banking and Monetary Policy</td>
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<td>ECON 4953</td>
<td>Seminar in Economics (may be taken if topic is relevant)</td>
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<td>International Management</td>
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<td>MARK 4040</td>
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<tr>
<td>POSC 4193</td>
<td>Environmental Politics and Policy</td>
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<tr>
<td>POSC 4406</td>
<td>Public Policy in Industrial Democracies</td>
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<td>POSC 4411</td>
<td>Politics, Economics, and Democracy</td>
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<td>POSC 4641</td>
<td>Politics of the Illicit Global Economy</td>
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<tr>
<td>POSC 4661</td>
<td>The Political Economy of Development</td>
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Total Credit Hours: 30

**Concentration IV: International Political-Military Relations**

Required Political Science Core Courses: Choose three of the following.

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<th>Course Title</th>
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<td>POSC 4611</td>
<td>International Organizations</td>
<td>3</td>
</tr>
<tr>
<td>POSC 4631</td>
<td>World Conflict and Security</td>
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<tr>
<td>POSC 4633</td>
<td>Human Security</td>
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Required International Political Economy Core Course: Choose one of the following.

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<tr>
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<th>Course Title</th>
<th>Credits</th>
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<tbody>
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<td>3</td>
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<tr>
<td>POSC 4661</td>
<td>The Political Economy of Development</td>
<td>3</td>
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Required International Economics Core Course: Choose one of the following.

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<td>ECON 4044</td>
<td>International Currency Markets</td>
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<td>ECON 4045</td>
<td>Comparative Economic Systems</td>
<td>3</td>
</tr>
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<td>ECON 4046</td>
<td>International Trade</td>
<td>3</td>
</tr>
<tr>
<td>ECON 4047</td>
<td>Development Economics</td>
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Required Senior Capstone Seminar:

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<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
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International Political-Military Relations Concentration: Choose four of the following.

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<td>HIST 3118</td>
<td>American Military History</td>
<td>3</td>
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<tr>
<td>HIST 3127</td>
<td>The Vietnam War Era</td>
<td>3</td>
</tr>
<tr>
<td>HIST 3232</td>
<td>Reaction, Revolution, and Nationalism: 1814 to 1914</td>
<td>3</td>
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<td>HIST 3295</td>
<td>&quot;The Great War&quot;: World War I, 1914-18</td>
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<td>HIST 4113</td>
<td>American Foreign Relations 1</td>
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<td>HIST 4255</td>
<td>The British Empire</td>
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<td>HIST 4298</td>
<td>The Cold War</td>
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<td>POSC 4193</td>
<td>Environmental Politics and Policy</td>
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<td>POSC 4376</td>
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<td>POSC 4611</td>
<td>International Organizations</td>
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<td>World Conflict and Security</td>
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<td>POSC 4633</td>
<td>Human Security</td>
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<td>POSC 4741</td>
<td>United States-Latin American Relations</td>
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Total Credit Hours: 30

**Concentration V: International Communication**

Required Political Science Core Courses: Choose three of the following. 9

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<th>Course Title</th>
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<td>POSC 4611</td>
<td>International Organizations</td>
</tr>
<tr>
<td>POSC 4631</td>
<td>World Conflict and Security</td>
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<tr>
<td>POSC 4633</td>
<td>Human Security</td>
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Required International Political Economy Core Course: Choose one of the following. 3

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<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>POSC 4621</td>
<td>Politics of the World Economy</td>
</tr>
<tr>
<td>POSC 4661</td>
<td>The Political Economy of Development</td>
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Required International Economics Core Course: Choose one of the following. 3

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<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
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<td>International Economic Issues (recommended option)</td>
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<tr>
<td>ECON 4044</td>
<td>International Currency Markets</td>
</tr>
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<td>ECON 4045</td>
<td>Comparative Economic Systems</td>
</tr>
<tr>
<td>ECON 4046</td>
<td>International Trade</td>
</tr>
<tr>
<td>ECON 4047</td>
<td>Development Economics</td>
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Required Senior Capstone Seminar:

INIA 4997 Senior Capstone Seminar in International Affairs 3

International Communication Concentration: Choose four courses as listed below.* 12

College of Communication: Choose at least two courses.

<table>
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<th>Course Code</th>
<th>Course Title</th>
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<tbody>
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<td>International Advertising and Public Relations</td>
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<td>COMM 4200</td>
<td>International Communication</td>
</tr>
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<td>CMST 3410</td>
<td>Intercultural Communication</td>
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<td>CMST 4270</td>
<td>Communicating in Multinational Organizations</td>
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College of Arts and Sciences courses:

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<th>Course Title</th>
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<tbody>
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<td>American Foreign Relations 1</td>
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<td>HIST 4298</td>
<td>The Cold War</td>
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<td>POSC 4195</td>
<td>Politics of the Internet</td>
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<tr>
<td>POSC 4376</td>
<td>American National Security Policy</td>
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<td>POSC 4406</td>
<td>Public Policy in Industrial Democracies</td>
</tr>
<tr>
<td>POSC 4421</td>
<td>Democracy, Authoritarianism, and Totalitarianism</td>
</tr>
<tr>
<td>POSC 4431</td>
<td>Modern Revolutions</td>
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<tr>
<td>POSC 4561</td>
<td>Politics of the Developing World</td>
</tr>
<tr>
<td>POSC 4601</td>
<td>International Law</td>
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### Concentration VI: Peace Studies

**Required Political Science Core Courses:** Choose three of the following.  
- **POSC 4601** International Law  
- **POSC 4611** International Organizations  
- **POSC 4631** World Conflict and Security  
- **POSC 4633** Human Security  

**Required International Political Economy Core Course:** Choose one of the following.  
- **POSC 4621** Politics of the World Economy  
- **POSC 4661** The Political Economy of Development  

**Required International Economics Core Course:** Choose one of the following.  
- **ECON 4040** International Economic Issues (recommended option)  
- **ECON 4044** International Currency Markets  
- **ECON 4045** Comparative Economic Systems  
- **ECON 4046** International Trade  
- **ECON 4047** Development Economics  

**Required Senior Capstone Seminar**  
- **INIA 4997** Senior Capstone Seminar in International Affairs  

**Peace Studies Concentration**  
**Preventing War:** Choose two courses from the following.  
- **CMST 3100** Communication and Conflict  
- **CMST 3410** Intercultural Communication  
- **HIST 3127** The Vietnam War Era  
- **HIST 3295** "The Great War": World War I, 1914-18  
- **HIST 3297** World War II  
- **HIST 3455** Modern Middle East Since 1500  
- **HIST 4298** The Cold War  
- **POSC 4601** International Law  
- **POSC 4611** International Organizations  
- **POSC 4631** World Conflict and Security  
- **POSC 4721** International Politics of the Middle East  

**Building Peace:** Choose two courses from the following.  
- **ECON 4016** Environmental and Natural Resource Economics  
- **ECON 4045** Comparative Economic Systems (if not taken above)  
- **ECON 4047** Development Economics  
- **ENGL 4810** Comparative Race and Ethnic Studies  
- **HIST 3235** Twentieth Century Europe  
- **HIST 3253** Twentieth Century Europe  
- **POSC 4193** Environmental Politics and Policy  
- **POSC 4561** Politics of the Developing World  
- **POSC 4651** The Politics of Human Rights  
- **POSC 4633** Human Security  
- **POSC 4711** International Politics of Europe  
- **POSC 4731** International Politics of Asia  
- **SOWJ 4700** Global Aid and Humanitarianism  
- **THEO 2500** Theology, Violence, and Nonviolence  
- **THEO 4500** Christ and World Religions: Theology of Interreligious Dialogue

*Note: For the International Communication Concentration, at least two of the four required courses must be chosen from the College of Communication. The remaining courses may be chosen from the list of College of Arts and Sciences courses.*
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>THEO 4510</td>
<td>Survey of World Religions</td>
</tr>
<tr>
<td>THEO 4530</td>
<td>Islam: Faith and Practice</td>
</tr>
</tbody>
</table>

**Total Credit Hours:** 30

### Concentration VII: Special Topics*

**Required Political Science Core Courses:** Choose three of the following.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>POSC 4601</td>
<td>International Law</td>
</tr>
<tr>
<td>POSC 4611</td>
<td>International Organizations</td>
</tr>
<tr>
<td>POSC 4631</td>
<td>World Conflict and Security</td>
</tr>
<tr>
<td>POSC 4633</td>
<td>Human Security</td>
</tr>
</tbody>
</table>

**Required International Political Economy Core Course:** Choose one of the following.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>POSC 4621</td>
<td>Politics of the World Economy</td>
</tr>
<tr>
<td>POSC 4661</td>
<td>The Political Economy of Development</td>
</tr>
</tbody>
</table>

**Required International Economics Course:** Choose one of the following.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 4040</td>
<td>International Economic Issues (recommended option)</td>
</tr>
<tr>
<td>ECON 4044</td>
<td>International Currency Markets</td>
</tr>
<tr>
<td>ECON 4045</td>
<td>Comparative Economic Systems</td>
</tr>
<tr>
<td>ECON 4046</td>
<td>International Trade</td>
</tr>
<tr>
<td>ECON 4047</td>
<td>Development Economics</td>
</tr>
</tbody>
</table>

**Required Senior Capstone Seminar:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>INIA 4997</td>
<td>Senior Capstone Seminar in International Affairs</td>
</tr>
</tbody>
</table>

**Special Topics Concentration:** Four Courses.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
</table>

**Total Credit Hours:** 30

### *Special Topics*

Students may work with their advisers to design a concentration on a topic in which they have a special interest. All such concentrations must meet the following conditions:

- A special topics concentration must include four related three credit upper division courses on a topic in international affairs significantly different than any of the existing concentrations.
- A special topics concentration must be declared and approved in writing at least a year prior to the student’s graduation.
- The proposal must be signed and approved by the student, the student’s adviser and the director of INIA.

### International Affairs B.A./M.A. Accelerated Degree Program

The Political Science Department offers a five-year B.A./M.A. in International Affairs. Students admitted to this program, may count a number of courses taken during their senior year toward both the B.A. and the M.A. degrees. This enables a student to complete both a B.A. and a M.A. in five years instead of the six that would normally be required.

The M.A. programs in political science offer courses that can take a student far beyond the undergraduate level. Those who have completed our M.A. degree have gone on to some of the finest graduate schools, launched careers in a variety of government agencies and gained employment in various settings in the private sector.

Graduate courses in our program offer students the possibility to pursue topics of interest to them in more depth than they are able to in undergraduate classes. These courses couple smaller class sizes and more opportunities for participation with an emphasis on the refinement of student research skills.

### International Affairs Minor

The minor consists of 6 courses (18 credit hours). In addition, students must fulfill the background requirements in economics and political science (12 cr. hrs.) for the minor.

Students must also have a demonstrated foreign language competency to the second intermediate (2002 or 2003) level. Students are encouraged to take at least two language courses beyond the intermediate (2002 or 2003) level, and preferably to minor in a foreign language.

Any substitutions must be approved by the director of INIA.

### Background Requirements:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 4040</td>
<td>International Economic Issues (recommended option)</td>
</tr>
<tr>
<td>ECON 4044</td>
<td>International Currency Markets</td>
</tr>
<tr>
<td>ECON 4045</td>
<td>Comparative Economic Systems</td>
</tr>
<tr>
<td>ECON 4046</td>
<td>International Trade</td>
</tr>
<tr>
<td>ECON 4047</td>
<td>Development Economics</td>
</tr>
</tbody>
</table>
ECON 1103  Principles of Microeconomics  3  
ECON 1104  Principles of Macroeconomics  3  
Political Science Courses:  
POSC 2401  Comparative Politics  3  
POSC 2601  International Politics  3  
Total Credit Hours  12  

INIA Minor Requirements  
Required Political Science Courses:  
POSC 4601  International Law  3  
POSC 4611  International Organizations  3  
POSC 4621  Politics of the World Economy  3  
POSC 4631  World Conflict and Security  3  
International Economics Course: Choose one upper division course.  3  
ECON 4040  International Economic Issues (recommended option)  
Senior Capstone Seminar:  
INIA 4997  Senior Capstone Seminar in International Affairs  3  
Total Credit Hours  18  

Note:  
- The INIA 4997 Senior Capstone Seminar in International Affairs is usually taken during the student’s last spring semester of study at Marquette.

Courses  
INIA 4997. Senior Capstone Seminar in International Affairs. 3 cr. hrs.  
Senior seminar for INIA majors and minors that offers students the opportunity to integrate their background, core and concentration studies of economics, political science and history as well as other disciplines in exploring a prominent issue in international affairs. Topics vary. Combines extensive readings, lecture, class discussion and student presentations. Prereq: Sr. stndg. and INIA major or minor.
Latin American Studies

**Director:** Julia Paulk, Ph.D.

Latin American Studies has come a long way from its foundations more than fifty years ago to forge new and critical questions about Latin American and hemispheric identity, diversity, borders, sustainability, and social justice. Environmental crises, such as the continued extraction of petroleum from the Amazonian rainforest, and recent events, such as the normalization of relations with Cuba, have widespread implications. Understanding this area and its cultures also opens the door to a better understanding of the US Latino population, now nearly 1/5 of our country’s population, by both non-Latinos and Latinos, who often want to know more about their heritage. The goals of the Latin American Studies (INLA) major, as well as the INLA minor, are to foster interdisciplinary study and research in topics related to Latin American Studies, to promote the interaction of Marquette students with Latin American communities both in Milwaukee and abroad, and to advance the pursuit of social justice in the region. A INLA degree provides advantages to job-seeking graduates in a variety of fields, including international diplomacy, international aid and development, business, banking, local and international nongovernmental organizations, journalism, immigration services, and more. The INLA major can easily be completed in four years regardless of whether or not the student enters Marquette with Spanish language proficiency.

### Latin American Studies Major

The major in Latin American Studies requires 33 credits consisting of the following: three Required Foundation Courses as outlined below (9 credits), two courses from each of the two Content Areas (12 credits), and four Elective Courses (12 credits). One of the courses counted toward the major must be a service learning course, and a maximum of 9 credits of SPAN courses can count as elective courses. A course can apply to only one requirement area (Foundation, Content Area or Electives).

#### Required Foundation Courses (9 credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 1301</td>
<td>Survey of Latin America</td>
</tr>
<tr>
<td>POSC 4541</td>
<td>Latin American Politics</td>
</tr>
</tbody>
</table>

#### Choose one of the following (3 credits):

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 3210</td>
<td>Hispanic Cultures and Literatures in English</td>
</tr>
<tr>
<td>SPAN 3310</td>
<td>Peoples and Cultures of Spanish America</td>
</tr>
<tr>
<td>SPAN 4320</td>
<td>Contemporary Issues in the Hispanic World</td>
</tr>
</tbody>
</table>

#### Choose one additional Foundation course. (3 credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 1301</td>
<td>Survey of Latin America</td>
</tr>
<tr>
<td>POSC 4541</td>
<td>Latin American Politics</td>
</tr>
<tr>
<td>POSC 4561</td>
<td>Politics of the Developing World</td>
</tr>
<tr>
<td>POSC 4633</td>
<td>Human Security</td>
</tr>
<tr>
<td>POSC 4661</td>
<td>The Political Economy of Development</td>
</tr>
<tr>
<td>POSC 4741</td>
<td>United States-Latin American Relations</td>
</tr>
</tbody>
</table>

#### Required Content Area Courses (12 credits)

**History, Economics & Politics:** Choose two of the following.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 4047</td>
<td>Development Economics</td>
</tr>
<tr>
<td>HIST 1301</td>
<td>Survey of Latin America</td>
</tr>
<tr>
<td>HIST 4310</td>
<td>Colonial Latin America</td>
</tr>
<tr>
<td>HIST 4355</td>
<td>History of Mexico</td>
</tr>
<tr>
<td>POSC 4541</td>
<td>Latin American Politics</td>
</tr>
<tr>
<td>POSC 4561</td>
<td>Politics of the Developing World</td>
</tr>
<tr>
<td>POSC 4633</td>
<td>Human Security</td>
</tr>
<tr>
<td>POSC 4661</td>
<td>The Political Economy of Development</td>
</tr>
<tr>
<td>POSC 4741</td>
<td>United States-Latin American Relations</td>
</tr>
</tbody>
</table>

**Culture, Society and Politics:** Choose two of the following.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 3390</td>
<td>Latin American Philosophy</td>
</tr>
<tr>
<td>SOWJ 2150</td>
<td>Immigrants and their Communities</td>
</tr>
<tr>
<td>SOWJ 4700</td>
<td>Global Aid and Humanitarianism</td>
</tr>
<tr>
<td>SPAN 3210</td>
<td>Hispanic Cultures and Literatures in English</td>
</tr>
<tr>
<td>SPAN 3310</td>
<td>Peoples and Cultures of Spanish America</td>
</tr>
<tr>
<td>SPAN 4310</td>
<td>Hispanic Film and Society</td>
</tr>
<tr>
<td>SPAN 4320</td>
<td>Contemporary Issues in the Hispanic World</td>
</tr>
</tbody>
</table>

#### Elective Courses (12 credits)

Any of the Foundation or Content Area courses not yet completed.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 4110</td>
<td>Structure of Spanish from a Linguistic Perspective</td>
</tr>
<tr>
<td>SPAN 4120</td>
<td>Spanish Phonetics</td>
</tr>
<tr>
<td>SPAN 4400</td>
<td>U.S. Latino/a Literature</td>
</tr>
</tbody>
</table>
Latin American Studies Minor

The minor in Latin American Studies consists of 18 credit hours: Required Foundation courses (9 credit hours), one course from each of the Content Areas (6 credit hours) and one elective course (3 credit hours).

Note:

Students must demonstrate a competency in a foreign language through the intermediate (2002 or 2003) level. This proficiency can be established through Spanish language course work at Marquette or through a Spanish language proficiency exam approved by Marquette’s Department of Foreign Languages and Literatures.

Required Foundation Courses: (9 credit hours)
Choose one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 1301</td>
<td>Survey of Latin America</td>
</tr>
<tr>
<td>POSC 4541</td>
<td>Latin American Politics</td>
</tr>
</tbody>
</table>

Choose one of the following:

<table>
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<tr>
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<th>Title</th>
</tr>
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<tbody>
<tr>
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</tr>
<tr>
<td>SPAN 3310</td>
<td>Peoples and Cultures of Spanish America</td>
</tr>
<tr>
<td>SPAN 4320</td>
<td>Contemporary Issues in the Hispanic World</td>
</tr>
</tbody>
</table>

Choose one additional Foundation Course

Required Content Area Courses: (6 credit hours)

History, Economics and Politics: Choose one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 4047</td>
<td>Development Economics</td>
</tr>
<tr>
<td>HIST 1301</td>
<td>Survey of Latin America</td>
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<td>HIST 4310</td>
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<td>POSC 4541</td>
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<td>Politics of the Developing World</td>
</tr>
<tr>
<td>POSC 4633</td>
<td>Human Security</td>
</tr>
<tr>
<td>POSC 4661</td>
<td>The Political Economy of Development</td>
</tr>
<tr>
<td>POSC 4741</td>
<td>United States-Latin American Relations</td>
</tr>
</tbody>
</table>

Culture, Society and Politics: Choose one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 3390</td>
<td>Latin American Philosophy</td>
</tr>
<tr>
<td>SOWJ 2150</td>
<td>Immigrants and their Communities</td>
</tr>
<tr>
<td>SOWJ 4700</td>
<td>Global Aid and Humanitarianism</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
</tr>
<tr>
<td>------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>SPAN 3210</td>
<td>Hispanic Cultures and Literatures in English</td>
</tr>
<tr>
<td>SPAN 3310</td>
<td>Peoples and Cultures of Spanish America</td>
</tr>
<tr>
<td>SPAN 4310</td>
<td>Hispanic Film and Society</td>
</tr>
<tr>
<td>SPAN 4320</td>
<td>Contemporary Issues in the Hispanic World</td>
</tr>
</tbody>
</table>

**Elective Course:** Choose any of the Foundation or Content Area courses not yet completed or one of the following. (3 credit hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 4110</td>
<td>Structure of Spanish from a Linguistic Perspective</td>
</tr>
<tr>
<td>SPAN 4120</td>
<td>Spanish Phonetics</td>
</tr>
<tr>
<td>SPAN 4400</td>
<td>U.S. Latino/a Literature</td>
</tr>
<tr>
<td>SPAN 4450</td>
<td>Afro-Hispanic Literature and Culture</td>
</tr>
<tr>
<td>SPAN 4600</td>
<td>Spanish-American Literature: Pre-Columbian to Baroque</td>
</tr>
<tr>
<td>SPAN 4610</td>
<td>Spanish-American Literature: Eighteenth and Nineteenth Centuries</td>
</tr>
<tr>
<td>SPAN 4615</td>
<td>Spanish-American Literature: Modernismo and Vanguardismo</td>
</tr>
<tr>
<td>SPAN 4620</td>
<td>Spanish-American Literature: The Boom to the Twenty-First Century</td>
</tr>
<tr>
<td>SPAN 4640</td>
<td>Novels and Novelists in Spanish-America</td>
</tr>
</tbody>
</table>

**Total Credit Hours**

18

* Travel must be to a Latin American country.

**Required Cognate Courses (0-10 credits)**

Two years of college-level proficiency in Spanish via course work or placement.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 1003</td>
<td>Intensive Elementary Spanish</td>
</tr>
</tbody>
</table>

And

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 2001</td>
<td>Intermediate Spanish 1</td>
</tr>
<tr>
<td>SPAN 2002</td>
<td>Intermediate Spanish 2</td>
</tr>
</tbody>
</table>

Or

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 2003</td>
<td>Intensive Intermediate Spanish</td>
</tr>
</tbody>
</table>

**Total Credit Hours**

0-10
The Law and Society minor is designed to provide students the opportunity to study law from an integrated, social science perspective. Students pursuing this minor learn to identify and analyze the social and cultural factors that shape the foundations, practice, interpretation and mobilization of the law. Course work includes explorations of both domestic and international contexts.

A minor in Law and Society provides students insights on the connections between a society and its legal institutions. This prepares them not only for law school, but also a variety of careers and degrees in law-related fields.

**Law and Society Minor**

The Interdisciplinary minor in Law and Society consists of a total of six courses (18 credits); two required courses (6 credits) and four elective courses (12 credits) as listed below.

### Required courses:

- **CRLS 2001** Introduction to the Law
- **SOCI 4600** The Social Reality of Crime and Justice
  or **SOCI 4660** Law and Society

### Elective courses:

Choose four courses from the following. At least two of the following disciplines must be represented: ANTH, CRLS, SOWJ, SOCI, HIST, POSC, PHIL.

No more than one course may be chosen from BULA or COMM.

- **ANTH 4253** Forensic Anthropology
- **ANTH 4320** Culture, Law and Violence
- **BULA 3001** Legal Environment of Business
- **BULA 3040** The Legal and Regulatory Environment of International Business
- **COMM 3800** Media Law
- **CRLS 2100** Juvenile Delinquency and Juvenile Justice
- **CRLS 4120** Comparative Justice Systems
- **CRLS 4130** Women, Crime, and Criminal Justice
- **CRLS 4140** Race, Crime and Punishment
- **CRLS 4600** Evidence
- **PHIL 3750** Philosophy of Law
- **PHIL 3751** Philosophy and History of Crime and Punishment (also HIST or CRLS)
- **POSC 2801** Justice and Power
- **POSC 4241** American Constitutional Law and Development
- **POSC 4251** The Politics of Civil Rights and Liberties
- **POSC 4276** Courts and Public Policy
- **POSC 4601** International Law
- **SOCI 3600** Deviance and Social Control
- **SOWJ 2150** Immigrants and their Communities
- **SOWJ 2300** Conflict Resolution and Restorative Justice

**Total Credit Hours** 18
Leadership and Organizations

This major is open only to students enrolled in the Professional Studies Program.

A major in Leadership and Organizations, specifically designed for working professionals, shapes students to be dynamic leaders in their organizations with a commitment to organizational effectiveness. Participants are equipped with 21st Century hard and soft leadership skills to function effectively within organizations.

The hard skills of leadership in organizations include:

- administration of the organization’s development and change
- human resources
- budget and finance
- monitoring and assessing the business environment to predict adjustments to the business plan
- maintaining and growing the bottom line

The soft skills of leadership in organizations include:

- self-awareness
- critical thinking
- verbal and written communication skills
- ethical decision-making
- functioning within team
- cultural competency as a leadership resource

Courses are taught by leader-practitioners through a curriculum based on current theories and best practice research applied to real-time work place tasks and responsibilities. Many who have graduated with this degree have been promoted to leadership positions, have discovered career paths for themselves, and/or have gone on to pursue an advanced degree.

Admission Requirements

Moratorium on Admissions for New Students

All students, freshman or transfer students (advanced standing), applying to the Undergraduate Professional Studies Program must submit a completed application, admissions essay, official transcripts from a high school or institution granting GED and, if appropriate, official transcripts from all post-secondary institutions. An applicant’s entire academic performance will be evaluated in making an admissions decision.

If an applicant was enrolled or registered at another institution since graduating from high school, official transcripts from such schools must be sent electronically via a secured third party method that has been verified by the sending institution or via U.S. Postal Service to the Undergraduate Professional Studies Program, Sensenbrenner Hall, Room 004, P.O. Box 1881, Milwaukee, WI 53201-1881. Generally, a minimum average of 2.000 (on a 4.000 scale) in college work is needed for consideration.

Non-degree applicants to the Undergraduate Professional Studies Program should refer to the Admission and Readmission (p. 25) section of this bulletin.

International applicants should contact the Office of International Education (http://www.mu.edu/oie).

Acceleration Opportunities

Marquette recognizes that adults have knowledge from personal and professional experiences that enrich their college experience significantly. Academic advisers evaluate each student’s background to design a personalized plan for completing the degree. Students have a variety of ways to apply credit toward their degree:

College Level Examination Program (CLEP) Tests

Degree credits may be earned for certain college courses through the College Level Examination Program (CLEP). Individuals who have acquired relevant knowledge outside the college classroom are encouraged to take the appropriate CLEP test(s). A maximum of 30 credits earned through CLEP examinations may be applied to a Marquette degree. Credit is granted for approved subject examinations only. Students should consult the university Admission and Readmission (p. 19) section of this bulletin for a listing of approved exams.
Marquette Credit by Examination

In recognition that students may possess mastery of the content of a particular course which they have not registered, they can petition the college office to establish a testing procedure whereby the student can demonstrate his/her knowledge. Refer to the university Academic Regulations (p. 62) section of this bulletin.

Transfer Credits

The Undergraduate Professional Studies Program accepts credit from both two and four year educational institutional in accordance with the university Transfer Credit Policy (p. 20). Credits are accepted on the basis of their relevance to the requirements of the program and grade earned is a C or better. Once enrolled as a student in the Undergraduate Professional Studies Program prior approval is required for course work completed at other accredited institutions. Contact the college admissions/records coordinator with any questions or concerns regarding transfer credits.

Attendance and Withdrawal Grades

Student attendance in each class session is deemed necessary for the successful completion of the course. The Undergraduate Professional Studies Program acknowledges that individual circumstances may prevent a student from attending a particular class period. Whenever possible, an absence should be prearranged with the instructor. Students are responsible for all materials covered and announcements made during his/her absence. It should be noted that the university does not differentiate between excused and unexcused absences. Tardiness and leaving early from class affects student performance. Students’ grades and/or standing in classes may be adjusted accordingly.

WA grade: Multiple absences may compromise the integrity of the learning experience. Therefore, depending on the content missed, students with two absences from an 8-week face-to-face/blended format course and three absences from 12-week face-to-face/blended format course may, at the discretion of the instructor, be withdrawn from the course with a grade of WA. For entire online courses, participation means being an active contributor and responder in a timely basis to fellow students and the instructor as set forth by discussion guidelines in each course. When students fail to participate in two assigned discussions or activities within the time parameters established, the instructor may withdraw these students from the online course with a grade of WA. In all cases of excessive absences, the Undergraduate Professional Studies Program reserves the right to automatically withdraw all students who have three absences in an 8-week face-to-face/blended format course and four absences in a 12-week face-to-face/blended format course with a WA grade.

W grade: This grade is assigned when a withdrawal from a course or the entire semester is initiated by students, within the timelines, as outlined in the Academic Calendar (p. 824). For W grades, the Bursar tuition adjustments (p. 91) apply.

UW grade: This grade is initiated by the college when students register for a course, never attend, and fail to officially withdraw. When students do not attend the first three weeks of class and fail to officially withdraw, a UW grade is issued. Likewise, the Bursar tuition adjustments apply at the time of the withdrawal.

Note: All withdrawal grades appear as a permanent grade on the official transcript and may impact degree progress and financial aid. In addition, the university policy (p. 91) regarding the responsibility for any tuition owed for all classes, whether withdrawn or not, applies.

In order to administer this policy effectively, each instructor takes attendance at every face-to-face, blended or online learning class. The Undergraduate Professional Studies Program provides sign-in attendance sheets for each class, and it is the students’ responsibility to sign in or they are counted as absent.

The Undergraduate Professional Studies Program advising staff contacts new students during their first term of enrollment if the sign-in attendance sheets reflect an absence. The attendance policy is explained, as well as ramifications of additional absences. After students’ first term of enrollment, students are responsible for full familiarity with the program’s attendance policy and all ramifications of absences.

All students enrolled in courses offered by the Undergraduate Professional Studies Program are expected to adhere to the program’s attendance policy. While attendance is mandatory in Undergraduate Professional Studies courses, all other aspects of the University Attendance Policy (p. 58) apply.

Incomplete Grades

Students in the Undergraduate Professional Studies Program and those students not in the program who take Undergraduate Professional Studies 8-week classes who do not complete course assignments, tests, quizzes, presentations, etc., due to a circumstance beyond their control, may make arrangements for an incomplete grade. This arrangement must be made prior to the last day of the session in which the course is offered. If the missing course work is not completed and submitted prior to the agreed upon date or the sixth week of the Undergraduate Professional Studies Program session that immediately follows the session in which the grade was earned, including summer, the incomplete grade will automatically be changed to a failing grade. Should students need an extension to remove an incomplete grade because of inability to complete the missing assignments due to circumstances beyond their control, students must make an arrangement with the instructor of the course well in advance of the deadline and the instructor must communicate this extension to the associate dean, prior to that same deadline. The granting of the extension is not guaranteed and is at the discretion of the instructor. Additional information regarding incomplete grades is available in the Undergraduate Professional Studies program student handbook.
Preparedness for 8-week accelerated courses

For students to be successful in 8-week accelerated courses, it is incumbent upon the students to be as prepared as possible to begin the 8-week course. Being prepared includes but is not limited to purchasing the required textbook, reviewing the course syllabus and logging into the corresponding course D2L site.

Students enrolled in the Undergraduate Professional Studies Program complete the requisite 36 credit hours in the nine knowledge areas plus an additional 6-15 credits as follows:

University Common Core and additional Curriculum Requirements

Candidates for the baccalaureate degree must complete a minimum of 120 credit hours including the following requirements:

<table>
<thead>
<tr>
<th>Area</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Core of Common Studies</td>
<td>36</td>
</tr>
<tr>
<td>Undergraduate Professional Studies Program Curriculum</td>
<td>6-15</td>
</tr>
<tr>
<td>Major</td>
<td>33</td>
</tr>
<tr>
<td>Cognate</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>33-42</td>
</tr>
</tbody>
</table>

University Core of Common Studies (UCCS)

Examining the World:

- 6 credits Rhetoric (R)
- 3 credits Mathematical Reasoning (MR)

Engaging the World:

- 3 credits Diverse Cultures (DC)
- 3 credits Histories of Cultures and Societies (HCS)
- 3 credits Individual and Social Behavior (ISB)
- 3 credits Literature/Performing Arts (LPA)
- 3 credits Science and Nature (SN)

Evaluating the World:

- 6 credits Human Nature and Ethics (HNE)
- 6 credits Theology (T)

Note: Consult the Core of Common Studies website (http://www.marquette.edu/core-of-common-studies) for an updated list of approved core courses.

The Undergraduate Professional Studies Program offers the following courses in the eight-week format to complete University Core of Common Studies.

Rhetoric (R) (http://www.marquette.edu/core-of-common-studies/course-rhetoric.php) (6 credit hours)

All students must complete six credit hours of coursework in the Rhetoric knowledge area. The specific courses that all Undergraduate Professional Studies Program students need to complete this requirement are:

- ENGL 1001 Rhetoric and Composition 1 * 3
- ENGL 1002 Rhetoric and Composition 2 * 3

History of Cultures and Societies (HCS) (http://www.marquette.edu/core-of-common-studies/course-histories.php) (3 credit hours)

All students must complete three credit hours of coursework in the History of Cultures and Societies knowledge area. Other courses may also fulfill the 3 credit hour history requirement; however, these options are not offered through the eight-week format. Generally students in the Undergraduate Professional Studies Program complete the History of Cultures and Societies requirement with the following history courses that are offered in the eight-week format.

- HIST 1001 Growth of Western Civilization to 1715 * 3
- HIST 1002 Growth of Western Civilization since 1715 * 3
Leadership and Organizations

Literature/Performing Arts (LPA) (http://www.marquette.edu/core-of-common-studies/course-literature-performing-arts.php) (3 credit hours)
All students must complete three credit hours of coursework in the Literature/Performing Arts knowledge area. Other courses may also fulfill the 3 credit hour literature and performing arts requirement; however, these options are not offered through the eight-week format. Generally students in the Undergraduate Professional Studies Program complete the Literature/Performing Arts requirement with the following literature courses that are offered in the eight-week format.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 2000</td>
<td>Literature, History, and Culture</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 2010</td>
<td>Literature and Genre</td>
<td>3</td>
</tr>
</tbody>
</table>

Mathematical Reasoning (MR) (http://www.marquette.edu/core-of-common-studies/course-math.php) (3 credit hours)
All students must complete three credit hours of coursework in the Mathematical Reasoning knowledge area. Other course may fulfill the 3 credit hour mathematical reasoning requirement; however, this option is offered through the eight-week format.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRST 2140</td>
<td>Research and Statistical Methods</td>
<td>3</td>
</tr>
</tbody>
</table>

Science and Nature (SN) (http://www.marquette.edu/core-of-common-studies/course-science-nature.php)(3 credit hours)
All students must complete three credit hours of coursework in the Science and Nature knowledge area. Generally students in the Undergraduate Professional Studies Program complete the Science and Nature requirement with PRST 1120 Aspects of Modern Science* that is offered in the eight-week format. Other natural science courses may also fulfill the required 3 credit hours; however, these options are not offered through the eight-week format.

Human Nature and Ethics (HNE) (http://www.marquette.edu/core-of-common-studies/course-ethics.php) (6 credit hours)
All students must complete PHIL 1001 Philosophy of Human Nature* and PHIL 2310 Theory of Ethics*.

Individual and Social Behavioral (ISB) (http://www.marquette.edu/core-of-common-studies/course-individual-social-behavior.php) (3 credit hours)
All students must complete three credit hours of coursework in the Individual and Social Behavior knowledge area. Other courses may also fulfill the 3 credit hour individual and social behavior requirement; however, these options are not offered through the eight-week format. Generally students in the Undergraduate Professional Studies Program complete the Individual and Social Behavior requirement with the following social science courses that are offered in the eight-week format.

Choose one of the following courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 1001</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SOCI 1001</td>
<td>Principles of Sociology</td>
<td>3</td>
</tr>
<tr>
<td>CRLS 1001</td>
<td>Introduction to Criminology</td>
<td>3</td>
</tr>
</tbody>
</table>

Theology (T) (http://www.marquette.edu/core-of-common-studies/course-theology.php)(6 credit hours)
All students must complete THEO 1001 Introduction to Theology* and one second level UCCS approved theology course for a total of six credit hours. THEO 2400 Christian Discipleship* is suggested as a second level theology selection and is offered in the eight-week format. Other second level UCCS approved theology courses may also fulfill the remaining 3 credit hours; however, these options are not offered through the eight-week format.

Courses fulfill University Core of Common Studies as well as college curriculum.

Undergraduate Professional Studies program Curriculum

Foundational and Communication Skills Courses (6 - 15 credit hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRST 1001</td>
<td>Foundations of Learning</td>
<td>3</td>
</tr>
<tr>
<td>PRST 1005</td>
<td>Fundamentals of College Reading and Writing</td>
<td>3</td>
</tr>
<tr>
<td>PRST 1010</td>
<td>Foundations of Research Writing</td>
<td>3</td>
</tr>
<tr>
<td>PRST 2110</td>
<td>Principles of Liberal Studies</td>
<td>3</td>
</tr>
<tr>
<td>CMST 3210</td>
<td>Business and Professional Presentations</td>
<td>3</td>
</tr>
</tbody>
</table>

*Courses have been designed to enhance educational success strategies and acclimation to the demands of current college reading, writing, and research skills that emphasize critical thinking. Students may be required to complete one or more of these courses as a condition of enrollment upon recommendation of the admission committee.
Major in Leadership and Organizations

Requires 33 credit hours. All students must complete the core leadership courses along with one concentration. The concentrations include: Organizational Development and Public Service.

Core Leadership Courses:
Twenty-one hours of core leadership courses consisting of:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEOR 2050</td>
<td>Leading Teams and Groups</td>
<td>3</td>
</tr>
<tr>
<td>LEOR 2100</td>
<td>History and Theories of Leadership</td>
<td>3</td>
</tr>
<tr>
<td>LEOR 3140</td>
<td>Ethics in Leadership</td>
<td>3</td>
</tr>
<tr>
<td>LEOR 3150</td>
<td>Leadership and Diversity in Organizations</td>
<td>3</td>
</tr>
<tr>
<td>LEOR 3610</td>
<td>Leaders as Communicators</td>
<td>3</td>
</tr>
<tr>
<td>LEOR 4997</td>
<td>Integrating Seminar</td>
<td>3</td>
</tr>
<tr>
<td>PRST 3110</td>
<td>Research and Inquiry Methods</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total Credit Hours</strong></td>
<td><strong>21</strong></td>
</tr>
</tbody>
</table>

Concentrations:

Organizational Development:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEOR 3320</td>
<td>Organizational Processes</td>
<td>3</td>
</tr>
<tr>
<td>LEOR 3340</td>
<td>Organization Development and Change</td>
<td>3</td>
</tr>
<tr>
<td>LEOR 3350</td>
<td>Organizational Behavior</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>One upper division LEOR elective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total Credit Hours</strong></td>
<td><strong>12</strong></td>
</tr>
</tbody>
</table>

Public Service:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEOR 3410</td>
<td>Political Leadership</td>
<td>3</td>
</tr>
<tr>
<td>LEOR 3440</td>
<td>Leaders as Agents of Change</td>
<td>3</td>
</tr>
<tr>
<td>LEOR 3520</td>
<td>Community Based Leadership</td>
<td>3</td>
</tr>
<tr>
<td>LEOR 3540</td>
<td>Leadership in Grassroots Organizations</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total Credit Hours</strong></td>
<td><strong>12</strong></td>
</tr>
</tbody>
</table>

Cognates:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMST 3210</td>
<td>Business and Professional Presentations</td>
<td>3</td>
</tr>
<tr>
<td>LEOR 3160</td>
<td>Systems Thinking</td>
<td>3</td>
</tr>
<tr>
<td>PRST 2110</td>
<td>Principles of Liberal Studies</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Total Credit Hours</strong></td>
<td><strong>9</strong></td>
</tr>
</tbody>
</table>

Minor in Leadership and Organizations

Requires 21 credit hours. All students must complete the 12 credit hours of required courses along with 9 credit hours of upper-division LEOR course work.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEOR 2050</td>
<td>Leading Teams and Groups</td>
<td>3</td>
</tr>
<tr>
<td>LEOR 2100</td>
<td>History and Theories of Leadership</td>
<td>3</td>
</tr>
<tr>
<td>LEOR 3140</td>
<td>Ethics in Leadership</td>
<td>3</td>
</tr>
<tr>
<td>LEOR 3150</td>
<td>Leadership and Diversity in Organizations</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Nine credit hours of upper-division LEOR course work.</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td><strong>Total Credit Hours</strong></td>
<td><strong>21</strong></td>
</tr>
</tbody>
</table>
Leadership and Organizations Courses

LEOR 1260. Personal and Family Financial Planning. 3 cr. hrs.
Focuses on the financial planning needs of individuals, families and working professionals. Specific emphasis is given to contemporary issues facing individuals and households by providing a general overview across a broad range of topics. These topics include family budgeting, personal investing, consumer purchasing, credit, home purchasing/mortgages, employee benefit selection and estate planning. Students will also develop detailed individual and family financial plans. Prereq: Enrolled in Professional Studies.

LEOR 1500. Introduction to Entrepreneurship. 3 cr. hrs.
Provides a solid foundation in the vital role played by entrepreneurs and entrepreneurship in the 21st century global economy. Introduces students to the process of launching a start-up business. Students learn the characteristics of entrepreneurs; the approaches used to create, identify and evaluate opportunities for a start-up; the skills that are needed to start and manage the opportunity; and how to develop a preliminary business plan. Prereq: Enrolled in Professional Studies or BUMD-Minor.

LEOR 2050. Leading Teams and Groups. 3 cr. hrs.
Team building and group theory, concepts, research and principles and applications; understanding how teams and groups function; development of skills needed to lead and work effectively in teams and groups; exercises, simulations, experiential learning. Prereq: Enrolled in Professional Studies or BUMD-Minor.

LEOR 2100. History and Theories of Leadership. 3 cr. hrs.
Analysis of the historical concepts and contemporary theories of leadership; emphasis on the application of leadership concepts to actual leadership situations. Prereq: Enrolled in Professional Studies.

LEOR 2210. Accounting Principles and Applications. 3 cr. hrs.
Measurement of income/expenses and the valuation of assets and equities under various kinds of organizations; structuring data to aid management decisions. Prereq: Enrolled in Professional Studies or BUMD-Minor, and MATH 1100 or PRST 1140 or equiv.

LEOR 2220. Economic Theory and Practice. 3 cr. hrs.
The Economic way of thinking (principles, analytic concepts and techniques) applied to consumer choice, resource use and the organization's pricing/hiring/production decisions; the operation of markets and the economic role of government; determinants of aggregate production, employment and the pricing level. Prereq: Enrolled in Professional Studies or BUMD-Minor, and MATH 1100 or PRST 1140 or equiv.

Acquisition and utilization of funds to support the production, personnel and marketing functions; theory of finance in relation to planning, control, risk and optimum capital structure. Prereq: Enrolled in Professional Studies and MATH 1100 or PRST 1140 or equiv.

LEOR 2280. Marketing Concepts and E-commerce. 3 cr. hrs.
Examines the role of marketing from both a business strategy and societal perspective. Students will examine the strategic, decision-making aspects of marketing including demand creation, consumer behavior, product management, pricing strategies, e-commerce, and advertising. The course will emphasize contemporary marketing cases and students will participate in practical projects to reinforce demand creation theory. The program will also examine the societal aspects of marketing including the effects of advertising on shaping cultural attitudes, social mores, and public opinion. Prereq: Enrolled in Professional Studies or BUMD-Minor.

LEOR 3045. Interpersonal Conflict Management. 3 cr. hrs.
The theories and principles of interpersonal conflict will be explored. Emphasis on effective application of conflict management techniques, negotiation and resolution strategies in the workplace. Prereq: Enrolled in Professional Studies.

LEOR 3125. Issues in Organizational Leadership 1. 3 cr. hrs.
The study of selected topics and applications including ethics and leadership, leading individuals, decision making and problem solving, leadership in formal organizations, leader as change agent, leadership and motivation, policy and leadership, entrepreneurial leadership and leadership in non-Western cultures. Prereq: Enrolled in Professional Studies.

LEOR 3135. Issues in Organizational Leadership 2. 3 cr. hrs.
Provides an opportunity for students to discuss, learn and apply leadership concepts with regard to three primary challenges of leaders and managers: effective listening, conflict resolution and facilitation skills. Students are asked to integrate the knowledge and understandings they have accumulated throughout the Leadership and Organizations sequence and through their personal real-world experiences. The relevant topics are presented and approached through a variety of learning formats, including readings, discussions and writings. Prereq: Enrolled in Professional Studies.

LEOR 3140. Ethics in Leadership. 3 cr. hrs.
Provides a foundation in which the student examines, determines and applies the essential leadership dimension of ethical thought and behavior. Literature, presentations, projects, and discussion include contemporary and classical thinking and trace its evolution over time and circumstances. Consideration are given to Greek and Roman periods, the role of religious thought, the humanism of the Renaissance, the Age of Enlightenment and the Industrial Revolution. The outcomes of these eras in western civilization are compared to those of other cultures and regions with attention to the impact on related societies. Students experience the often complex and competing demands and interests of different cultures and societal groups and develop a personal sense of principles which have universal application along with areas of reasonable compromise in achieving ethical outcomes. Other world intercultural perspectives are explored including: political, legal, theological, environmental, educational and tradition-based institutions. Practical ethical issues and problems related to cultural diversity, international business environments and influences are explored. As a concluding exercise, students develop a paper on their personal philosophy concerning ethical leadership principles and practices to which they are willing to commit in their professional and personal lives. Prereq: Enrolled in Professional Studies.
LEOR 3150. Leadership and Diversity in Organizations. 3 cr. hrs.
Examination of interpersonal patterns of selected ethnic groups, races and social classes in the U.S.; gender differences and considerations; exploration of cultural diversity in the workplace; understanding appropriate behaviors; managing diversity in achieving the goal of the organization. Prereq: Enrolled in Professional Studies; LEOR 2050 recommended.

LEOR 3160. Systems Thinking. 3 cr. hrs.
The interconnections of infinitely complex networks of systems in organizational life will be explored. Basic concepts and principles of systems thinking will be explored. Application of such tools as behavior-over-time-graphs and causal loops will be a focus, as will strategies to see how various kinds of power flow through a system. Complex systems will be studied. Prereq: Enrolled in Professional Studies.

LEOR 3165. Leading Continuous Quality Improvement. 3 cr. hrs.
In-depth review of Continuous Quality Improvement (CQI) philosophies and guiding principles. Interactive, hands-on learning of tools and techniques utilized in a CQI environment occur. Case studies highlight systems and structures employed in multiple organizations. Prereq: Enrolled in Professional Studies; recommend PRST 2140 or equiv.

LEOR 3175. Principles of Human Resource. 3 cr. hrs.
Examines the principles, methods and practical applications of human resource management. Issues concerning the effective, equitable, ethical and legal treatment of employees are reviewed related to attracting, selecting, developing, retaining, evaluating and utilizing human resources. Prereq: Enrolled in Professional Studies.

LEOR 3210. Global Commerce. 3 cr. hrs.
Equips students with an analytical perspective on the most recent issues in contemporary global commerce. Focuses on those forces currently having a profound impact and imposing unique leadership challenges on either corporate societal responsibility, the business operating environment, economic and regulatory systems, leadership or financial climates. Examines from three to six global topics per term. Emphasizes developing and examining management interventions and leadership solutions. Students are required to assess topical issues and propose solutions to those contemporary commercial challenges. Students are expected to work in collaborative teams and in an environment of spirited, constructive debate. Prereq: Enrolled in Professional Studies; two of the following: LEOR 1260, LEOR 2220, LEOR 2240, LEOR 2280.

LEOR 3230. Organizational Processes. 3 cr. hrs.
Analyzes the major organizational processes and the role that managers play in changing those processes to increase organizational effectiveness. Course material presents the concepts of leadership, teamwork and communication within an organizational setting and requires students to design an organizational structure that effectively considers the environment, technology, goals, profile and stage of growth of the organization. Prereq: Enrolled in Professional Studies.

LEOR 3300. Organization Development and Change. 3 cr. hrs.
Reviews the broad background of organizational development (OD) and examines the assumptions, strategies, models, intervention techniques and other aspects of organizational development. The fundamental theories that underlie planned change are examined. The process of planned changes is then studied through a look at how OD practitioners enter and contract with client systems to diagnose organizations, groups and jobs; collect, analyze and feed back diagnostic data; design interventions; manage change; and evaluate and institutionalize change. Major OD methods - human process, techno-structural, human resource management and strategic interventions are deliberated. Students learn through case studies how different OD techniques or interventions are used by actual organizations. Prereq: Enrolled in Professional Studies; Jr. stndg.; LEOR 3350 and LEOR 3320.

LEOR 3330. Organizational Behavior. 3 cr. hrs.
The behavior of people as individuals and in groups with emphasis on supervision, productivity and the organizational environment; the fundamentals of organizational theory, structure and administration. Prereq: Enrolled in Professional Studies or BUMD-Minor; LEOR 3320.

LEOR 3340. Organizational Strategies. 3 cr. hrs.
Investigates how to craft, implement and execute organization strategies. The importance of identifying and determining the value-creating potential of a firm's resources, capabilities and core competencies are examined. The dynamics of strategic change in the complex global economy and the corporate level are studied. Prereq: Enrolled in Professional Studies and LEOR 3320.

LEOR 3410. Political Leadership. 3 cr. hrs.
Basic political theory and principles will be examined using the writings of Plato, Aristotle, Marcus Aurelius, St. Augustine, St. Thomas Aquinas, Machiavelli, Hobbes, Loeke, Montesquieu, Rousseau, Bentham, Marx, Spencer, and Gandhi. These theories will then be compared to the actions of political leaders during crises times, such as the U.S. Civil War, World Wars I and II, the Vietnam War, Civil Rights Movement, the Cold War, and the Suffrage Movement. Prereq: Enrolled in Professional Studies.

LEOR 3420. Integrity in Leadership-Religious Perspectives. 3 cr. hrs.
Considers the lives and teachings of some of history's outstanding religious leaders, including Jesus of Nazareth, David, St. Augustine, St. Ignatius of Loyola, Dietrich Bonhoeffer, Dorothy Day, Mahatma Gandhi, Martin Luther King, Jr., Thomas Merton, and Pope John Paul II. Through critical analysis of autobiographical, biographical, and primary texts, the course will examine the manner in which each figure exemplifies the theological virtues of faith, hope, and love, and how these virtues guide, drive, and inform their respective lives and leadership. Prereq: Enrolled in Professional Studies and THEO 1001.

LEOR 3440. Leaders as Agents of Change. 3 cr. hrs.
Focuses on the manifestation of social movements, with a special emphasis on the leaders in these movements. Through readings, film, primary and secondary research, as well as class participation, students discover how social movement leaders emerge and the roles these leaders play in social movements and societies. Prereq: Enrolled in Professional Studies. LEOR 2050 and LEOR 3540 recommended.
LEOR 3460. Leaders in Literature. 3 cr. hrs.
Through a variety of literary texts, this course will provide perspectives on leadership by examining past examples of leaders who have emerged from the imagination of writers past. As we read these texts we will examine and debate the relevance of leadership figures in literature as embodiments of great ideas and moral concerns. We will contrast them to contemporary experiences and conduct, both professional and personal, as a means for establishing the value of such literary constructs to the formation of our own ideas and understanding of leadership. Study of leaders in literature will expand to the historical and literary contexts in which the works were created and from which the authors are writing. Students will develop an increasingly sophisticated understanding of literary period, and will be challenged to see the value of such literary works as powerful constructions of human imagination and spirit. Exposure to a variety of literary constructions of leadership can challenge students to develop a rich sense of their own leadership qualities and a method for reflecting upon, and analyzing the instances of leadership in their own workplaces and communities. Prereq: ENGL 1002.

LEOR 3480. Historical Leadership during World Conflicts. 3 cr. hrs.
Requires the student to examine leadership events during world conflicts and analyze them using leadership theories that elucidate the critical elements of leadership and decision making. These elements include how the leader(s) and followers exerted influence, decided upon goals and objectives, developed courses of action to attain those goals, and developed a shared sense of purpose to successfully implement a course of action. Students develop case studies of key events and decisions. Prereq: Enrolled in Professional Studies; HIST 1001 or HIST 1002 and LEOR 2100.

LEOR 3520. Community Based Leadership. 3 cr. hrs.
A historical, sociological and political examination of not-for-profit, non-profit and for profit organizations. Distinctions between non-profit, not-for-profit and for-profit organizations are examined. Reviews current theories of leadership in not-for-profits, non-profits and for profits and examines the impact of the leader on fund raising, public policy, meeting legal requirements, recruiting and mission. Prereq: Enrolled in Professional Studies. LEOR 3440 recommended.

LEOR 3540. Leadership in Grassroots Organizations. 3 cr. hrs.
The importance of an involved citizenry as key to the preservation of a democratic society is examined. The study and value of grassroots organizations provide a unique opportunity to examine the value and impact of such organizations in American life. What social and/or political events give rise to grassroots organizations? How do “ordinary” people emerge as leaders? To examine these questions, this class explores strategies, tactics, motivation, community-building and leadership emergence. An optional service-learning component is available.

LEOR 3610. Leaders as Communicators. 3 cr. hrs.
Moves beyond the study of what a leader is to how a leader accomplishes. While examining how leaders use communication students critically analyze these questions: What is the relationship between leadership and communication styles? What communication competencies are needed by organizational leaders? How do leaders use communication to facilitate change in organizations? How does an individuals’ gender, race and/or ethnicity affect leadership and communication behaviors. Prereq: Enrolled in Professional Studies.

LEOR 3710. Information Systems for Management. 3 cr. hrs.
An overview of the technological, managerial and organizational factors which impact information systems. The critical role of information systems at the operational, tactical and strategic levels of the organization will be examined. Advanced productivity application software projects. Prereq: Enrolled in Professional Studies and PRST 1110; suggest completion of 3 of the classes LEOR 2210, 2220, 2240, 2280.

LEOR 4931. Topics in Leadership and Organizations. 1-3 cr. hrs.
Various topics selected from one of the various within organization and/or leadership. Specific topics to be announced in the Schedule of Classes. Prereq: Enrolled in Professional Studies and Jr. stndg.

LEOR 4995. Independent Study in Leadership and Organizations. 1-3 cr. hrs.
Research on a selected topic under the direction of a faculty member of the college of Professional Studies. Prereq: Enrolled in Professional Studies; cons. of Associate Dean.

LEOR 4997. Integrating Seminar. 3 cr. hrs.
Interdisciplinary, capstone experience; concentration on leadership as an integrated theme; shaping individual theories and applications across the curriculum into a holistic approach; using leadership skills to promote the advancement of community and organizational goals. Completion of all previous course work required. Prereq: Enrolled in Professional Studies; Sr. stndg.

Professional Studies Courses

PRST 1001. Foundations of Learning. 3 cr. hrs.
Orientation to the environment and demands of the college classroom and a Marquette education; readings and discussion in literature and humanities; exploration of the learning skills needed for academic success; critical thinking, writing, studying memory, note and test taking, library and others. S/U grade assessment. Prereq: Open to first-year College of Professional Studies students only.

PRST 1005. Fundamentals of College Reading and Writing. 3 cr. hrs.
Focus is on the reading and writing skills necessary for success in the college's core curriculum courses. Introduces students to the critical reading strategies required in an academic setting and to the elements of the composing process (prewriting, drafting, editing and revising). Course covers the basic writing skills of various essay structures and grammar conventions. Students are instructed on how to write essays using scholarly sources and appropriate documentation (APA). Close collaboration with the university's librarians help students establish a research environment for this and future courses. Students are expected to write often, participate in peer review and become critical readers of their own work. Students may be required to register for this course upon recommendation of the admission committee as a condition of enrollment.
PRST 1010. Foundations of Research Writing. 3 cr. hrs.
Designed to help students with little or no experience using current research methods to implement the critical reading and thinking skills and other strategies necessary to the practice of persuasive research writing. Focuses on the process of learning how to argue effectively on paper. Students have the opportunity to develop their research writing skills by writing multiple drafts with well-documented, credible sources. Entering transfer students may be required to register for this course upon recommendation of the admission committee as a condition of enrollment. Prereq: Enrolled in the College of Professional Studies; ENGL 1001 and/or 1002 equivs. Must be completed within the first year of student's academic career.

PRST 1110. Introduction to Information Systems. 3 cr. hrs.

PRST 1120. Aspects of Modern Science. 3 cr. hrs.
An interdisciplinary, integrated study of processes and principles of modern biology, chemistry, and physics. Scientific inquiry as a means of knowledge; major technological contributions to modern societies: stability, information transfer, and evolution of biological systems, emphasizing relevant chemical and physical processes in specific environments. Accepted as natural science requirement for Leadership and Organization students only. Prereq: Enrolled in Professional Studies.

PRST 1140. Foundations of Applied Mathematics. 3 cr. hrs.
This course includes the development of computational skills and the application of mathematics in business and other organizational disciplines. Topics will include algebraic operation, formula use and interpretation, equations and inequalities, graphs and functions, probability concepts, mathematics of finance, linear systems and linear programming. Prereq: Enrolled in Professional Studies; two years of college preparatory mathematics.

PRST 2110. Principles of Liberal Studies. 3 cr. hrs.
Introduction to the disciplinary frameworks of the common core offered by Marquette University. Its purpose is to promote lifelong learning, and enhance the skills of analysis, problem solving, critical thinking, writing and communication needed for successful academic achievement in a liberal arts education. The course develops a common ground of understanding and values among students through shared knowledge of the liberal arts. The course offers students an opportunity to enhance their critical thinking, oral expression and writing. Prereq: Enrolled in Professional Studies; ENGL 1001 and ENGL 1002 or equiv.

PRST 2140. Research and Statistical Methods. 3 cr. hrs.
Introduction to research and statistical methods used in business-related decisions; descriptive statistics; probability theory and distributions; sampling and sampling distributions; estimations and inferences; hypothesis testing; chi-squared and testing goodness-of-fit; contingency tables; correlation and regression. Prereq: Enrolled in Professional Studies; MATH 1100 or PRST 1140 recommended.

PRST 3110. Research and Inquiry Methods. 3 cr. hrs.
An upper-level course designed to expose the learner to the methods and means of scientific inquiry. The course offers the student three topical emphases to explore: multi-disciplinary case analyses, an examination of ethical issues in research and reporting, and statistical software use. Students will construct a survey instrument, practice focus group studies and engage in comparative analysis through group work. An introductory statistics course is required as a prerequisite. Prereq: Enrolled in the College of Professional Studies; PRST 2140 or equiv.

PRST 3986. Internship in Professional Studies. 1-3 cr. hrs.
Field experience in government, non-profit, corporate, and/or other administrative law agencies for the purpose of furthering the student's integration of theory, skills, and practice as related to a student's major or minor within a professional organizational setting. Experiential opportunities are augmented with selected readings, reflective journals, papers, and in-class seminars. Prereq: Enrolled in Professional Studies; Jr. stndg.; cum GPA of 2.000; ENGL 1001, ENGL 1002, and LEOR 2100 or CMST 1000, or CRLS 1001.

PRST 4995. Independent Study in Professional Studies. 1-3 cr. hrs.
Research on a selected topic under the direction of a faculty member of the College of Professional Studies. Prereq: Enrolled in the College of Professional Studies; cons. of Associate Dean.
Medieval Studies

Director: Lezlie Knox, Ph.D.

The interdisciplinary minor in medieval studies integrates courses in English, foreign languages, literature, history, philosophy, and theology to introduce students to the major movements and achievements of the Latin Christian West from approximately A.D. 500 to 1500.

Medieval Studies Minor

The minor consists of six courses (18 credit hours).

Choose six of the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 4130</td>
<td>History of the English Language</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 4301</td>
<td>Medieval Literature and Chaucer</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 4311</td>
<td>Themes in Medieval Literature</td>
<td>3</td>
</tr>
<tr>
<td>GRMN 4525</td>
<td>German Literature: Twelfth to the Eighteenth Century</td>
<td>3</td>
</tr>
<tr>
<td>HIST 3205</td>
<td>The Byzantine Empire</td>
<td>3</td>
</tr>
<tr>
<td>HIST 3210</td>
<td>The Middle Ages</td>
<td>3</td>
</tr>
<tr>
<td>HIST 4212</td>
<td>The Crusades</td>
<td>3</td>
</tr>
<tr>
<td>HIST 4250</td>
<td>Tudor England 1485 to 1603</td>
<td>3</td>
</tr>
<tr>
<td>HIST 4525</td>
<td>Age of the Samurai</td>
<td>3</td>
</tr>
<tr>
<td>HIST 4550</td>
<td>Medieval East Asia</td>
<td>3</td>
</tr>
<tr>
<td>LATN 4100</td>
<td>Latin Prose Composition</td>
<td>3</td>
</tr>
<tr>
<td>LATN 4115</td>
<td>Medieval Latin</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 3620</td>
<td>Medieval Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 3515</td>
<td>Masterpieces of Spanish Literature</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 4500</td>
<td>Race, Culture and Religion in Early Spanish Literature</td>
<td>3</td>
</tr>
<tr>
<td>SPAN 4600</td>
<td>Spanish-American Literature: Pre-Columbian to Baroque</td>
<td>3</td>
</tr>
<tr>
<td>THEO 2250</td>
<td>Spiritual Exercises of St. Ignatius</td>
<td>3</td>
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<tr>
<td>THEO 4200</td>
<td>Theology in the Early Church</td>
<td>3</td>
</tr>
<tr>
<td>THEO 4210</td>
<td>History and Theology of the Christian East</td>
<td>3</td>
</tr>
<tr>
<td>THEO 4220</td>
<td>St. Augustine: The Man and the Theologian</td>
<td>3</td>
</tr>
<tr>
<td>THEO 4230</td>
<td>Theology in the Middle Ages</td>
<td>3</td>
</tr>
</tbody>
</table>

Notes:

- Electives may also be chosen from appropriate offerings of HIST 4931 Topics in History, HIST 4953 Readings in History, PHIL 4931 Topics in Philosophy, THEO 4220 St. Augustine: The Man and the Theologian and THEO 4290 Studies in Historical Theology.
- Any substitutions must be approved by the program coordinator.
Peace Studies

Director: Louise Cainkar, Ph.D.

Reflecting the reality that questions of peace and justice permeate our lives, Peace Studies is one of the fastest growing academic fields. As a peace studies major or minor you can choose from classes in many disciplines (including political science, sociology, history, anthropology, theology, psychology, philosophy, and other fields) to first understand the causes of conflict; second, develop ways to nonviolently prevent and resolve conflict; and third, build peaceful and just systems and societies. Through course work you analyze conflicts varying in scope from international to personal through lenses of peacemaking, conflict resolution, justice, human rights and development.

Peace studies emphasizes valuable skills such as strategic thinking, conflict resolution, creative problem solving, negotiation, persuasion, critical analysis and effective communication. These skills and experiences are attractive to a wide variety of employers including those in peace and development organizations, nonprofit and social service organizations, law (e.g., human rights, immigration), public health, journalism, counseling and more.

Peace Studies Major

The major consists of 10 courses (30 credit hours). Four required courses (12 credit hours) and six elective courses (18 credit hours) chosen from any of the focal area course listings.

Required Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>INPS 2010</td>
<td>Introduction to Peace Studies</td>
<td>3</td>
</tr>
<tr>
<td>THEO 2500</td>
<td>Theology, Violence, and Nonviolence</td>
<td>3</td>
</tr>
<tr>
<td>INPS 4997</td>
<td>Capstone Seminar in Peace Studies</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>One of the following:</td>
<td>3</td>
</tr>
<tr>
<td>CMST 3100</td>
<td>Communication and Conflict</td>
<td></td>
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<tr>
<td>SOWJ 2300</td>
<td>Conflict Resolution and Restorative Justice</td>
<td></td>
</tr>
<tr>
<td>POSC 4631</td>
<td>World Conflict and Security</td>
<td></td>
</tr>
</tbody>
</table>

Elective Courses: Choose six courses from the following areas 18

Total Credit Hours 30

Elective Course Options:

Focal Area One: Peacemaking

Theories and Practices of Peacemaking

Working for the cessation of violence (intervention methods, causes of violence/terrorism, resources for reducing violence)

Peacemaking is the discipline that concentrates on preventing war and violence by addressing the underlying causes of violence and war, and by providing alternatives to war and violence such as conflict resolution, nonviolent action, arbitration, mediation and legal structures of dispute resolution.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 4320</td>
<td>Culture, Law and Violence</td>
<td>3</td>
</tr>
<tr>
<td>CMST 3100</td>
<td>Communication and Conflict</td>
<td>3</td>
</tr>
<tr>
<td>CMST 4400</td>
<td>Cross-Cultural Communication in the United States</td>
<td>3</td>
</tr>
<tr>
<td>CRLS 3640</td>
<td>Domestic Violence in the United States</td>
<td>3</td>
</tr>
<tr>
<td>CRLS 4640</td>
<td>Family Violence and Public Intervention</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 3770</td>
<td>Feminist Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>POSC 4281</td>
<td>Urban Public Policy</td>
<td>3</td>
</tr>
<tr>
<td>POSC 4631</td>
<td>World Conflict and Security</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 3210</td>
<td>The Psychology of Prejudice</td>
<td>3</td>
</tr>
<tr>
<td>SOCI 3700</td>
<td>Social Movements</td>
<td>3</td>
</tr>
<tr>
<td>SOCI 4400</td>
<td>Social Inequality</td>
<td>3</td>
</tr>
<tr>
<td>SOCI 4450</td>
<td>Sociology of Sex and Gender</td>
<td>3</td>
</tr>
<tr>
<td>SOCI 4600</td>
<td>The Social Reality of Crime and Justice</td>
<td>3</td>
</tr>
<tr>
<td>SOWJ 2300</td>
<td>Conflict Resolution and Restorative Justice</td>
<td>3</td>
</tr>
<tr>
<td>SOWJ 2600</td>
<td>Community Organizing</td>
<td>3</td>
</tr>
<tr>
<td>SOWJ 3400</td>
<td>Advocacy and Social Change Theory and Practice</td>
<td>3</td>
</tr>
<tr>
<td>SOWJ 4600</td>
<td>Faith-based Activism</td>
<td>3</td>
</tr>
</tbody>
</table>
Focal Area Two: Peacekeeping

Justice, Human Rights and Reconciliation

Sustaining the peace (identify actors, human rights and civil liberties, allocation of resources, justice systems)

Peacekeeping is the discipline that keeps violence and war from spreading or reigniting after a peace agreement is signed.

Focal Area Three: Peace Building

Social, Cultural and Economic Development

Building a more peaceful society (environment and resources, addressing poverty, international entities, solidarity)

Peace building is the discipline that goes beyond the cessation of hostilities to bring people previously at odds with one another into reconciliation.

Peace building assumes that peace is more than a negative, the end of war and violence. Peace is also a positive, something that needs to be built. Peace building therefore works to encourage and build a culture of sustainable peace—which includes such fundamentals as human rights, the rule of law and an equitable economy.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 4316</td>
<td>Culture Change and Development</td>
<td>3</td>
</tr>
<tr>
<td>ECON 4016</td>
<td>Environmental and Natural Resource Economics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 4047</td>
<td>Development Economics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 4070</td>
<td>Economics and Ethics</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 4840</td>
<td>Postcolonial Literatures</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 4850</td>
<td>Global Literatures</td>
<td>3</td>
</tr>
<tr>
<td>HEAL 1025</td>
<td>Culture and Health</td>
<td>3</td>
</tr>
<tr>
<td>NURS 1001</td>
<td>Nursing and Health in the Jesuit Tradition</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 3350</td>
<td>Philosophy of the Environment</td>
<td>3</td>
</tr>
<tr>
<td>POSC 4193</td>
<td>Environmental Politics and Policy</td>
<td>3</td>
</tr>
<tr>
<td>POSC 4411</td>
<td>Politics, Economics, and Democracy</td>
<td>3</td>
</tr>
<tr>
<td>POSC 4441</td>
<td>Designing Liberal Democracy</td>
<td>3</td>
</tr>
<tr>
<td>POSC 4561</td>
<td>Politics of the Developing World</td>
<td>3</td>
</tr>
<tr>
<td>POSC 4621</td>
<td>Politics of the World Economy</td>
<td>3</td>
</tr>
<tr>
<td>POSC 4641</td>
<td>Politics of the Illicit Global Economy</td>
<td>3</td>
</tr>
<tr>
<td>POSC 4661</td>
<td>The Political Economy of Development</td>
<td>3</td>
</tr>
<tr>
<td>SOWJ 4700</td>
<td>Global Aid and Humanitarianism</td>
<td>3</td>
</tr>
<tr>
<td>THEO 4390</td>
<td>Studies in Systematic Theology</td>
<td>3</td>
</tr>
</tbody>
</table>
### Focal Area Four: Topics in Peace Studies

**Holocaust and Genocide**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 4266</td>
<td>Nazi Germany and the Holocaust</td>
<td>3</td>
</tr>
<tr>
<td>HIST 4600</td>
<td>Comparative Twentieth-Century Genocides</td>
<td>3</td>
</tr>
</tbody>
</table>

**Race, Ethnicity and Migration**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 3350</td>
<td>Native Peoples of North America</td>
<td>3</td>
</tr>
<tr>
<td>COMM 4500</td>
<td>Race and Gender Issues in Mass Media</td>
<td>3</td>
</tr>
<tr>
<td>CRLS 4140</td>
<td>Race, Crime and Punishment</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 4810</td>
<td>Comparative Race and Ethnic Studies</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 4820</td>
<td>Studies in Critical Race and Ethnic Studies</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 4830</td>
<td>Africana Literatures</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1301</td>
<td>Survey of Latin America</td>
<td>3</td>
</tr>
<tr>
<td>HIST 3455</td>
<td>Modern Middle East Since 1500</td>
<td>3</td>
</tr>
<tr>
<td>HIST 4135</td>
<td>African-American History</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 3380</td>
<td>Asian Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 3780</td>
<td>Africana Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 4953</td>
<td>Undergraduate Seminar: (Latin American Philosophy)</td>
<td>3</td>
</tr>
<tr>
<td>POSC 4361</td>
<td>Politics of Race, Ethnicity, and Gender</td>
<td>3</td>
</tr>
<tr>
<td>SOCI 3250</td>
<td>Race and Ethnic Relations</td>
<td>3</td>
</tr>
<tr>
<td>SOCI 4250</td>
<td>African-American Social Thought</td>
<td>3</td>
</tr>
<tr>
<td>SOWJ 2150</td>
<td>Immigrants and their Communities</td>
<td>3</td>
</tr>
<tr>
<td>SOWJ 3450</td>
<td>Arabs and Muslims in Global Context</td>
<td>3</td>
</tr>
<tr>
<td>THEO 3420</td>
<td>Bridging the Racial Divide</td>
<td>3</td>
</tr>
</tbody>
</table>

### Notes:

- Students are encouraged to complete INPS 4986 Internship in Peace Studies, as well as to take Special Topics courses offered each term that reflect Peace Studies themes.
- Internship, Independent Studies and Special Topics courses will count toward a relevant focus area with the approval of the director of Peace Studies.
- Special Topics course listings vary by departments.

### Peace Studies Minor

The minor consists of six courses (18 credit hours): two required courses (6 credit hours) and four elective courses (12 credit hours) as listed below.

#### Required Courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>INPS 2010</td>
<td>Introduction to Peace Studies</td>
<td>3</td>
</tr>
<tr>
<td>INPS 4997</td>
<td>Capstone Seminar in Peace Studies</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Elective Courses: Choose four courses from the following areas:

**Focal Area One: Peacemaking**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 4320</td>
<td>Culture, Law and Violence</td>
<td>3</td>
</tr>
<tr>
<td>CMST 3100</td>
<td>Communication and Conflict</td>
<td>3</td>
</tr>
<tr>
<td>CMST 4400</td>
<td>Cross-Cultural Communication in the United States</td>
<td>3</td>
</tr>
<tr>
<td>CRLS 3640</td>
<td>Domestic Violence in the United States</td>
<td>3</td>
</tr>
<tr>
<td>CRLS 4640</td>
<td>Family Violence and Public Intervention</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 3770</td>
<td>Feminist Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>POSC 4281</td>
<td>Urban Public Policy</td>
<td>3</td>
</tr>
<tr>
<td>POSC 4631</td>
<td>World Conflict and Security</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 3210</td>
<td>The Psychology of Prejudice</td>
<td>3</td>
</tr>
<tr>
<td>SOCI 3700</td>
<td>Social Movements</td>
<td>3</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
</tr>
<tr>
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</tr>
<tr>
<td>SOCI 4400</td>
<td>Social Inequality</td>
<td>3</td>
</tr>
<tr>
<td>SOCI 4450</td>
<td>Sociology of Sex and Gender</td>
<td>3</td>
</tr>
<tr>
<td>SOCI 4600</td>
<td>The Social Reality of Crime and Justice</td>
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<td>SOWJ 2300</td>
<td>Conflict Resolution and Restorative Justice</td>
<td>3</td>
</tr>
<tr>
<td>SOWJ 2600</td>
<td>Community Organizing</td>
<td>3</td>
</tr>
<tr>
<td>SOWJ 3400</td>
<td>Advocacy and Social Change Theory and Practice</td>
<td>3</td>
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<tr>
<td>SOWJ 4600</td>
<td>Faith-based Activism</td>
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<tr>
<td>THEO 4490</td>
<td>Studies in Moral Theology</td>
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**Focal Area Two: Peacekeeping**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>CMST 4330</td>
<td>Freedom of Speech</td>
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</tr>
<tr>
<td>CRLS 4120</td>
<td>Comparative Justice Systems</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 4452</td>
<td>British Literature of the Romantic Period, 1790-1837</td>
<td>3</td>
</tr>
<tr>
<td>HIST 4260</td>
<td>Modern Ireland</td>
<td>3</td>
</tr>
<tr>
<td>HIST 4460</td>
<td>Modern South Africa</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 3710</td>
<td>Political Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 3750</td>
<td>Philosophy of Law</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 4953</td>
<td>Undergraduate Seminar:</td>
<td>3</td>
</tr>
<tr>
<td>POSC 2801</td>
<td>Justice and Power</td>
<td>3</td>
</tr>
<tr>
<td>POSC 4251</td>
<td>The Politics of Civil Rights and Liberties</td>
<td>3</td>
</tr>
<tr>
<td>POSC 4601</td>
<td>International Law</td>
<td>3</td>
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<td>POSC 4611</td>
<td>International Organizations</td>
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<td>POSC 4651</td>
<td>The Politics of Human Rights</td>
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<td>SOCI 4660</td>
<td>Law and Society</td>
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<td>SOCI 4700</td>
<td>Political Sociology</td>
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<td>SOCI 4740</td>
<td>Social Change</td>
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<tr>
<td>SOWJ 3700</td>
<td>Social Welfare and the Law</td>
<td>3</td>
</tr>
<tr>
<td>THEO 4390</td>
<td>Studies in Systematic Theology</td>
<td>3</td>
</tr>
</tbody>
</table>

**Focal Area Three: Peace Building**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 4316</td>
<td>Culture Change and Development</td>
<td>3</td>
</tr>
<tr>
<td>ECON 4016</td>
<td>Environmental and Natural Resource Economics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 4047</td>
<td>Development Economics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 4070</td>
<td>Economics and Ethics</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 4840</td>
<td>Postcolonial Literatures</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 4850</td>
<td>Global Literatures</td>
<td>3</td>
</tr>
<tr>
<td>HEAL 1025</td>
<td>Culture and Health</td>
<td>3</td>
</tr>
<tr>
<td>NURS 1001</td>
<td>Nursing and Health in the Jesuit Tradition</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 3350</td>
<td>Philosophy of the Environment</td>
<td>3</td>
</tr>
<tr>
<td>POSC 4193</td>
<td>Environmental Politics and Policy</td>
<td>3</td>
</tr>
<tr>
<td>POSC 4411</td>
<td>Politics, Economics, and Democracy</td>
<td>3</td>
</tr>
<tr>
<td>POSC 4441</td>
<td>Designing Liberal Democracy</td>
<td>3</td>
</tr>
<tr>
<td>POSC 4561</td>
<td>Politics of the Developing World</td>
<td>3</td>
</tr>
<tr>
<td>POSC 4621</td>
<td>Politics of the World Economy</td>
<td>3</td>
</tr>
<tr>
<td>POSC 4641</td>
<td>Politics of the Illicit Global Economy</td>
<td>3</td>
</tr>
<tr>
<td>POSC 4661</td>
<td>The Political Economy of Development</td>
<td>3</td>
</tr>
<tr>
<td>SOWJ 4700</td>
<td>Global Aid and Humanitarianism</td>
<td>3</td>
</tr>
<tr>
<td>THEO 4390</td>
<td>Studies in Systematic Theology</td>
<td>3</td>
</tr>
<tr>
<td>THEO 4440</td>
<td>Foundations of Ecological Ethics</td>
<td>3</td>
</tr>
</tbody>
</table>

**Focal Area Four: Topics in Peace Studies**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 4266</td>
<td>Nazi Germany and the Holocaust</td>
<td>3</td>
</tr>
<tr>
<td>HIST 4600</td>
<td>Comparative Twentieth-Century Genocides</td>
<td>3</td>
</tr>
</tbody>
</table>

**Race, Ethnicity and Migration**
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 3350</td>
<td>Native Peoples of North America</td>
<td>3</td>
</tr>
<tr>
<td>COMM 4500</td>
<td>Race and Gender Issues in Mass Media</td>
<td>3</td>
</tr>
<tr>
<td>CRLS 4140</td>
<td>Race, Crime and Punishment</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 4810</td>
<td>Comparative Race and Ethnic Studies</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 4820</td>
<td>Studies in Critical Race and Ethnic Studies</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 4830</td>
<td>Africana Literatures</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1301</td>
<td>Survey of Latin America</td>
<td>3</td>
</tr>
<tr>
<td>HIST 3455</td>
<td>Modern Middle East Since 1500</td>
<td>3</td>
</tr>
<tr>
<td>HIST 4135</td>
<td>African-American History</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 3380</td>
<td>Asian Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 3780</td>
<td>Africana Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 4953</td>
<td>Undergraduate Seminar:</td>
<td>3</td>
</tr>
<tr>
<td>POSC 4361</td>
<td>Politics of Race, Ethnicity, and Gender</td>
<td>3</td>
</tr>
<tr>
<td>SOCI 3250</td>
<td>Race and Ethnic Relations</td>
<td>3</td>
</tr>
<tr>
<td>SOCI 4250</td>
<td>African-American Social Thought</td>
<td>3</td>
</tr>
<tr>
<td>SOWJ 2150</td>
<td>Immigrants and their Communities</td>
<td>3</td>
</tr>
<tr>
<td>SOWJ 3450</td>
<td>Arabs and Muslims in Global Context</td>
<td>3</td>
</tr>
<tr>
<td>THEO 3420</td>
<td>Bridging the Racial Divide</td>
<td>3</td>
</tr>
</tbody>
</table>

**Notes:**
- Relevant upper-division, independent study and special topics courses may be counted toward the course requirements of the minor with the prior approval of the director of Peace Studies.
- Any substitutions must be approved by the director of Peace Studies.
- A number of the courses listed above have pre-requisites that must be met prior to taking the course.

**Courses**

**INPS 2010. Introduction to Peace Studies. 3 cr. hrs.**
An interdisciplin ary, introductory seminar for students interested in Peace Studies. Students explore faith-based and secular theoretical and practical approaches to the concepts of peace, through critical discussion of relevant texts and reflective writing.

**INPS 4997. Capstone Seminar in Peace Studies. 3 cr. hrs.**
Senior seminar for students completing Peace Studies. Designed to bring interdisciplinary approaches to bear on questions of peace. Topics include the application of peace building skills, the creation of just systems, the protection of human rights, and effective models of development. Students explore paths to peace through text-based inquiry, multidisciplinary theoretical analysis, and integration of prior course work. Experiential learning opportunities and internships are offered. Prereq: Sr. stndg. and INPS major or minor.
Public History

Director: Michael Wert, Ph.D.

The interdisciplinary minor in public history allows students to examine the ways the historic method is applied outside of the classroom. For students seeking a career in public history, the minor better prepares them for advanced study in specialized programs. In addition to history courses, students can explore related disciplines such as anthropology and can take specialized courses in fields such as marketing, management or advertising. Students interested in this minor should see the public history adviser in the Department of History. As students select courses to meet the requirements for the University Core of Common Studies (UCCS), they should pay close attention to the list of recommended courses for this minor.

Public History Minor

The minor in public history consists of six courses (18 credit hours), including three required courses in history (9 credit hours); and three elective courses (9 credit hours).

Note:

- History majors pursuing the interdisciplinary minor in public history should note that only two courses may overlap between a major and a minor in the Klingler College of Arts and Sciences.

Required History Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 4100</td>
<td>Public History</td>
<td>3</td>
</tr>
<tr>
<td>HIST 4101</td>
<td>Applied History</td>
<td>3</td>
</tr>
<tr>
<td>HIST 4986</td>
<td>Internship in History</td>
<td>3</td>
</tr>
</tbody>
</table>

*Elective Courses - Choose three of the following: 9

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCO 1030</td>
<td>Principles of Financial Accounting</td>
</tr>
<tr>
<td>ACCO 1031</td>
<td>Principles of Managerial Accounting</td>
</tr>
<tr>
<td>ADVE 1400</td>
<td>Advertising Principles</td>
</tr>
<tr>
<td>ANTH 3201</td>
<td>Archaeology and Prehistoric Cultures</td>
</tr>
<tr>
<td>ANTH 3250</td>
<td>Prehistory of North America</td>
</tr>
<tr>
<td>ENGL 4931</td>
<td>Topics in Literature (Writing for Nonprofit Agencies)</td>
</tr>
<tr>
<td>ENTP 3001</td>
<td>Understanding Entrepreneurship</td>
</tr>
<tr>
<td>HURE 3001</td>
<td>Management of Human Resources</td>
</tr>
<tr>
<td>HURE 4080</td>
<td>Training and Development</td>
</tr>
<tr>
<td>MANA 3001</td>
<td>Behavior and Organization</td>
</tr>
<tr>
<td>MARK 3001</td>
<td>Introduction to Marketing</td>
</tr>
<tr>
<td>MARK 4020</td>
<td>Integrated Marketing Communications</td>
</tr>
</tbody>
</table>

Total Credit Hours 18

Note:

- *Elective Courses: Only two business administration courses may be included among the three electives.
- All courses should be selected with the approval of the public history adviser.

Recommended courses that satisfy UCCS requirements include:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 1001</td>
<td>Introductory Anthropology</td>
</tr>
<tr>
<td>COMM 1100</td>
<td>Contemporary Presentation</td>
</tr>
<tr>
<td>or ENGL 1002</td>
<td>Rhetoric and Composition 2</td>
</tr>
<tr>
<td>ECON 1103</td>
<td>Principles of Microeconomics</td>
</tr>
<tr>
<td>HIST 1101</td>
<td>Introduction to American History</td>
</tr>
</tbody>
</table>

Statistics Courses - at least one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUAD 1560</td>
<td>Introduction to Statistics and Business Analytics</td>
</tr>
<tr>
<td>MATH 1700</td>
<td>Modern Elementary Statistics</td>
</tr>
<tr>
<td>PSYC 2001</td>
<td>Psychological Measurements and Statistics</td>
</tr>
<tr>
<td>SOCI 2060</td>
<td>Social Statistics</td>
</tr>
</tbody>
</table>
Urban Affairs

Director: Amber Wichowsky, Ph.D.

The interdisciplinary minor in urban affairs introduces students to urban issues from multiple viewpoints.

Urban Affairs Minor

The minor consists of seven courses (21 credit hours). Students must take at least one course from each of the following four areas listed below in addition to choosing three elective courses.

<table>
<thead>
<tr>
<th>Economics Courses - Choose one of the following:</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 4010 Public Finance</td>
<td></td>
</tr>
<tr>
<td>ECON 4012 Urban and Regional Economics</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>History Courses - Choose one of the following:</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 4986 Internship in History</td>
<td></td>
</tr>
<tr>
<td>HIST 4140 American Urban History</td>
<td></td>
</tr>
<tr>
<td>HIST 4931 Topics in History</td>
<td></td>
</tr>
<tr>
<td>HIST 4953 Readings in History</td>
<td></td>
</tr>
<tr>
<td>HIST 4955 Undergraduate Seminar in History</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Political Science Courses - Choose one of the following:</th>
<th>3</th>
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</thead>
<tbody>
<tr>
<td>POSC 4281 Urban Public Policy</td>
<td></td>
</tr>
<tr>
<td>POSC 4291 Urban Politics</td>
<td></td>
</tr>
<tr>
<td>POSC 4321 Business and Politics</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Social and Cultural Sciences - Choose one of the following:</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 3100 Urban Anthropology</td>
<td></td>
</tr>
<tr>
<td>SOCI 4270 Urban Sociology</td>
<td></td>
</tr>
<tr>
<td>SOWJ 3001 Social Welfare Policy and Programs</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Electives - Choose three courses from the following:</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEEN 4340 Urban Planning for Civil Engineers</td>
<td></td>
</tr>
<tr>
<td>CRLS 3300 Police and Society</td>
<td></td>
</tr>
<tr>
<td>CRLS 3600 Victimology</td>
<td></td>
</tr>
<tr>
<td>CRLS 4931 Topics in Criminology and Law</td>
<td></td>
</tr>
<tr>
<td>ECON 4016 Environmental and Natural Resource Economics</td>
<td></td>
</tr>
<tr>
<td>HIST 4135 African-American History</td>
<td></td>
</tr>
<tr>
<td>REAL 3001 Introduction to Commercial Real Estate</td>
<td></td>
</tr>
<tr>
<td>SOCI 3200 Social Problems in Urban Society</td>
<td></td>
</tr>
<tr>
<td>SOCI 3250 Race and Ethnic Relations</td>
<td></td>
</tr>
<tr>
<td>SOCI 4100 Urban Life</td>
<td></td>
</tr>
<tr>
<td>SOCI 4270 Urban Sociology</td>
<td></td>
</tr>
</tbody>
</table>

Total Credit Hours: 21

Notes:

- See approved electives list from the program coordinator.
- An interdisciplinary urban affairs major can be created for individual students in consultation with the program coordinator. A proposal for an interdisciplinary urban affairs major must be approved by the college’s associate dean for academic affairs.
Women's and Gender Studies

Director: Angelique Harris, Ph.D.

The Women's and Gender Studies program offers a major or minor that promotes a critical, feminist, and cross-cultural understanding of gender and power in a global context and across disciplinary boundaries. It provides students with the knowledge and skills necessary for just and equitable leadership in professional, civic and religious roles.

Students gain the knowledge and skills for understanding and recognizing:

- How gender has shaped the world around us and the ways we make sense of it.
- How sexism operates in a dynamic with other systems of oppression historically and in contemporary contexts.
- The diversity of women’s experiences and accomplishments.
- The diversity of gendered experiences and perspectives among men and women.
- How to embrace gender diversity and work for justice.

Women's and Gender Studies Major

The interdisciplinary major in Women's and Gender Studies (WGST) consists of one introductory course (3 credit hours), four exploratory courses (12 credit hours), four integrative courses (12 credit hours) and the senior capstone course (3 credit hours) for a total of 30 credit hours.

- Exploratory courses enable students to explore WGST issues as they arise within particular disciplines.
- Integrative courses combine theory with practice or link distinct subjects together.

Required Introductory Course:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>WGST 1001</td>
<td>Introduction to Women's and Gender Studies</td>
<td>3</td>
</tr>
</tbody>
</table>

Exploratory Courses - Choose four of the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 3330</td>
<td>Women and Men in Cross-Cultural Perspective</td>
<td>3</td>
</tr>
<tr>
<td>CMST 4120</td>
<td>Gender and Communication</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 1210</td>
<td>Introduction to Schooling in a Diverse Society</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 4785</td>
<td>Gender, Sexuality, Literature</td>
<td>3</td>
</tr>
<tr>
<td>HEAL 1025</td>
<td>Culture and Health</td>
<td>3</td>
</tr>
<tr>
<td>HEAL 1200</td>
<td>Women's Health</td>
<td>3</td>
</tr>
<tr>
<td>HIST 4145</td>
<td>A History of Women in America</td>
<td>3</td>
</tr>
<tr>
<td>HIST 4245</td>
<td>Women in Western Civilization</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 3770</td>
<td>Feminist Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 3201</td>
<td>Introductory Social Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 3210</td>
<td>The Psychology of Prejudice</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 4720</td>
<td>Psychology of Marriage and Family</td>
<td>3</td>
</tr>
<tr>
<td>SOCI 2200</td>
<td>The Family</td>
<td>3</td>
</tr>
<tr>
<td>THEO 4030</td>
<td>Women in the Bible</td>
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</table>

Integrative Courses: Choose four courses from either Group I or Group II.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 4320</td>
<td>Culture, Law and Violence</td>
<td>3</td>
</tr>
<tr>
<td>COMM 4100</td>
<td>Mass Media and the American Family</td>
<td>3</td>
</tr>
<tr>
<td>COMM 4500</td>
<td>Race and Gender Issues in Mass Media</td>
<td>3</td>
</tr>
<tr>
<td>CMST 4110</td>
<td>Family Communication</td>
<td>3</td>
</tr>
<tr>
<td>CMST 4360</td>
<td>Rhetoric of Social Movements</td>
<td>3</td>
</tr>
<tr>
<td>CMST 4400</td>
<td>Cross-Cultural Communication in the United States</td>
<td>3</td>
</tr>
<tr>
<td>CRLS 3640</td>
<td>Domestic Violence in the United States</td>
<td>3</td>
</tr>
<tr>
<td>CRLS 4130</td>
<td>Women, Crime, and Criminal Justice</td>
<td>3</td>
</tr>
<tr>
<td>CRLS 4640</td>
<td>Family Violence and Public Intervention</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 4715</td>
<td>Children’s Literature</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 4786</td>
<td>Women Writers</td>
<td>3</td>
</tr>
<tr>
<td>HEAL 4200</td>
<td>Natural Family Planning</td>
<td>3</td>
</tr>
<tr>
<td>HIST 4150</td>
<td>Childhood in America</td>
<td>3</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td></td>
</tr>
<tr>
<td>------------</td>
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</tr>
<tr>
<td>MANA 3035</td>
<td>Diversity in Organizations</td>
<td></td>
</tr>
<tr>
<td>POSC 4361</td>
<td>Politics of Race, Ethnicity, and Gender</td>
<td></td>
</tr>
<tr>
<td>PSYC 3220</td>
<td>Human Sexuality</td>
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</tr>
<tr>
<td>PSYC 3550</td>
<td>Psychology of Gender Roles</td>
<td></td>
</tr>
<tr>
<td>SOCI 3280</td>
<td>Race and Family</td>
<td></td>
</tr>
<tr>
<td>SOCI 3550</td>
<td>Race, Gender and Medicine</td>
<td></td>
</tr>
<tr>
<td>SOCI 3570</td>
<td>Men, Masculinities and Health</td>
<td></td>
</tr>
<tr>
<td>SOCI 4450</td>
<td>Sociology of Sex and Gender</td>
<td></td>
</tr>
<tr>
<td>SOWJ 3370</td>
<td>Family Practice</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Group II (depending on content and prior approval from director of WGST)</td>
<td></td>
</tr>
<tr>
<td>ADPR 4953</td>
<td>Seminar in Advertising and Public Relations</td>
<td></td>
</tr>
<tr>
<td>CRLS 4931</td>
<td>Topics in Criminology and Law</td>
<td></td>
</tr>
<tr>
<td>ECON 4020</td>
<td>Economics of Labor Markets</td>
<td></td>
</tr>
<tr>
<td>ECON 4953</td>
<td>Seminar in Economics</td>
<td></td>
</tr>
<tr>
<td>ENGL 4170</td>
<td>Studies in Language</td>
<td></td>
</tr>
<tr>
<td>ENGL 4422</td>
<td>British literature of the Long 18th Century</td>
<td></td>
</tr>
<tr>
<td>ENGL 4452</td>
<td>British Literature of the Romantic Period, 1790-1837</td>
<td></td>
</tr>
<tr>
<td>ENGL 4472</td>
<td>British Literature of the Victorian Period, 1837-1900</td>
<td></td>
</tr>
<tr>
<td>ENGL 4523</td>
<td>Modernism</td>
<td></td>
</tr>
<tr>
<td>ENGL 4543</td>
<td>British Literature of the Postmodernist Period</td>
<td></td>
</tr>
<tr>
<td>ENGL 4442</td>
<td>US Literature from the Constitution to the Civil War</td>
<td></td>
</tr>
<tr>
<td>ENGL 4482</td>
<td>US Literature from the Civil War to the Early 20th Century</td>
<td></td>
</tr>
<tr>
<td>ENGL 4533</td>
<td>US Literature: 20th-Century Beginnings to World War II</td>
<td></td>
</tr>
<tr>
<td>ENGL 4553</td>
<td>US Literature after World War II</td>
<td></td>
</tr>
<tr>
<td>ENGL 4610</td>
<td>Individual Authors</td>
<td></td>
</tr>
<tr>
<td>ENGL 4710</td>
<td>Studies in Genre</td>
<td></td>
</tr>
<tr>
<td>ENGL 4770</td>
<td>Studies in Literature and Culture</td>
<td></td>
</tr>
<tr>
<td>ENGL 4810</td>
<td>Comparative Race and Ethnic Studies</td>
<td></td>
</tr>
<tr>
<td>ENGL 4820</td>
<td>Studies in Critical Race and Ethnic Studies</td>
<td></td>
</tr>
<tr>
<td>ENGL 4931</td>
<td>Topics in Literature</td>
<td></td>
</tr>
<tr>
<td>HEAL 1300</td>
<td>Substance Abuse</td>
<td></td>
</tr>
<tr>
<td>HEAL 1931</td>
<td>Topics in Health Care</td>
<td></td>
</tr>
<tr>
<td>HEAL 3150</td>
<td>Alternative and Complementary Therapies</td>
<td></td>
</tr>
<tr>
<td>HIST 4931</td>
<td>Topics in History</td>
<td></td>
</tr>
<tr>
<td>HIST 4953</td>
<td>Readings in History</td>
<td></td>
</tr>
<tr>
<td>HIST 4955</td>
<td>Undergraduate Seminar in History</td>
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</tr>
<tr>
<td>PHIL 4931</td>
<td>Topics in Philosophy</td>
<td></td>
</tr>
<tr>
<td>PHIL 4953</td>
<td>Undergraduate Seminar:</td>
<td></td>
</tr>
<tr>
<td>SOCI 4931</td>
<td>Topics in Sociology</td>
<td></td>
</tr>
<tr>
<td>SPAN 4550</td>
<td>Twentieth and Twenty-First Century Spanish Literature</td>
<td></td>
</tr>
<tr>
<td>THEO 4490</td>
<td>Studies in Moral Theology</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Required Senior Capstone Course</td>
<td></td>
</tr>
<tr>
<td>WGST 4997</td>
<td>Women's and Gender Studies Capstone Course</td>
<td></td>
</tr>
</tbody>
</table>

**Total Credit Hours:** 30

**Notes:**

- The two required courses are critical to the WGST major and will not be waived or substituted. Both courses are offered annually: WGST 1001 Introduction to Women's and Gender Studies is offered during the Fall semester, and WGST 4997 Women's and Gender Studies Capstone Course is offered in the Spring semester.
- Integrative courses: Group I (course content always satisfies WGST requirements); Group II (content varies from term to term, will satisfy requirements according to course title and content with prior approval from director of WGST).
- Other courses relevant to WGST issues may be approved with consent of director of WGST.
• In the senior capstone course, WGST 4997 Women's and Gender Studies Capstone Course, you will integrate your diverse academic experiences within WGST and devise a community-based project that meets your unique interests.

## Women's and Gender Studies Minor

The WGST minor consists of six courses (18 credit hours): the required WGST 1001 Introduction to Women's and Gender Studies, in addition to 5 courses (15 credit hours) including at least one exploratory course and at least one integrative course, with courses distributed among at least three disciplines.

### Required Course

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
</table>
| WGST 1001 | Introduction to Women's and Gender Studies | 3

### Elective Courses - Choose five courses distributed among at least three disciplines.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 3330</td>
<td>Women and Men in Cross-Cultural Perspective</td>
</tr>
<tr>
<td>CMST 4120</td>
<td>Gender and Communication</td>
</tr>
<tr>
<td>EDUC 1210</td>
<td>Introduction to Schooling in a Diverse Society</td>
</tr>
<tr>
<td>ENGL 4785</td>
<td>Gender, Sexuality, Literature</td>
</tr>
<tr>
<td>HEAL 1025</td>
<td>Culture and Health</td>
</tr>
<tr>
<td>HEAL 1200</td>
<td>Women's Health</td>
</tr>
<tr>
<td>HIST 4145</td>
<td>A History of Women in America</td>
</tr>
<tr>
<td>HIST 4245</td>
<td>Women in Western Civilization</td>
</tr>
<tr>
<td>PHIL 3770</td>
<td>Feminist Philosophy</td>
</tr>
<tr>
<td>PSYC 3201</td>
<td>Introductory Social Psychology</td>
</tr>
<tr>
<td>PSYC 3210</td>
<td>The Psychology of Prejudice</td>
</tr>
<tr>
<td>PSYC 4720</td>
<td>Psychology of Marriage and Family</td>
</tr>
<tr>
<td>SOCI 2200</td>
<td>The Family</td>
</tr>
<tr>
<td>THEO 4030</td>
<td>Women in the Bible</td>
</tr>
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</table>

### Exploratory Courses - Choose at least one from the list below:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>ANTH 4320</td>
<td>Culture, Law and Violence</td>
</tr>
<tr>
<td>COMM 4100</td>
<td>Mass Media and the American Family</td>
</tr>
<tr>
<td>COMM 4500</td>
<td>Race and Gender Issues in Mass Media</td>
</tr>
<tr>
<td>CMST 4110</td>
<td>Family Communication</td>
</tr>
<tr>
<td>CMST 4360</td>
<td>Rhetoric of Social Movements</td>
</tr>
<tr>
<td>CMST 4400</td>
<td>Cross-Cultural Communication in the United States</td>
</tr>
<tr>
<td>CRLS 3640</td>
<td>Domestic Violence in the United States</td>
</tr>
<tr>
<td>CRLS 4640</td>
<td>Family Violence and Public Intervention</td>
</tr>
<tr>
<td>CRLS 4130</td>
<td>Women, Crime, and Criminal Justice</td>
</tr>
<tr>
<td>ENGL 4715</td>
<td>Children's Literature</td>
</tr>
<tr>
<td>ENGL 4786</td>
<td>Women Writers</td>
</tr>
<tr>
<td>HEAL 4200</td>
<td>Natural Family Planning</td>
</tr>
<tr>
<td>HIST 4150</td>
<td>Childhood in America</td>
</tr>
<tr>
<td>MANA 3035</td>
<td>Diversity in Organizations</td>
</tr>
<tr>
<td>POSC 4361</td>
<td>Politics of Race, Ethnicity, and Gender</td>
</tr>
<tr>
<td>PSYC 3220</td>
<td>Human Sexuality</td>
</tr>
<tr>
<td>PSYC 3550</td>
<td>Psychology of Gender Roles</td>
</tr>
<tr>
<td>SOCI 3280</td>
<td>Race and Family</td>
</tr>
<tr>
<td>SOCI 3550</td>
<td>Race, Gender and Medicine</td>
</tr>
<tr>
<td>SOCI 3570</td>
<td>Men, Masculinities and Health</td>
</tr>
<tr>
<td>SOCI 4450</td>
<td>Sociology of Sex and Gender</td>
</tr>
<tr>
<td>SOWJ 3370</td>
<td>Family Practice</td>
</tr>
<tr>
<td>WGST 4997</td>
<td>Women's and Gender Studies Capstone Course</td>
</tr>
</tbody>
</table>

### Integrative Courses - Choose at least one course:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 4320</td>
<td>Culture, Law and Violence</td>
</tr>
<tr>
<td>COMM 4100</td>
<td>Mass Media and the American Family</td>
</tr>
<tr>
<td>COMM 4500</td>
<td>Race and Gender Issues in Mass Media</td>
</tr>
<tr>
<td>CMST 4110</td>
<td>Family Communication</td>
</tr>
<tr>
<td>CMST 4360</td>
<td>Rhetoric of Social Movements</td>
</tr>
<tr>
<td>CMST 4400</td>
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<tr>
<td>CRLS 4130</td>
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<tr>
<td>ENGL 4786</td>
<td>Women Writers</td>
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<tr>
<td>HEAL 4200</td>
<td>Natural Family Planning</td>
</tr>
<tr>
<td>HIST 4150</td>
<td>Childhood in America</td>
</tr>
<tr>
<td>MANA 3035</td>
<td>Diversity in Organizations</td>
</tr>
<tr>
<td>POSC 4361</td>
<td>Politics of Race, Ethnicity, and Gender</td>
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<tr>
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<td>Race and Family</td>
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<tr>
<td>SOWJ 3370</td>
<td>Family Practice</td>
</tr>
<tr>
<td>WGST 4997</td>
<td>Women's and Gender Studies Capstone Course</td>
</tr>
</tbody>
</table>

### Group II (depending on content and program director's approval)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>ADPR 4953</td>
<td>Seminar in Advertising and Public Relations</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
</tr>
<tr>
<td>------------</td>
<td>-------------------------------------------------------</td>
</tr>
<tr>
<td>CRLS 4931</td>
<td>Topics in Criminology and Law</td>
</tr>
<tr>
<td>ECON 4020</td>
<td>Economics of Labor Markets</td>
</tr>
<tr>
<td>ECON 4953</td>
<td>Seminar in Economics</td>
</tr>
<tr>
<td>ENGL 4170</td>
<td>Studies in Language</td>
</tr>
<tr>
<td>ENGL 4422</td>
<td>British literature of the Long 18th Century</td>
</tr>
<tr>
<td>ENGL 4442</td>
<td>US Literature from the Constitution to the Civil War</td>
</tr>
<tr>
<td>ENGL 4452</td>
<td>British Literature of the Romantic Period, 1790-1837</td>
</tr>
<tr>
<td>ENGL 4472</td>
<td>British Literature of the Victorian Period, 1837-1900</td>
</tr>
<tr>
<td>ENGL 4482</td>
<td>US Literature from the Civil War to the Early 20th Century</td>
</tr>
<tr>
<td>ENGL 4523</td>
<td>Modernism</td>
</tr>
<tr>
<td>ENGL 4533</td>
<td>US Literature: 20th-Century Beginnings to World War II</td>
</tr>
<tr>
<td>ENGL 4543</td>
<td>British Literature of the Postmodernist Period</td>
</tr>
<tr>
<td>ENGL 4553</td>
<td>US Literature after World War II</td>
</tr>
<tr>
<td>ENGL 4610</td>
<td>Individual Authors</td>
</tr>
<tr>
<td>ENGL 4710</td>
<td>Studies in Genre</td>
</tr>
<tr>
<td>ENGL 4770</td>
<td>Studies in Literature and Culture</td>
</tr>
<tr>
<td>ENGL 4810</td>
<td>Comparative Race and Ethnic Studies</td>
</tr>
<tr>
<td>ENGL 4820</td>
<td>Studies in Critical Race and Ethnic Studies</td>
</tr>
<tr>
<td>ENGL 4931</td>
<td>Topics in Literature</td>
</tr>
<tr>
<td>HEAL 1300</td>
<td>Substance Abuse</td>
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<tr>
<td>HEAL 1931</td>
<td>Topics in Health Care</td>
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<tr>
<td>HEAL 3150</td>
<td>Alternative and Complementary Therapies</td>
</tr>
<tr>
<td>HIST 4931</td>
<td>Topics in History</td>
</tr>
<tr>
<td>HIST 4953</td>
<td>Readings in History</td>
</tr>
<tr>
<td>HIST 4955</td>
<td>Undergraduate Seminar in History</td>
</tr>
<tr>
<td>PHIL 4931</td>
<td>Topics in Philosophy</td>
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<td>PHIL 4953</td>
<td>Undergraduate Seminar:</td>
</tr>
<tr>
<td>SOCI 4931</td>
<td>Topics in Sociology</td>
</tr>
<tr>
<td>SPAN 4550</td>
<td>Twentieth and Twenty-First Century Spanish Literature</td>
</tr>
<tr>
<td>THEO 4490</td>
<td>Studies in Moral Theology</td>
</tr>
</tbody>
</table>

**Total Credit Hours**: 18

**Notes:**

- Other courses relevant to WGST issues may be approved with consent of director of WGST.
- The introductory required course is critical to the WGST minor and will not be waived or substituted. WGST 1001 Introduction to Women's and Gender Studies is offered annually during the fall semester.
- Integrative courses: Group I (course content always satisfies WGST requirements); Group II (content varies from term to term, will satisfy requirements according to course title and content with prior approval from the director of WGST).
- WGST Minors are strongly encouraged to take the WGST 4997 Women's and Gender Studies Capstone Course, which would count as an integrative course for the minor.

**Courses**

**WGST 1001. Introduction to Women's and Gender Studies. 3 cr. hrs.**

Introduction to the interdisciplinary field of Women's and Gender Studies, an academic area of study focused on the ways sex and gender manifest themselves in our social, cultural, and political lives. Define and learn to use key terms and concepts such as sex, gender, sexuality, embodiment, feminism, patriarchy, etc. Course materials will include classic and contemporary scholarship from a variety of disciplines, as well as personal narratives of gendered lives.

**WGST 4951. MU Led Travel/Study Abroad. 6 cr. hrs.**

Course taught in an international setting by Marquette professors and where students earn Marquette credit. Study Abroad expenses apply. Prereq: cons. of the Office of International Education.
WGST 4997. Women's and Gender Studies Capstone Course. 3 cr. hrs.
Capstone course is designed to enable upper-level students, and especially WGST majors and minors, to integrate the knowledge and experience gained in WGST courses and use that knowledge and experience as a springboard for future work. Prereq: WGST 1001 and two other WGST courses or permission of program director.
Mathematics, Statistics and Computer Science

Chairperson: Rebecca Sanders, Ph.D.
marquette.edu/mscs/

The Department of Mathematics, Statistics and Computer Science offers a unique interdisciplinary learning environment with areas of study ranging from pure and applied mathematics to computer science, statistics and mathematics education.

The Mathematics major (MATH) explores the interplay between the pure theory and the practical applications of mathematics. The mathematics curriculum can be tailored to an individual’s interests with a focus in pure mathematics, applied mathematics or actuarial science, statistics, as well as secondary education. In any case, the curriculum is designed to provide technical skills for growth within the discipline and for success in a wide variety of careers.

The Computer Science major (COSC) provides students with an understanding of the central ideas and methods used to solve real problems with software. Students will practice the many skills required to build computer systems that address problems in scientific, engineering, and business domains. Most of all, the major aims to prepare students for long-term success in a rapidly changing field that provides the computer technology underpinning our modern world.

The Computational Mathematics major (COMA) blends the subjects of computer science and applied mathematics, providing a balance which would otherwise require a double major to achieve. Furthermore, the curriculum teaches the skills necessary for careers in today’s technical environment.

Data Science is the emerging field that seeks to extract and quantify knowledge from data. The Data Science major (DTSC) integrates statistics and mathematics with computer science, allowing students to develop the knowledge and skills necessary to discover and quantify new knowledge from data. Those prepared to integrate advanced technology with modern statistical and mathematical practices have the opportunity to use in data in action to benefit society. Data scientists turn data into knowledge.

The Mathematics for Elementary School Teachers major (MELT) is for College of Education students who are seeking teaching certification at the elementary school level, while obtaining strong mathematical preparation. This program is designed to prepare “mathematics specialists” who provide vision, focus and leadership in elementary schools.

Bioinformatics is a field that lies at the intersection of biology, statistics, and computer science, which is focused on the generation and analysis of large biological datasets. The interdisciplinary Bioinformatics major (INBI) provides sufficient depth in both biology and computer science in order to approach problems in bioinformatics from the perspective of both parent fields Biology and Computer Science. The program is designed to prepare individuals to use the computational tools of bioinformatics to solve problems or analyze datasets in biological sciences. For more information about the interdisciplinary Bioinformatics major (INBI), visit the College of Arts and Sciences Interdisciplinary Majors and Minors section of the Undergraduate Bulletin.

The Department of Mathematics, Statistics and Computer Science offers a five-year B.S./M.S. accelerated degree program in which students may obtain both a B.S. degree in Computer Science and the professional master of science (M.S.) degree in Computing in five years. In addition, together with the Graduate School of Management, the Department of Mathematics, Statistics and Computer Science offers a five-year B.S./M.B.A. accelerated degree program.

Major in Mathematics

The major in mathematics consists of 39 credit hours of mathematics courses, including five required MATH courses (18 credit hours); one MATH sequence (two courses - 6 credit hours); at least one course from each of the three groups (Group 1 - Pure Mathematics, Group 2 - Applied Mathematics and Group 3 - Statistics, for a total of 9 credit hours); and 6 additional credit hours of upper division MATH courses.

Note:

- Students majoring in mathematics must also complete the following course in computer science: COSC 1010 Introduction to Computer Programming.

Required Mathematics Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1450</td>
<td>Calculus 1</td>
<td>4</td>
</tr>
<tr>
<td>MATH 1451</td>
<td>Calculus 2</td>
<td>4</td>
</tr>
<tr>
<td>MATH 2350</td>
<td>Foundations of Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>MATH 2450</td>
<td>Calculus 3</td>
<td>4</td>
</tr>
<tr>
<td>MATH 3100</td>
<td>Linear Algebra and Matrix Theory</td>
<td>3</td>
</tr>
</tbody>
</table>

Choose one of the following sequences:

- MATH 4120 Abstract Algebra 1
- MATH 4121 Abstract Algebra 2
- MATH 4200 Intermediate Analysis 1
- MATH 4201 Intermediate Analysis 2
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>MATH 4200</td>
<td>Intermediate Analysis 1</td>
</tr>
<tr>
<td>MATH 4210</td>
<td>Complex Variables</td>
</tr>
<tr>
<td>MATH 4200</td>
<td>Intermediate Analysis 1</td>
</tr>
<tr>
<td>MATH 4450</td>
<td>Topology</td>
</tr>
<tr>
<td>MATH 4420</td>
<td>Foundations of Geometry</td>
</tr>
<tr>
<td>MATH 4030</td>
<td>Concepts in Geometry and Calculus from an Advanced Standpoint</td>
</tr>
<tr>
<td>MATH 4500</td>
<td>Theory of Differential Equations</td>
</tr>
<tr>
<td>MATH 4510</td>
<td>Elementary Partial Differential Equations</td>
</tr>
<tr>
<td>MATH 4670</td>
<td>Applied Combinatorial Mathematics</td>
</tr>
<tr>
<td>MATH 4650</td>
<td>Theory of Optimization</td>
</tr>
<tr>
<td>MATH 4420</td>
<td>Foundations of Geometry</td>
</tr>
<tr>
<td>MATH 4450</td>
<td>Topology</td>
</tr>
</tbody>
</table>

Choose at least one additional course from each of the three groups listed below:

Group 1 - Pure Mathematics

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 4120</td>
<td>Abstract Algebra 1</td>
</tr>
<tr>
<td>MATH 4121</td>
<td>Abstract Algebra 2</td>
</tr>
<tr>
<td>MATH 4200</td>
<td>Intermediate Analysis 1</td>
</tr>
<tr>
<td>MATH 4201</td>
<td>Intermediate Analysis 2</td>
</tr>
<tr>
<td>MATH 4210</td>
<td>Complex Variables</td>
</tr>
<tr>
<td>MATH 4320</td>
<td>Theory of Numbers</td>
</tr>
<tr>
<td>MATH 4420</td>
<td>Foundations of Geometry</td>
</tr>
<tr>
<td>MATH 4450</td>
<td>Topology</td>
</tr>
</tbody>
</table>

Group 2 - Applied Mathematics

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 3520</td>
<td>Operational Methods in Physics and Engineering</td>
</tr>
<tr>
<td>MATH 4500</td>
<td>Theory of Differential Equations</td>
</tr>
<tr>
<td>MATH 4510</td>
<td>Elementary Partial Differential Equations</td>
</tr>
<tr>
<td>MATH 4540</td>
<td>Numerical Analysis</td>
</tr>
<tr>
<td>MATH 4630</td>
<td>Mathematical Modeling and Analysis</td>
</tr>
<tr>
<td>MATH 4650</td>
<td>Theory of Optimization</td>
</tr>
<tr>
<td>MATH 4670</td>
<td>Applied Combinatorial Mathematics</td>
</tr>
</tbody>
</table>

Group 3 - Statistics

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>MATH 4700</td>
<td>Theory of Probability</td>
</tr>
<tr>
<td>MATH 4710</td>
<td>Mathematical Statistics</td>
</tr>
<tr>
<td>MATH 4720</td>
<td>Statistical Methods</td>
</tr>
<tr>
<td>MATH 4740</td>
<td>Biostatistical Methods and Models</td>
</tr>
<tr>
<td>MATH 4760</td>
<td>Time Series Analysis</td>
</tr>
<tr>
<td>MATH 4780</td>
<td>Regression Analysis</td>
</tr>
</tbody>
</table>

Choose 6 credit hours of upper-division MATH courses.

Total Credit Hours: 39

Note:

- Occasionally MATH 4931 Topics in Mathematics or Statistics may be approved as a substitute within a student’s program of study for an above listed course.
- MATH 2350 Foundations of Mathematics is the preferred course for a MATH major. For those seeking a double major in COSC or a minor in COSC, MATH 2100 Discrete Mathematics will be accepted as a substitute.

**Typical Program for Mathematics Major**

**Freshman**

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1450</td>
<td>4</td>
<td>MATH 1451</td>
<td>4</td>
</tr>
<tr>
<td>ENGL 1001</td>
<td>3</td>
<td>COSC 1010</td>
<td>4</td>
</tr>
<tr>
<td>UCCS-Ind. &amp; Social Behavior</td>
<td>3</td>
<td>ENGL 1002</td>
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</table>
### Sophomore

<table>
<thead>
<tr>
<th></th>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 2350</td>
<td>3</td>
<td>MATH 3100</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MATH 2450</td>
<td>4</td>
<td>PHIL 1001</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>UCCS-Literature / Performing Arts</td>
<td>3</td>
<td>UCCS-Science &amp; Nature</td>
<td>3-4</td>
<td></td>
</tr>
<tr>
<td>Electives</td>
<td>6</td>
<td>Electives</td>
<td>6</td>
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</table>

13

### Junior

<table>
<thead>
<tr>
<th></th>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH Sequence (part 1)</td>
<td>3</td>
<td>MATH Sequence (part 2)</td>
<td>3</td>
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<tr>
<td>MATH Group 1 (Pure)</td>
<td>3</td>
<td>MATH Group 3 (Statistics)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>THEO 1001</td>
<td>3</td>
<td>PHIL 2310</td>
<td>3</td>
<td></td>
</tr>
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<td>Electives</td>
<td>6</td>
<td>Electives</td>
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</table>

15

### Senior

<table>
<thead>
<tr>
<th></th>
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<th>Hours</th>
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</tr>
</thead>
<tbody>
<tr>
<td>MATH Group 2 (Applied)</td>
<td>3</td>
<td>MATH 3xxx/4xxx</td>
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</tr>
<tr>
<td>MATH 3xxx/4xxx</td>
<td>3</td>
<td>UCCS-Diverse Cultures</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>UCCS-Theology</td>
<td>3</td>
<td>Electives</td>
<td>10</td>
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</tr>
<tr>
<td>Electives</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

16

Total credit hours: 120-121

---

**Department of Public Instruction Certification for Mathematics Majors**

To pursue Department of Public Instruction certification, College of Education students are required to fulfill the requirements of a mathematics major (39 credit hours of mathematics courses) as listed below. In addition to the 39 credit hours, students must complete an introductory computer science course (4 credit hours), the mathematics teaching methodology course (3 credit hours), and the algebra and geometry course for middle school teachers (2 credit hours) for a total of 48 credit hours as listed below.

**Notes:**

- Students majoring in mathematics must also complete COSC 1010 Introduction to Computer Programming.
- MATH 4020 The Teaching of Mathematics is required as part of the state certification program and must be completed before student teaching.
- MATH 2032 Algebra and Geometry for Teachers is also required.
- From the beginning of their work toward a degree, students should consult with both the department adviser for Mathematics Education and the Director of Teacher Education in the College of Education about the appropriate sequence of courses.

**Required Mathematics Courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1450</td>
<td>Calculus 1</td>
<td>4</td>
</tr>
<tr>
<td>MATH 1451</td>
<td>Calculus 2</td>
<td>4</td>
</tr>
<tr>
<td>MATH 2350</td>
<td>Foundations of Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>MATH 2450</td>
<td>Calculus 3</td>
<td>4</td>
</tr>
<tr>
<td>MATH 3100</td>
<td>Linear Algebra and Matrix Theory</td>
<td>3</td>
</tr>
<tr>
<td>MATH 4420</td>
<td>Foundations of Geometry</td>
<td>6</td>
</tr>
<tr>
<td>&amp; MATH 4030</td>
<td>and Concepts in Geometry and Calculus from an Advanced Standpoint</td>
<td></td>
</tr>
</tbody>
</table>
Required Group Courses:

Group 1 - Pure Mathematics

MATH 4120 Abstract Algebra 1 3

Group 2 - Applied Mathematics

MATH 4630 Mathematical Modeling and Analysis 3

Group 3 - Statistics

MATH 4720 Statistical Methods 3

Additional Mathematics Courses:

MATH 4670 Applied Combinatorial Mathematics 3

or MATH 4700 Theory of Probability 3

MATH 4040 Concepts in High School Algebra and Number Theory from an Advance Standpoint 3

Total Credit Hours 39

Math B.S./M.B.A. Accelerated Degree Program

The Department of Mathematics, Statistics and Computer Science together with the Graduate School of Management offers an accelerated degree program which allows students to earn both their B.S. degree in Math and a master of business administration (M.B.A.) all within in a five-year time period.

During the first four years of the program, students complete both their coursework requirements for their Math B.S. degree and the necessary prerequisite courses for the M.B.A. degree in the College of Business Administration. In addition, undergraduate students begin their M.B.A. graduate work in their senior year by taking two graduate level courses.

To be considered for admission to the B.S./M.B.A. five-year program, applicants must formally apply to the Graduate School of Management during their junior year at Marquette University. For more detailed information and details of a typical five-year coursework plan, please refer to the Graduate School of Management Bulletin and contact the Department of Math, Statistics and Computer Science or the Graduate School of Management.

Major in Computational Mathematics

The major in computational mathematics consists of 50 credit hours of computer science and mathematics courses as listed below:

Required Computer Sciences Courses:

COSC 1010 Introduction to Computer Programming 4
COSC 1020 Object-Oriented Software Design 4
COSC 2100 Data Structures and Algorithms 3
COSC 2200 Hardware Systems 3

Computer Science Elective: Choose one of the following.

COSC 3250 Operating Systems 3
COSC 3410 Programming Languages

Required Mathematics Courses:

MATH 1450 Calculus 1 4
MATH 1451 Calculus 2 4
MATH 2350 Foundations of Mathematics 3
MATH 2450 Calculus 3 4
MATH 3100 Linear Algebra and Matrix Theory 3
MATH 4540 Numerical Analysis 3
MATH 4630 Mathematical Modeling and Analysis 3
MATH 4710 Mathematical Statistics 3

or MATH 4720 Statistical Methods

Mathematics Electives: Choose two of the following.

MATH 4200 Intermediate Analysis 1
MATH 4210 Complex Variables
MATH 4500 Theory of Differential Equations
MATH 4510 Elementary Partial Differential Equations
MATH 4650 Theory of Optimization
MATH 4670 Applied Combinatorial Mathematics
MATH 4700 Theory of Probability
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 4740</td>
<td>Biostatistical Methods and Models</td>
</tr>
<tr>
<td>MATH 4760</td>
<td>Time Series Analysis</td>
</tr>
<tr>
<td>MATH 4780</td>
<td>Regression Analysis</td>
</tr>
</tbody>
</table>

**Total Credit Hours**: 50

**Note**:  
• COSC 2100 Data Structures and Algorithms 1 is the preferred course for a COMA major, however COSC 2010 Data Structures for Engineers will be accepted as a substitute.

**Typical Program for Computational Mathematics Majors**

**Freshman**

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COSC 1010</td>
<td>4</td>
<td>COSC 1020</td>
<td>4</td>
</tr>
<tr>
<td>MATH 1450</td>
<td>4</td>
<td>MATH 1451</td>
<td>4</td>
</tr>
<tr>
<td>ENGL 1001</td>
<td>3</td>
<td>ENGL 1002</td>
<td>3</td>
</tr>
<tr>
<td>UCCS-Hist of Cultures &amp; Soc.</td>
<td>3</td>
<td>UCCS-Indiv. &amp; Soc. Behav.</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>14</td>
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</table>

**Sophomore**

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COSC 2100</td>
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<td>MATH 3100</td>
<td>3</td>
</tr>
<tr>
<td>COSC 2200</td>
<td>3</td>
<td>PHIL 1001</td>
<td>3</td>
</tr>
<tr>
<td>MATH 2350</td>
<td>3</td>
<td>UCCS-Science &amp; Nature</td>
<td>3-4</td>
</tr>
<tr>
<td>MATH 2450</td>
<td>4</td>
<td>Electives</td>
<td>6</td>
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<tr>
<td>Elective</td>
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</tr>
<tr>
<td></td>
<td>16</td>
<td></td>
<td>15-16</td>
</tr>
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</table>

**Junior**

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COSC 3410 (or elective)</td>
<td>3</td>
<td>COSC 3250 (or elective)</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics elective</td>
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<td>Mathematics elective</td>
<td>3</td>
</tr>
<tr>
<td>THEO 1001</td>
<td>3</td>
<td>PHIL 2310</td>
<td>3</td>
</tr>
<tr>
<td>UCCS-Lit./Performing Arts</td>
<td>3</td>
<td>Electives</td>
<td>6</td>
</tr>
<tr>
<td>Electives</td>
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</tr>
<tr>
<td></td>
<td>15</td>
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</table>

**Senior**

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 4540</td>
<td>3</td>
<td>MATH 4710 or 4720</td>
<td>3</td>
</tr>
<tr>
<td>MATH 4630</td>
<td>3</td>
<td>UCCS-Diverse Cultures</td>
<td>3</td>
</tr>
<tr>
<td>UCCS-Theology</td>
<td>3</td>
<td>Electives</td>
<td>9</td>
</tr>
<tr>
<td>Electives</td>
<td>7</td>
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</tr>
<tr>
<td></td>
<td>16</td>
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<td>15</td>
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</table>

Total credit hours: 120-121
Major in Computer Science

The major in computer science consists of nine required COSC courses (29 credit hours) and 12 credit hours of upper-division COSC elective courses, for a total of 41 credit hours of COSC courses. In addition, each student must complete 27 credit hours of mathematics and science, including four required MATH cognate courses (14 credit hours), a natural science elective with laboratory component (3-4 credit hours), and an additional 3 credit hours of upper-division MATH.

Required Computer Science Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COSC 1010</td>
<td>Introduction to Computer Programming</td>
<td>4</td>
</tr>
<tr>
<td>COSC 1020</td>
<td>Object-Oriented Software Design</td>
<td>4</td>
</tr>
<tr>
<td>COSC 2100</td>
<td>Data Structures and Algorithms 1</td>
<td>3</td>
</tr>
<tr>
<td>COSC 2200</td>
<td>Hardware Systems</td>
<td>3</td>
</tr>
<tr>
<td>COSC 3100</td>
<td>Data Structures and Algorithms 2</td>
<td>3</td>
</tr>
<tr>
<td>COSC 3250</td>
<td>Operating Systems</td>
<td>3</td>
</tr>
<tr>
<td>COSC 3410</td>
<td>Programming Languages</td>
<td>3</td>
</tr>
<tr>
<td>COSC 4920</td>
<td>Principles of Design</td>
<td>3</td>
</tr>
<tr>
<td>COSC 4998</td>
<td>Senior Design Project</td>
<td>3</td>
</tr>
</tbody>
</table>

Electives - Choose 12 credit hours of upper-division COSC courses.

Required Mathematics Cognate Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
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<td>MATH 1450</td>
<td>Calculus 1</td>
<td>4</td>
</tr>
<tr>
<td>MATH 1451</td>
<td>Calculus 2</td>
<td>4</td>
</tr>
<tr>
<td>MATH 2100</td>
<td>Discrete Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>MATH 3100</td>
<td>Linear Algebra and Matrix Theory</td>
<td>3</td>
</tr>
</tbody>
</table>

Mathematics Elective - Choose 3 additional credit hours of upper-division MATH.

Natural Science Elective with Laboratory Component - Choose at least 3 additional credit hours of BIOL, CHEM or PHYS with laboratory.

Math/Science Electives - Choose 7 additional credit hours of MATH, BIOL, CHEM or PHYS.

Total Credit Hours 68

Notes:

- MATH 2100 Discrete Mathematics is the preferred course for a COSC major. For those seeking a double major in MATH or a minor in MATH, MATH 2350 Foundations of Mathematics will be accepted as a substitute.
- COSC 2100 Data Structures and Algorithms 1 is the preferred course for a COSC major, however COSC 2010 Data Structures for Engineers can be substituted.

Typical Program for Computer Science Majors

**Freshman**

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COSC 1010</td>
<td>4</td>
<td>COSC 1020</td>
<td>4</td>
</tr>
<tr>
<td>MATH 1450</td>
<td>4</td>
<td>MATH 1451</td>
<td>4</td>
</tr>
<tr>
<td>ENGL 1001</td>
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<td>ENGL 1002</td>
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</tr>
<tr>
<td>THEO 1001</td>
<td>3</td>
<td>Natural Science with Laboratory</td>
<td>4</td>
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</table>

14 15

**Sophomore**

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
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<tbody>
<tr>
<td>COSC 2100</td>
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<td>COSC 3100</td>
<td>3</td>
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<tr>
<td>COSC 2200</td>
<td>3</td>
<td>COSC 3250</td>
<td>3</td>
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<td>MATH 3100</td>
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<tr>
<td>UCCS-Lit./Performing Arts</td>
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<td>PHIL 1001</td>
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## Elective

<table>
<thead>
<tr>
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<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COSC 3410</td>
<td>3</td>
<td>COSC 3xxx/4xxx</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>COSC 3xxx/4xxx</td>
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<td>MATH 3xxx/4xxx</td>
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<td></td>
</tr>
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<td>Math/Science elective</td>
<td>3-4</td>
<td>Math/Science elective</td>
<td>3-4</td>
<td></td>
</tr>
<tr>
<td>UCCS-Hist. of Cultures &amp; Soc.</td>
<td>3</td>
<td>PHIL 2310</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>UCCS-Theology</td>
<td>3</td>
<td>Elective</td>
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</tr>
<tr>
<td>Elective</td>
<td>1</td>
<td>16-17</td>
<td>15-16</td>
<td></td>
</tr>
</tbody>
</table>

**Total credit hours: 120-122**

**Note:** Must complete 13 credit hours of Math/Science electives, including at least:

- 3 credit hours upper-division (3000- or 4000-level) MATH courses,
- 3 credit hours science course with a laboratory component (BIOL, CHEM or PHYS), and
- one course designated by the College of Arts & Sciences to meet the UCCS-Science and Nature requirement.

### Computer Science B.S./M.B.A. Accelerated Degree Programs

The Department of Mathematics, Statistics and Computer Science offers an accelerated degree program where eligible students may obtain both their B.S. degree in Computer Science and a professional master of science (M.S.) degree in Computing in five years.

Students are eligible to apply to this program as early as the final semester of their sophomore year. Students wishing to participate in the five-year program must apply and be admitted to the program before their senior year, when they begin to take graduate credits. Minimal criteria for application to the ADP include a GPA of at least 3.000 in the following: two semesters of courses in programming; two semesters of courses on data structures and algorithms; and three courses in calculus and discrete mathematics.

For more detailed information, please refer to the Graduate School Bulletin and contact the Department of Mathematics, Statistics and Computer Science.

Together with the Graduate School of Management, the Department of Mathematics, Statistics and Computer Science offers an accelerated degree program which allows students to earn both their B.S. degree in Computer Science and a master of business administration (M.B.A.) all within in a five-year time period.

During the first four years of the program, students complete both their coursework requirements for their Computer Science B.S. degree and the necessary prerequisite courses for the M.B.A. degree in the College of Business Administration. In addition, undergraduate students begin their M.B.A. graduate work in their senior year by taking two graduate level courses.

To be considered for admission to the B.S./M.B.A. five-year program, applicants must formally apply to the Graduate School of Management during their junior year at Marquette University. For more detailed information and details of a typical five-year coursework plan, please refer to the Graduate School of Management Bulletin and contact the Department of Mathematics, Statistics and Computer Science or the Graduate School of Management.
**Major in Data Science**

The major in data science consists of 59 credit hours of computer science and mathematics courses, including sixteen required courses (53 credit hours) and two computer science or mathematics electives (6 credit hours).

**Required Computer Science Courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COSC 1010</td>
<td>Introduction to Computer Programming</td>
<td>4</td>
</tr>
<tr>
<td>COSC 1020</td>
<td>Object-Oriented Software Design</td>
<td>4</td>
</tr>
<tr>
<td>COSC 2100</td>
<td>Data Structures and Algorithms 1</td>
<td>3</td>
</tr>
<tr>
<td>COSC 4610</td>
<td>Data Mining</td>
<td>3</td>
</tr>
<tr>
<td>COSC 4800</td>
<td>Principles of Database Systems</td>
<td>3</td>
</tr>
<tr>
<td>COSC 4920</td>
<td>Principles of Design</td>
<td>3</td>
</tr>
<tr>
<td>COSC 4998</td>
<td>Senior Design Project</td>
<td>3</td>
</tr>
</tbody>
</table>

**Required Mathematics Courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1450</td>
<td>Calculus 1</td>
<td>4</td>
</tr>
<tr>
<td>MATH 1451</td>
<td>Calculus 2</td>
<td>4</td>
</tr>
<tr>
<td>MATH 2350</td>
<td>Foundations of Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>or MATH 2100</td>
<td>Discrete Mathematics</td>
<td></td>
</tr>
<tr>
<td>MATH 2450</td>
<td>Calculus 3</td>
<td>4</td>
</tr>
<tr>
<td>MATH 3100</td>
<td>Linear Algebra and Matrix Theory</td>
<td>3</td>
</tr>
<tr>
<td>MATH 4700</td>
<td>Theory of Probability</td>
<td>3</td>
</tr>
</tbody>
</table>

**Data Science and Data Visualization (New 2017)**

<table>
<thead>
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<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 4720</td>
<td>Statistical Methods</td>
<td>3</td>
</tr>
<tr>
<td>MATH 4780</td>
<td>Regression Analysis</td>
<td>3</td>
</tr>
</tbody>
</table>

**Computer Science or Mathematics Electives:** Choose two of the following.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COSC 4600</td>
<td>Fundamentals of Artificial Intelligence</td>
<td></td>
</tr>
<tr>
<td>MATH 4630</td>
<td>Mathematical Modeling and Analysis</td>
<td></td>
</tr>
<tr>
<td>MATH 4710</td>
<td>Mathematical Statistics</td>
<td></td>
</tr>
<tr>
<td>MATH 4760</td>
<td>Time Series Analysis</td>
<td></td>
</tr>
</tbody>
</table>

**Total Credit Hours**

59

**Note:**

- Depending on course topic, COSC 4931 Topics in Computer Science or MATH 4931 Topics in Mathematics or Statistics may be substituted as a Data Science elective.

**Typical Program for Data Science Major**

**Freshman**

<table>
<thead>
<tr>
<th></th>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COSC 1010</td>
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<td>MATH 1451</td>
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<td>ENGL 1001</td>
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<td>ENGL 1002</td>
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</tr>
<tr>
<td>UCCS-Science &amp; Nature</td>
<td></td>
<td>4</td>
<td>UCCS-Hist. of Cultures &amp; Soc.</td>
<td>3</td>
</tr>
</tbody>
</table>

15 14

**Sophomore**

<table>
<thead>
<tr>
<th></th>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COSC 2100</td>
<td></td>
<td>3</td>
<td>MATH 3100</td>
<td>3</td>
</tr>
<tr>
<td>MATH 2350</td>
<td></td>
<td>3</td>
<td>MATH 4720</td>
<td>3</td>
</tr>
<tr>
<td>MATH 2450</td>
<td></td>
<td>4</td>
<td>Data Science and Data Visualization</td>
<td>3</td>
</tr>
<tr>
<td>UCCS-Lit./Performing Arts</td>
<td></td>
<td>3</td>
<td>UCCS-Indiv. &amp; Soc. Behav.</td>
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</tr>
<tr>
<td></td>
<td>First Term</td>
<td>Hours</td>
<td>Second Term</td>
<td>Hours</td>
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<td>----------------</td>
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</tr>
<tr>
<td>Junior</td>
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</tr>
<tr>
<td></td>
<td>COSC 4800</td>
<td>3</td>
<td>COSC 4610</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>MATH 4700</td>
<td>3</td>
<td>Data Science elective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>PHIL 1001</td>
<td>3</td>
<td>PHIL 2310</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Electives</td>
<td>6</td>
<td>THEO 1001</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Elective</td>
<td></td>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15</td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>Senior</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>COSC 4920</td>
<td>3</td>
<td>COSC 4998</td>
<td>3</td>
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<tr>
<td></td>
<td>Data Science elective</td>
<td>3</td>
<td>MATH 4780</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>UCCS-Theology</td>
<td>3</td>
<td>UCCS-Diverse Cultures</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Electives</td>
<td>6</td>
<td>Electives</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15</td>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>

Total credit hours: 120

Note:

- The above Typical Program for a data science major is for students entering Marquette in odd numbered years. For those students entering Marquette in even numbered years, switch the Data Science elective in second term of Junior year with MATH 4780 Regression Analysis in second term of Senior year.

**Major in Mathematics for Elementary School Teachers (MELT)**

This major is for students in the College of Education enrolled in the middle childhood/early adolescence teacher education program (grades 1-8). The major in mathematics for elementary teachers consists of twelve required mathematics courses for a total of 36 credit hours as listed below.

Note:

- From the beginning of their work toward a degree, students should consult with both a department adviser and the director of teacher education in the College of Education about the appropriate sequence of courses. University and state requirements for teacher certification are described in the College of Education section of this bulletin.

Required Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1450</td>
<td>Calculus 1</td>
<td>4</td>
</tr>
<tr>
<td>MATH 1451</td>
<td>Calculus 2</td>
<td>4</td>
</tr>
<tr>
<td>MATH 2030</td>
<td>Problem Solving and Reasoning for Teachers</td>
<td>3</td>
</tr>
<tr>
<td>MATH 2031</td>
<td>Number Systems and Operations for Elementary Teachers</td>
<td>2</td>
</tr>
<tr>
<td>MATH 2032</td>
<td>Algebra and Geometry for Teachers</td>
<td>2</td>
</tr>
<tr>
<td>MATH 2350</td>
<td>Foundations of Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>MATH 3100</td>
<td>Linear Algebra and Matrix Theory</td>
<td>3</td>
</tr>
<tr>
<td>MATH 4310</td>
<td>History of Mathematical Ideas</td>
<td>3</td>
</tr>
<tr>
<td>MATH 4320</td>
<td>Theory of Numbers</td>
<td>3</td>
</tr>
<tr>
<td>MATH 4420</td>
<td>Foundations of Geometry</td>
<td>3</td>
</tr>
<tr>
<td>MATH 4630</td>
<td>Mathematical Modeling and Analysis</td>
<td>3</td>
</tr>
<tr>
<td>MATH 4720</td>
<td>Statistical Methods</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours 36
## Typical Program for Mathematics for Elementary School Teachers Majors

### Freshman

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARSC 1020</td>
<td>4</td>
<td>ARSC 1021</td>
<td>4</td>
</tr>
<tr>
<td>EDUC 1210</td>
<td>3</td>
<td>EDUC 1220</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1001</td>
<td>3</td>
<td>ENGL 1002 or COMM 1100</td>
<td>3</td>
</tr>
<tr>
<td>Foreign Language 1</td>
<td>4</td>
<td>Foreign Language 2</td>
<td>4</td>
</tr>
<tr>
<td>MATH 1450</td>
<td>4</td>
<td>MATH 1451</td>
<td>4</td>
</tr>
<tr>
<td>Service Learning</td>
<td>18</td>
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</table>

### Sophomore

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC 2227</td>
<td>3</td>
<td>HIST 1301, 1401, or 1501</td>
<td>3</td>
</tr>
<tr>
<td>POSC 2201</td>
<td>3</td>
<td>EDUC 2330</td>
<td>3</td>
</tr>
<tr>
<td>Literature elective</td>
<td>3</td>
<td>PHIL 1001</td>
<td>3</td>
</tr>
<tr>
<td>MATH 2350</td>
<td>3</td>
<td>MATH 3100</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1101</td>
<td>3</td>
<td>MATH 4310 or 4320</td>
<td>3</td>
</tr>
<tr>
<td>THEO 1001</td>
<td>3</td>
<td>THEO 2000</td>
<td>3</td>
</tr>
<tr>
<td>Field Experience 1</td>
<td></td>
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</tr>
</tbody>
</table>

### Junior

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 2310</td>
<td>3</td>
<td>EDUC 4240</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 4347</td>
<td>4</td>
<td>EDUC 4317</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 4217</td>
<td>3</td>
<td>EDUC 4357</td>
<td>4</td>
</tr>
<tr>
<td>EDUC 4337 (must be taken for 3 cr. hrs.)</td>
<td>3</td>
<td>MATH 2031</td>
<td>2</td>
</tr>
<tr>
<td>MATH 2030</td>
<td>3</td>
<td>EDUC 1964</td>
<td>1</td>
</tr>
<tr>
<td>MATH 4420</td>
<td>3</td>
<td>MATH 4310 or 4320</td>
<td>3</td>
</tr>
<tr>
<td>Field Experience 2</td>
<td></td>
<td>MATH 4630</td>
<td>3</td>
</tr>
<tr>
<td>Field Experience 3</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

### Senior

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC 4297</td>
<td>4</td>
<td>EDUC 4966 (must be taken for 15 cr. hrs.)</td>
<td>15</td>
</tr>
<tr>
<td>EDUC 4540</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDUC 4964</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 2032</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDUC 2964</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATH 4720</td>
<td>3</td>
<td></td>
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</tbody>
</table>
Senior Level Practicum

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>

Total credit hours: 142

Note:
- A minimum of 128 credits is required for the degree.
- EDUC 4337 Teaching Elementary Social Studies must be taken for 3 cr. hrs.
- EDUC 4966 Student Teaching: Elementary/Middle must be taken for 15 cr. hrs.

Minor in Mathematics

The minor in mathematics consists of 24 credit hours of mathematics courses, including four required math courses (15 credit hours) and an additional 9 credit hours of upper division math courses as listed below.

Required Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1450</td>
<td>Calculus 1</td>
</tr>
<tr>
<td>MATH 1451</td>
<td>Calculus 2</td>
</tr>
<tr>
<td>MATH 2450</td>
<td>Calculus 3</td>
</tr>
<tr>
<td>MATH 2350</td>
<td>Foundations of Mathematics</td>
</tr>
<tr>
<td>or MATH 2451</td>
<td>Differential Equations</td>
</tr>
</tbody>
</table>

Electives - Choose at least nine additional hours of upper-division MATH courses. | 9 |

Total Credit Hours | 24 |

Department of Public Instruction Certification for Mathematics Minor

To pursue Department of Public Instruction certification for a minor in mathematics, College of Education students are required to fulfill the requirements of the mathematics minor (24 credit hours of mathematics courses) as listed below. In addition to the 24 credit hours in mathematics, students must complete the mathematics teaching methodology course (3 credit hours), as listed below.

Notes:
- MATH 4020 The Teaching of Mathematics is required as part of the state certification program and must be completed before student teaching.
- From the beginning of their work toward a degree, students should consult with both the department adviser for Mathematics Education and the director of Teacher Education in the College of Education about the appropriate sequence of courses.
- MATH 2350 Foundations of Mathematics is the preferred course for a MATH minor. For those seeking a major in COSC or a minor in COSC, MATH 2100 Discrete Mathematics can be substituted.

Required Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1450</td>
<td>Calculus 1</td>
</tr>
<tr>
<td>MATH 1451</td>
<td>Calculus 2</td>
</tr>
<tr>
<td>MATH 2450</td>
<td>Calculus 3</td>
</tr>
<tr>
<td>MATH 2350</td>
<td>Foundations of Mathematics</td>
</tr>
<tr>
<td>MATH 3100</td>
<td>Linear Algebra and Matrix Theory</td>
</tr>
<tr>
<td>MATH 4420</td>
<td>Foundations of Geometry</td>
</tr>
<tr>
<td>MATH 4720</td>
<td>Statistical Methods</td>
</tr>
</tbody>
</table>

Total Credit Hours | 24 |

Minor in Computer Science

The minor in computer science consists of 20 credit hours of computer science courses, including four required COSC courses (14 credit hours) and 6 additional credit hours of upper-division COSC elective courses. In addition, each student must complete a required MATH course (3 credit hours) as listed below:

Required Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COSC 1010</td>
<td>Introduction to Computer Programming</td>
</tr>
<tr>
<td>COSC 1020</td>
<td>Object-Oriented Software Design</td>
</tr>
<tr>
<td>COSC 2100</td>
<td>Data Structures and Algorithms 1</td>
</tr>
</tbody>
</table>
COSC 2000 Hardware Systems 3
Electives - Choose 6 credit hours of upper-division COSC courses. 6
Required Mathematics Course:
MATH 2100 Discrete Mathematics 3
Total Credit Hours 23

Note:
• MATH 2100 Discrete Mathematics is the preferred course for a COSC minor. For those seeking a major in MATH or a minor in MATH, MATH 2350 Foundations of Mathematics can be substituted.
• COSC 2100 Data Structures and Algorithms 1 is the preferred course for a COSC minor, however COSC 2010 Data Structures for Engineers can be substituted.

Minor in Software Development

The minor in software development consists of 20 credit hours of computer science courses, including four required COSC courses (14 credit hours) and 6 additional credit hours of upper-division COSC elective courses. In addition, each student must complete a required MATH course (3 credit hours) as listed below:

Required Courses:
COSC 1010 Introduction to Computer Programming 4
COSC 1020 Object-Oriented Software Design 4
COSC 2100 Data Structures and Algorithms 1 3
COSC 4860 Component-Based Software Construction 3
Electives - Choose 6 credit hours of upper-division COSC courses. 6
Required Mathematics Course:
MATH 2100 Discrete Mathematics 3
Total Credit Hours 23

Note:
• MATH 2100 Discrete Mathematics is the preferred course for a Software Development minor. For those seeking a major in MATH or a minor in MATH, MATH 2350 Foundations of Mathematics can be substituted.
• COSC 2100 Data Structures and Algorithms 1 is the preferred course for a Software Development minor, however COSC 2010 Data Structures for Engineers can be substituted.

Computer Science Courses

COSC 1000. Introduction to Computer Science. 3 cr. hrs.
Introduction to the science behind today's computerized society. Emphasis placed on understanding the breadth and current status of computer science rather than the development of skills. Topics include machine architectures, operating systems, networking, algorithms and their development, programming languages, artificial intelligence, and data representation systems. (Previous computer experience is not required.) Prereq: Two years of college preparatory mathematics. This course satisfies the computer option in the Arts and Sciences core curriculum.

COSC 1010. Introduction to Computer Programming. 4 cr. hrs.
Introduction to abstraction, algorithmic thinking, simulation and testing for computer-based problem solving. Students will learn a high-level programming language and use tools developed by computer scientists and software engineers to solve problems. No prior programming experience is assumed. 3 hrs. lecture, 2 hrs. lab. Two years of college preparatory mathematics required.

COSC 1020. Object-Oriented Software Design. 4 cr. hrs.
Software development using Java. Topics include classes and interfaces as design patterns, the Java API, current object-oriented design methodologies, an introduction to the Internet and the development of Web applications. Projects involve the development of graphical interfaces and net-centric applications. 3 hrs. lecture, 2 hrs. lab. Prereq: COSC 1010 or advanced placement.

COSC 2010. Data Structures for Engineers. 3 cr. hrs.
The study of popular data structures such as lists, stacks, queues and trees and their related algorithms. Prereq: COSC 1010 or EECE 1610; knowledge of JAVA. Credit will not be given for both COSC 2010 and COSC 2100.

COSC 2100. Data Structures and Algorithms 1. 3 cr. hrs.
Introduction to algorithm analysis and complexity theory in the context of data structures and the algorithms used to manipulate them. Includes introduction to traditional data structures, indexing, hashing and time and space complexity. Prereq: COSC 1020; and MATH 2100 or MATH 2350, which may be taken concurrently.
COSC 2200. Hardware Systems. 3 cr. hrs.
Introduction to computer architecture and machine level programming. Topics include combinational and sequential binary logic, assembly languages, memory management, caching, pipelining, bus architecture, interrupts and I/O processing. Course may consist of a 3 hr. lecture or a 2 hr. lecture and 2 hr. lab. Prereq: COSC 1020; and MATH 2100 or MATH 2350, which may be taken concurrently.

COSC 3100. Data Structures and Algorithms 2. 3 cr. hrs.
Types of algorithms such as divide-and-conquer, greedy, probabilistic, graph traversal, heuristic, and parallel algorithms. Computational complexity including time and space complexity, and the P=NP problem. Prereq: COSC 2100 or COSC 2010.

COSC 3250. Operating Systems. 3 cr. hrs.
Fundamental concepts of operating systems including process control and scheduling, synchronization, memory management, file systems, device control, and the boot process. Course may consist of a 3 hr. lecture or a 2 hr. lecture and 2 hr. lab. Credit will not be given for both COSC 3250 and COEN 4820. Prereq: COSC 2100 or COSC 2010; and COSC 2200 or EECE 2710.

COSC 3410. Programming Languages. 3 cr. hrs.
A comparative study of programming paradigms and representative programming languages. Topics include binding times, control of data, control of execution, execution environment, the role of language as an organizational tool, modularization, and the concept and significance of universal programming languages. Prereq: COSC 2100 or COSC 2010.

COSC 3550. Programming Computer Games. 3 cr. hrs.
Algorithms, data structures, and tricks used to program arcade-style video games written in Java. Topics include 2D animation, sprites, interaction, music/sound, 3D worlds, network games. Underlying issues include graphical user interfaces, multi-threaded applications, real-time concerns, use of APIs, and client-server applications. Prereq: COSC 2100 or COSC 2010.

COSC 3810. Software Design and Analysis. 3 cr. hrs.
Issues involved in the design and implementation of large software systems. Software lifecycle, software design methodologies, human factors analysis, project management. Prereq: COSC 2100 or COSC 2010.

COSC 3977. Problem Solving -- Programming. 1 cr. hr.
Students will study and implement computing problems, examine their solutions, apply classical algorithms, and formulate strategies for teamwork and problem solving in a programming contest environment. This course is a preparation for the ACM International Collegiate Programming Contest. S/U grade assessment. Prereq: Cons. of instr.

COSC 4010. Teaching Computer Science. 3 cr. hrs.
Historical background, problems, curricular materials and pedagogy in computer science pertinent to the needs of secondary school teachers. Prereq: EDUC 2227 or equiv.

COSC 4110. Formal Languages and Computability. 3 cr. hrs.
Regular languages, finite state automata, and lexical analysis; context free languages, push-down automata, parsing, and the rudiments of LL and LR parsers; general phrase-structure languages, Turing machines, the Church-Turing thesis, the halting problem, universal programming languages. Prereq: COSC 3100.

COSC 4290. Real-Time and Embedded Systems. 3 cr. hrs.
Focuses on event-driven programming, real-time scheduling, and synchronization; worst-case execution time analysis and deadline analysis; real-time operating systems and real-time programming languages. Prereq: COSC 3250 or COEN 4820 or equivalent system programming experience.

COSC 4300. Networks and Internets. 3 cr. hrs.
Focuses on data communication and network protocols, including the TCP/IP protocol suite; Internet transport, packet switching and routing; network programming and network applications. May consist of a 3 hr. lec. or a 2 hr. lec. and 2 hr. lab. Prereq: COSC 3250 or COEN 4820 or equivalent system programming experience.

COSC 4400. Compiler Construction. 3 cr. hrs.
Lexical analysis, parsing, code generation, and optimization. Includes theoretical foundations and the practical concerns of implementation. Prereq: COSC 3410.

COSC 4600. Fundamentals of Artificial Intelligence. 3 cr. hrs.
An introduction to the broad field of artificial intelligence. Topics include problem solving by searching, knowledge representation, reasoning, planning, decision making, learning, perception, and language processing. Offered alternate fall terms. Prereq: COSC 2100 or COSC 2010; and COSC 2200 or EECE 2710.

COSC 4610. Data Mining. 3 cr. hrs.
Techniques for extracting and evaluating patterns from large databases. Introduction to knowledge discovery process. Fundamental tasks including classification, prediction, clustering, association analysis, summarization, and discrimination. Basic techniques including decision trees, neural networks, statistics, partitional clustering, and hierarchical clustering. Offered alternate spring terms. Prereq: COSC 4600 or COEN 4850; and COSC 4800.

COSC 4800. Principles of Database Systems. 3 cr. hrs.
Topics include database concepts and architecture, data modeling, formal query languages such as relational algebra, commercial query language SQL, database access from application programs and a brief examination of advanced concepts including transactions, distributed databases, security and XML. Prereq: COSC 2100 or COSC 2010.
Mathematics Courses

MATH 1100. College Algebra. 3 cr. hrs.
Precalculus mathematics including basic algebraic operations, equations, inequalities, complex numbers, graphs, functions, zeros of polynomials, systems of equations, and matrices. Offered every term. Prereq: Two years of college preparatory mathematics including a year each of algebra and geometry. Does not count toward Math-Logic-Computer requirement in the Arts and Sciences College Curriculum.

MATH 1101. Trigonometry and Analytic Geometry. 3 cr. hrs.
A continuation of MATH 1100 covering precalculus mathematics including trigonometric functions and their properties, trigonometric identities and equations, applications of trigonometry, vectors, polar coordinates, exponential and logarithmic functions, and conic sections. Prereq: MATH 1100 or equivalent. Equivalent is one year of high school geometry and the equivalent of MATH 1100 in high school courses. Does not count toward the Math-Logic-Computer requirement in the Arts and Sciences College Curriculum.

MATH 1300. The Nature of Mathematics. 3 cr. hrs.
Concepts of mathematics for liberal arts students. Emphasis on understanding and appreciating concepts rather than developing computational skills. For example, such topics as the historical development of ideas, role of abstraction, and relationship between different areas of mathematics is given precedence over performance of arithmetic and algebraic manipulations. Prereq: Two years of college preparatory mathematics.

MATH 1390. Finite Mathematics. 3 cr. hrs.
Mathematics of finance, including simple and compound interest, present and future value of ordinary annuities, sinking funds, and amortization schedules. Matrices, linear systems and linear programming. Combinatorics and elementary probability theory. Prereq: MATH 1100 or equivalent. Equivalent is three years of college preparatory mathematics.

MATH 1400. Elements of Calculus. 3 cr. hrs.
The basic concepts and techniques of differential and integral calculus. Applications and examples chosen primarily from economics, biology, the social and behavioral sciences and business. Prereq: MATH 1100 or equivalent. Equivalent is three years of college preparatory mathematics.
MATH 1410. Calculus for the Biological Sciences. 3 cr. hrs.
Fundamental concepts and techniques of differential and integral calculus, logarithmic, exponential and trigonometric functions, examples and applications from biology and medicine. Prereq: MATH 1100 or equivalent. Equivalent is three years of college preparatory mathematics.

MATH 1450. Calculus 1. 4 cr. hrs.
Functions of one variable, limits and continuity. The derivative and the definite integral with applications. Prereq: MATH 1101 or equiv. Equivalent is three to four years of college preparatory mathematics including topics listed in description of MATH 1101.

MATH 1451. Calculus 2. 4 cr. hrs.

MATH 1455. Calculus 2 for Biomedical and Civil Engineers. 4 cr. hrs.
Techniques of integration, including numerical methods. Infinite sequences and series, including Taylor Series. Analytic-Geometry including parametric equations, vectors and vector functions. The differential and integral calculus of functions of several variables. Restricted to students in BIEN or CEEN. Prereq: MATH 1450.

MATH 1700. Modern Elementary Statistics. 3 cr. hrs.
Fundamental theory and methods of statistics without calculus. Descriptive statistics, elements of probability theory, estimation, tests of hypotheses, regression, correlation, introduction to computer methods of statistical tabulation and analysis. This course is recommended for students seeking a general introduction to statistical concepts and is not intended to be a final course in statistics for students who need a thorough working knowledge of statistical methods. Prereq: MATH 105 or equivalent. Equivalent is two years of college preparatory mathematics. May not be taken for credit by students who have received college credit for another probability or statistics course.

MATH 2030. Problem Solving and Reasoning for Teachers. 3 cr. hrs.
Mathematical content and processes for teachers. Mathematical techniques and ways of thinking are used to enhance mathematical power. Multiple ways of organizing and analyzing data, reasoning and communication skills, and multiple problem-solving strategies are used to solve nonroutine problems. In the process, elementary mathematical ideas are expanded and deepened. Restricted to students in the teacher preparation program. Prereq: Two years of college preparatory mathematics.

MATH 2031. Number Systems and Operations for Elementary Teachers. 2 cr. hrs.
Mathematical content and processes for elementary teachers. Uses a problem solving approach. Integrates mathematics content with teaching methods and learning theory. In-depth study of whole and rational number systems including analyses of algorithms for addition, subtraction, multiplication, and division. Provides a framework for the meaningful teaching of place value, whole numbers, exponents, fractions, decimals, percents, ratios, proportions, probability, and data analysis. Restricted to students in the elementary teacher preparation program. Prereq: EDUC 1964, which must be taken concurrently; and MATH 2030.

MATH 2032. Algebra and Geometry for Teachers. 2 cr. hrs.
Mathematical content and processes for teachers. Uses a problem solving approach. Integrates mathematics content with teaching methods and learning theory. In-depth study of the growth of algebraic and geometric reasoning. Provides a framework for the meaningful teaching of integers, patterns, algebraic expressions, functions, equations, graphs, spatial visualization, polygons and polyhedra, similarity and congruence, conjectures and deductions in geometry, and mathematical modeling. Restricted to students in the teacher preparation program. Prereq: EDUC 2964, which must be taken concurrently; and MATH 2030.

MATH 2100. Discrete Mathematics. 3 cr. hrs.
Introduction to set theory, logic, mathematics induction, finite state machines, graph theory, modular arithmetic, Boolean algebra, and coding theory. Applications in computer science are emphasized. Two years of college preparatory mathematics required. May not be taken for credit by those who have completed MATH 2350.

MATH 2105. Discrete Mathematics for Engineers. 3 cr. hrs.
Counting methods. The algebra of sequences, generating functions, and recurrences. The algebra of finite state machines and semigroups. Relations, graphs, posets, and trees. Path and flow problems. Prereq: MATH 2451. Credit will not be given for both MATH 2105 and either MATH 2100 or MATH 2350.

MATH 2350. Foundations of Mathematics. 3 cr. hrs.
Introduction to set theory, logic, mathematical induction, graph theory, modular arithmetic, and higher mathematical thinking through proof and applications. Mathematical proof is emphasized. Prereq: MATH 1400, MATH 1410 or MATH 1450.

MATH 2450. Calculus 3. 4 cr. hrs.
Three-dimensional analytic geometry including parametric equations, vectors and vector functions. The differential and integral calculus of functions of several variables. Prereq: MATH 1451.

MATH 2451. Differential Equations. 4 cr. hrs.
Methods and techniques applicable to first order, nth order, and systems of first order differential equations. Eigenvalues, eigenvectors, the Wronskian, Laplace transforms, linearization, and phase portraits. Prereq: MATH 2450.

MATH 2455. Differential Equations for Biomedical and Civil Engineers. 3 cr. hrs.
Methods and techniques for solving differential equations and systems of differential equations, with applications to biomedical and civil engineering. Restricted to students in BIEN or CEEN. Prereq: MATH 2450 or MATH 1455.
MATH 3100. Linear Algebra and Matrix Theory. 3 cr. hrs.
N-dimensional vector spaces, bases and coordinate systems, linear transformations and matrices, systems of equations, characteristic values, applications to differential equations and geometry. Prereq: MATH 2100, MATH 2350, or MATH 2451.

MATH 3520. Operational Methods in Physics and Engineering. 3 cr. hrs.
Functions of a complex variable. Laplace and Fourier transforms and applications. Introduction to the calculus of variations. Prereq: MATH 2450.

MATH 3977. Problem Solving: Putnam Competition. 1 cr. hr.
Students will study mathematical problems, examine their solutions and formulate general problem solving methods and techniques. The course is a preparation for the Putnam Mathematical Competition. S/U grade assessment. Prereq: Cons. of instr.

MATH 4020. The Teaching of Mathematics. 3 cr. hrs.
Historical background, problems, curricular materials, and teaching procedures in the various areas of mathematics pertinent to the needs of a secondary school mathematics teacher. In addition, a three-hour time block on one day each week between 8 a.m. and 3 p.m. must be kept free for clinical experience. Prereq: EDUC 2227; and MATH 4120 or MATH 4420, which may be taken concurrently. Admission to the College of Education.

MATH 4030. Concepts in Geometry and Calculus from an Advanced Standpoint. 3 cr. hrs.
Topics chosen primarily from geometry and calculus, taught from an advanced standpoint to enrich and deepen the student's understanding. Emphasis on alternative approaches, generalizations, historical contexts and connections with prior mathematical studies. Prereq: MATH 4200 and six additional hrs. of upper division MATH courses and cons. of dept. ch.

MATH 4040. Concepts in High School Algebra and Number Theory from an Advance Standpoint. 3 cr. hrs.
Topics closely related to the high school mathematics curriculum, chosen primarily from algebra and number theory, taught from an advanced standpoint to enrich and deepen the student's understanding. Emphasis on alternative approaches, generalizations, historical contexts and connections with prior mathematical studies. Offered alternate spring terms. Course is offered for graduate credit only to students enrolled in MSST. Prereq: MATH 4120. Admission to the College of Education.

MATH 4120. Abstract Algebra 1. 3 cr. hrs.
Sets, mappings, operations on sets, relations and partitions. A postulational approach to algebraic systems including semigroups, groups, rings and fields. Homomorphisms of groups and rings, number systems, polynomial rings. Prereq: MATH 2350 or MATH 2100.

MATH 4121. Abstract Algebra 2. 3 cr. hrs.
A continuation of MATH 4120 with emphasis on groups, rings, fields, and modules. Prereq: MATH 4120.

MATH 4200. Intermediate Analysis 1. 3 cr. hrs.
Limits and continuity, differentiability, Riemann integration. Topology of N-dimensional spaces. Prereq: MATH 2451 or MATH 3100.

MATH 4201. Intermediate Analysis 2. 3 cr. hrs.
Transformations of N-spaces, line and surface integrals, sequences and series, uniform convergence. Prereq: MATH 4200.

MATH 4210. Complex Variables. 3 cr. hrs.
Complex numbers, analytic functions, differentiation, series expansion, line integrals, singularities, and residues. Prereq: MATH 2450.

MATH 4310. History of Mathematical Ideas. 3 cr. hrs.
Topics selected from the following: development of the number system (need for irrational and complex numbers); development of geometry including the effects of the discovery of non-Euclidean geometry; limit concept; need for axiomatic structures; twentieth-century problems. Current mathematics research and place of mathematics in today's world. Prereq: Jr. stndg. or cons. of dept. ch.

MATH 4320. Theory of Numbers. 3 cr. hrs.
Integers, unique factorization theorems, arithmetic functions, theory of congruences, quadratic residues, partition theory. Prereq: MATH 2100 or MATH 2350.

MATH 4420. Foundations of Geometry. 3 cr. hrs.
Modern postulational development of Euclidean and non-Euclidean geometries. Prereq: MATH 2100 or MATH 2350.

MATH 4450. Topology. 3 cr. hrs.
Topological spaces, mappings, metric spaces, product and quotient spaces. Separation axioms, compactness, local compactness and connectedness. Prereq: MATH 2350 or MATH 2100.

MATH 4500. Theory of Differential Equations. 3 cr. hrs.
Existence and uniqueness theorems, linear and non-linear systems, numerical techniques, stability. Prereq: MATH 2451 or MATH 3100.

MATH 4510. Elementary Partial Differential Equations. 3 cr. hrs.
Fourier series, method of separation of variables, eigenfunction expansions, application of eigenfunctions to partial differential equations, Green's functions and transform methods. Prereq: MATH 2451 or MATH 3100.

MATH 4540. Numerical Analysis. 3 cr. hrs.
Numerical solution of algebraic and transcendental equations, linear systems and the algebraic eigenvalue problem, interpolation and approximation, numerical integration, difference equations, numerical solution of differential equations, and finite difference methods. Prereq: MATH 1451; and COSC 1010 or EECE 1610.

MATH 4630. Mathematical Modeling and Analysis. 3 cr. hrs.
Construction and analysis of mathematical models from biological, behavioral, and physical sciences. Prereq: MATH 2451, MATH 2455 or MATH 3100.
MATH 4650. Theory of Optimization. 3 cr. hrs.
Fundamental theorems describing the solution of linear programs and matrix games. Minimax, duality, saddle point property, simplex and specialized algorithms. Zero sum games, transportation and assignment problems, applications to economics. Prereq: MATH 2451 or MATH 3100.

MATH 4670. Applied Combinatorial Mathematics. 3 cr. hrs.
Permutations and combinations, recurrence relations, inclusion and exclusion, Polya's theory of counting, graph theory, transport networks, matching theory. Prereq: MATH 2100 or MATH 2350.

MATH 4700. Theory of Probability. 3 cr. hrs.
Random variables, distributions, moment generating functions of random variables, various derived probabilistic models and applications. Recommended, with MATH 4710, for students in mathematics, engineering, and the physical and behavioral sciences. Prereq: MATH 2450.

MATH 4710. Mathematical Statistics. 3 cr. hrs.
Sampling theory and distributions, estimation and hypothesis testing, regression, correlation, analysis of variance, non-parametric methods, Bayesian statistics. Prereq: MATH 4700.

MATH 4720. Statistical Methods. 3 cr. hrs.
Probability, discrete and continuous distributions. Treatment of data, point and interval estimation, hypothesis testing. Large and small sample method, regression, non-parametric methods. An introductory applications-oriented course recommended for students who wish to acquire a basic understanding of statistical methods. Prereq: MATH 1400, MATH 1410 or MATH 1450. May not be taken for credit by those who have completed MATH 4710.

MATH 4740. Biostatistical Methods and Models. 3 cr. hrs.
Introduction to the statistics of life science and the use of mathematical models in biology. Data analysis and presentation, regression, analysis of variance, correlation, parameter estimation and curve fitting. Biological sequence analysis, discrete and continuous mathematical models and simulation. Credit will not be given for both MATH 4720 and MATH 4740. Prereq: MATH 1400, MATH 1410, or MATH 1450.

MATH 4760. Time Series Analysis. 3 cr. hrs.

MATH 4780. Regression Analysis. 3 cr. hrs.
Basic concepts of statistical inference, simple linear regression, multiple linear regression, diagnostic analysis, selecting the best equation, stepwise methods, nonlinear regression, use of statistical software. Offered alternate spring terms. Prereq: MATH 4720 or equivalent.

MATH 4931. Topics in Mathematics or Statistics. 1-3 cr. hrs.
Topics selected from one of the various branches of mathematics or statistics. Specific topics to be announced in the Schedule of Classes.

MATH 4953. Undergraduate Seminar. 3 cr. hrs.
Designed to initiate a selected group of qualified undergraduates into the techniques and discipline of scholarly research by concentrated work in a restricted field. Emphasis on critical reading and analysis of sources. Specific subjects to be announced in the Schedule of Classes. Prereq: Cons. of dept. ch.

MATH 4987. Co-op Work Period. 0 cr. hrs.
Students work full-time during fall or spring terms in a cooperative education program work assignment approved in advance by the department. Responsibilities include relevant academic content. Grading and credits are accomplished by registering for MATH 4988 during the following term. Fee. Prereq: Jr. stndg. SNC/UNC grade assessment.

MATH 4988. Co-op Grading Period. 1 cr. hr.
Grading for preceding co-op work assignment is accomplished by completing a report on the work assignment, a report on academic material related to the work assignment, and other materials as required. Grading is completed during the school term following the work assignment. May be taken more than once, but a maximum of two credits may be counted toward a major in the department. Prereq: Jr. stndg. and MATH 4987.

MATH 4995. Independent Study in Mathematics. 1-3 cr. hrs.
Directed reading and/or research in Mathematics under a member of the staff. Prereq: Cons. of dept. ch.

MATH 4999. Senior Thesis. 2 cr. hrs.
Preparation of a thesis by approved students under the direction of an adviser from the staff. Prereq: Cons. of dept. ch.
Philosophy

Interim Chairperson: John Jones, Ph.D.
Department of Philosophy website (http://www.marquette.edu/phil/index.shtml)

The Marquette Philosophy Department is a community of teachers and scholars who aim to enable students in all disciplines by developing interpretive, critical, analytical and communicative skills necessary for personal, intellectual and moral development, cultural literacy and achievement in the complexities of life in the twenty-first century.

In addition to its role in the University Core of Common Studies, the department offers a major with three concentrations which students can select based on their interests and educational goals: History of Philosophy; Social, Political and Legal Philosophy; and Ethics and Values. The skills developed in the major are applicable to any subject matter, and in any human context, are sought after by employers in many fields and help to explain why philosophy majors on average score the highest overall scores on the LSAT (Law School Admissions Test) and Graduate Record Exam (GRE) exams.

Philosophy as an investigation of the enduring questions facing humanity -- What is the human being?, What should the human being do?, What is the relationship of the human being to the world around him/herself? and What is the relationship of the human being to the transcendent? — encourages the student to be reflective about his/her human life. Philosophy asks the student to evaluate critically the civilization in which he/she lives while emphasizing the communal nature of human existence and our need to live with others.

Major in Philosophy

The major in philosophy consists of ten courses (30 credit hours), including four required courses (12 credit hours), three philosophy electives (9 credit hours), and three philosophy courses (9 credit hours) in one of the four areas of concentration (History of Philosophy; Social, Political and Legal Philosophy, Ethics and Values, or Philosophy of Science and Mind) listed below.

Required Courses:

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<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PHIL 1000</td>
<td>Logic (PHIL 4000 recommended)</td>
<td>3</td>
</tr>
<tr>
<td>or PHIL 4000</td>
<td>Modern Logic</td>
<td></td>
</tr>
<tr>
<td>PHIL 1001</td>
<td>Philosophy of Human Nature</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 2310</td>
<td>Theory of Ethics</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 3410</td>
<td>Metaphysics</td>
<td>3</td>
</tr>
<tr>
<td>or PHIL 3450</td>
<td>Epistemology</td>
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</table>

Electives: Choose three PHIL courses. 9
Concentrations: Choose one of the four concentrations. 9

Concentration I - History of Philosophy

Required Course:

<table>
<thead>
<tr>
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<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>PHIL 3610</td>
<td>Ancient Philosophy</td>
<td></td>
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<tr>
<td>or PHIL 3650</td>
<td>Early Modern Philosophy</td>
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</tbody>
</table>

Electives: Choose two courses from the following.

<table>
<thead>
<tr>
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<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
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<tr>
<td>PHIL 3620</td>
<td>Medieval Philosophy</td>
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<tr>
<td>PHIL 3630</td>
<td>Pragmatism and American Philosophy</td>
<td></td>
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<tr>
<td>PHIL 3640</td>
<td>Twentieth Century Anglo-American Philosophy</td>
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<tr>
<td>PHIL 3650</td>
<td>Early Modern Philosophy</td>
<td></td>
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<tr>
<td>PHIL 3660</td>
<td>Marx and Marxism</td>
<td></td>
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<tr>
<td>PHIL 3665</td>
<td>Phenomenology and Existentialism</td>
<td></td>
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<tr>
<td>PHIL 3670</td>
<td>Nineteenth-Century German Philosophy</td>
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</table>

Concentration II - Social, Political and Legal Philosophy: Choose three courses from the following.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>PHIL 3660</td>
<td>Marx and Marxism</td>
<td></td>
</tr>
<tr>
<td>PHIL 3710</td>
<td>Political Philosophy</td>
<td></td>
</tr>
<tr>
<td>PHIL 3750</td>
<td>Philosophy of Law</td>
<td></td>
</tr>
<tr>
<td>PHIL 3751</td>
<td>Philosophy and History of Crime and Punishment</td>
<td></td>
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<tr>
<td>PHIL 3770</td>
<td>Feminist Philosophy</td>
<td></td>
</tr>
<tr>
<td>PHIL 3780</td>
<td>Africana Philosophy</td>
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</table>

Concentration III - Ethics and Values: Choose three courses from the following.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 3350</td>
<td>Philosophy of the Environment</td>
<td></td>
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</table>
PHIL 3370  Philosophy of Art
PHIL 3380  Asian Philosophy
PHIL 3780  Africana Philosophy
PHIL 4320  Contemporary Ethical Problems
PHIL 4330  Business Ethics
PHIL 4335  Biomedical Ethics

Concentration IV - Philosophy of Science and Mind

Required course:
PHIL 4450  Philosophy of Mind
or PHIL 4470  Philosophy of Science

Electives: Choose two courses from the following.
PHIL 3350  Philosophy of the Environment
PHIL 3410  Metaphysics
PHIL 3450  Epistemology
PHIL 3460  Philosophy of Language
PHIL 3640  Twentieth Century Anglo-American Philosophy
PHIL 3650  Early Modern Philosophy
PHIL 3665  Phenomenology and Existentialism
PHIL 4335  Biomedical Ethics
PHIL 4450  Philosophy of Mind
PHIL 4470  Philosophy of Science
Any upper-division course in Natural Science, Social Science or Engineering.

Total Credit Hours 30

Philosophy B.A./M.A. Accelerated Degree Program

The Department of Philosophy offers an accelerated degree program which allows students to earn both their B.A. degree and M.A. degrees in Philosophy within a five-year time period.

Those who have completed an M.A. in philosophy have gone on to excellent philosophy PhD programs or law schools, and gained employment in the non-profit and private sectors. Graduate courses in our program offer students the possibility to pursue topics of interest to them in more depth than they are able to in undergraduate classes. These courses couple smaller class sizes and more opportunities for participation with an emphasis on the refinement of student research skills.

Students accepted into the program may transfer up to 12 credits of approved 5000-plus level courses into their graduate program. Undergraduates participating in this program are granted early admission to the graduate school and are allowed to take specific graduate-level courses during their junior and senior years.

To be considered for admission to the B.A./M.A. five-year program, applicants must formally apply to the philosophy department in their junior year at Marquette University and have achieved a minimum cumulative undergraduate GPA of 3.000.

For additional information about requirements contact the philosophy department.

Minor in Philosophy

The philosophy minor consists of seven courses (21 credit hours) including four required courses (12 credit hours) and three elective philosophy courses (9 credit hours) as listed below:

Required Courses:
PHIL 1000  Logic
or PHIL 4000  Modern Logic
PHIL 1001  Philosophy of Human Nature
PHIL 2310  Theory of Ethics
PHIL 3410  Metaphysics
or PHIL 3450  Epistemology

Electives: Choose three philosophy courses

Total Credit Hours 21
Courses

PHIL 1000. Logic. 3 cr. hrs.
The goal of the course is to provide the student with an understanding of correct reasoning as it is employed in ordinary discourse. The course will study topics such as: terms and propositions, definition, opposition, induction and deduction, reasoning and argumentation, fallacies in argument. Fr stndg recommended.

PHIL 1001. Philosophy of Human Nature. 3 cr. hrs.
Investigation into the meaning of rational life. The course deals with the following four problem areas: human choice, human cognition, the affective, social and spiritual dimensions of the human person, and the unity of the human being. A substantive treatment of classical and Christian philosophical approaches will be included. May not be taken by first semester freshmen.

PHIL 1001H. Honors Philosophy of Human Nature. 3 cr. hrs.
Investigation into the meaning of rational life. The course deals with the following four problem areas: human choice, human cognition, the affective, social and spiritual dimensions of the human person, and the unity of the human being. A substantive treatment of classical and Christian philosophical approaches will be included. May not be taken by first semester freshmen. Prereq: Admission to Marquette University Honors Program.

PHIL 2310. Theory of Ethics. 3 cr. hrs.
An investigation into the moral dimension of human life. Among the topics to be considered are the norms of morality and the general process of moral decision-making. Traditional natural law will be one of the points of view included. Prereq: Soph. stndg. and PHIL 1001.

PHIL 2310H. Honors Theory of Ethics. 3 cr. hrs.
An investigation into the moral dimension of human life. Among the topics to be considered are the norms of morality and the general process of moral decision-making. Traditional natural law is one of the points of view included. Prereq: Soph. stndg.; PHIL 1001 or PHIL 1001H and admission to Marquette University Honors Program.

PHIL 3350. Philosophy of the Environment. 3 cr. hrs.
Philosophical inquiry into nature and our impact on it. Moral, scientific, and social problems posed by global environmental crises. Selected issues in value theory, ethics and aesthetics such as ethical status of natural objects and systems, the morality of trade-offs between species, and the ethics of limiting consumption and population. Prereq: Soph. stndg., and PHIL 1001 and PHIL 2310.

PHIL 3370. Philosophy of Art. 3 cr. hrs.
Philosophical examination of art and its place in human life. Among possible topics are cognitive aspects of art, art and cultural understanding, the contribution of philosophy to the understanding and appreciation of art, the definition of art, art and morality, the objectivity of judgements of aesthetic value, the nature of aesthetic experience, the ontology of art, art as vehicle of social change, and the role of the artists' intentions in interpreting and evaluating works of art. Prereq: Soph. stndg. and PHIL 1001.

PHIL 3380. Asian Philosophy. 3 cr. hrs.
The major systems of philosophy of India and China; early Vedic and Upanishadic systems, Buddhism including Chan/Zen, Brahmanism, Hinduism, Confucianism, and Daoism. Emphasis on the key ideas in Eastern philosophy. Prereq: Soph. stndg. and PHIL 1001.

PHIL 3390. Latin American Philosophy. 3 cr. hrs.
Introduction to significant figures, issues and texts in Latin American Philosophy. Investigates the global and comparative nature of philosophical dialogue and debate by reading texts from from philosophers and pensadores in Latin America, the Caribbean and the United States. Prereq: PHIL 1001.

PHIL 3410. Metaphysics. 3 cr. hrs.
Investigation of fundamental questions about the nature of reality, especially those not amenable to purely empirical resolution. Among possible topics are theories of substance, the nature of physical objects, the existence of the soul, essences and natural necessity, time and space, the reality of possible worlds, the existence of universals, the nature of causation, and the distinction between primary and secondary qualities. Prereq: Soph. stndg and PHIL 1001.

PHIL 3450. Epistemology. 3 cr. hrs.
Study of the sources, nature, structure, and extent of knowledge and justified belief. Among possible topics are skepticism, theories of perception, a priori knowledge, testimony as a source of knowledge, theories of truth, internalist and externalist theories of knowledge, the analysis of knowledge, and foundational and coherence theories of the structure of knowledge. Prereq: Soph. stndg. and PHIL 1001.

PHIL 3460. Philosophy of Language. 3 cr. hrs.
Study of fundamental issues about the nature of symbolic systems, including language. Among the possible topics are intention-based, use-based, truthconditional and verificationalist theories of meaning, the indeterminacy of translation, proper names and reference, theories of definite descriptions, the nature of demonstrative and indexical expressions, and theories of metaphor. Prereq: Soph. stndg. and PHIL 1001.

PHIL 3610. Ancient Philosophy. 3 cr. hrs.
Examination of ancient Greek and Roman philosophy, from the pre-Socratic philosophers through the Hellenistic schools, with an emphasis on Plato and Aristotle. Including other philosophers such as Heraclitus, Parmenides, Pythagoras, Plotinus, Epicurus, Seneca and Sextus Empiricus. Issues may include the soul, immorality, knowledge, eros, and fate and freedom. Prereq: Soph. stndg. and PHIL 1001.
PHIL 3620. Medieval Philosophy. 3 cr. hrs.
An examination of selected issues and philosophers of the medieval period. Philosophers covered may include Augustine, Boethius, Averroes, Avicenna, Maimonides, Anselm, Aquinas, Bonaventure, Scotus, and Ockham. Topics may include free will, universals, the nature of the soul, proofs for the existence of God, the relation of faith and reason. Prereq: Soph. stdg. and PHIL 1001.

PHIL 3630. Pragmatism and American Philosophy. 3 cr. hrs.
Studies the development of Philosophy within the continental United States with special emphasis on the emergence of Pragmatism as an original philosophical response to new historical conditions. Issues can include rejecting the Cartesian quest for certainty and sharp dualisms between mind and body, fact and value, language and the world, self and society; the meaning of truth; the impact of the theory of evolution on views and persons, Nature and God. Readings from authors such as Pierce, Edwards, Emerson, Mead, Addams, Bradley, Brighton, James, Dewey, Royce and contemporaries such as Richard Rorty, Cornel West, Hilary Putnam, Donald Davidson, and Alain Locke. Prereq: Soph. stdg. and PHIL 1001.

PHIL 3640. Twentieth Century Anglo-American Philosophy. 3 cr. hrs.
A critical examination of a number of 20th century Anglo-American philosophers and philosophic movements. Movements considered will include some of the following: "Common Sense" Philosophy, Logical Atomism, Logical Positivism, and Ordinary Language Philosophy. Philosophers treated may include G.E. Moore, Bertrand Russell, Ludwig Wittgenstein, J.L. Austin, Elizabeth Anscombe, Willard Quine, Thomas Nagel, and Saul Kripke. Prereq: Soph. stdg. and PHIL 1001.

PHIL 3650. Early Modern Philosophy. 3 cr. hrs.
Investigation of 17th-18th century philosophy, especially in light of individualism and scientific discovery. Philosophers may include, but not limited to, Descartes, Leibniz, Spinoza, Locke, Berkeley, Hume, and Kant. Themes may include theories of mind and matter, personal identity, God and the cosmos, and the relations amongst philosophy, science and religion. Prereq: Soph. stdg. and PHIL 1001.

PHIL 3660. Marx and Marxism. 3 cr. hrs.
Marx's intellectual transition from "leftist" Hegelianism to dialectical materialism; and thence, from his study of political economics to Das Kapital. Developments and adaptations of Marx's thought as found in thinkers representative of various schools of Marx interpretation. Prereq: Soph. stdg. and PHIL 1001.

PHIL 3665. Phenomenology and Existentialism. 3 cr. hrs.
Study of major figures and themes from phenomenological and existentialist traditions, such as Kierkegaard, Husserl, Heidegger, and Sartre. Prereq: Soph. stdg. and PHIL 1001.

PHIL 3670. Nineteenth-Century German Philosophy. 3 cr. hrs.
Examination of the philosophical developments in Germany from the post-Kantian idealism of Fichte, Schelling and Hegel to the thought of Nietzsche. Authors may include figures such as Schopenhauer and Marx. Prereq: Soph. stdg. and PHIL 1001.

PHIL 3710. Political Philosophy. 3 cr. hrs.
A philosophical inquiry into the nature of social and political life. May include topics such as the nature of political liberty, the relation between the individual and larger institutions such as the state, the nature of justice, human rights, the meaning of the individual as a social being, the social aspects of individual identity, and the legitimacy (or lack thereof) of the use of force. Prereq: Soph. stdg. and PHIL 1001.

PHIL 3750. Philosophy of Law. 3 cr. hrs.
An inquiry into the nature and foundation of law, with particular attention to natural law, legal positivism and rights-based theories of law, theories of punishment and responsibility, and the relationship between law and morality. Prereq: Soph. stdg. and PHIL 1001.

PHIL 3751. Philosophy and History of Crime and Punishment. 3 cr. hrs.
A study of crime and punishment from philosophical and historical perspectives. Crime and punishment from both the European and the American experience will be discussed. Emphasis will be placed on the interdisciplinary nature (philosophical/historical institutions) of crime and punishment. Prereq: Soph. stdg. and PHIL 1001. Same as HIST 3751 and CRLS 3751. May be counted toward the core curriculum requirement in either Philosophy or Social-behavioral Science.

PHIL 3770. Feminist Philosophy. 3 cr. hrs.
The history of philosophical views of women and a critical introduction to different types of feminism, e.g., liberal, existentialist, radical, Marxist, and socialist feminism. Includes such topics as feminist theory of knowledge, political theory, and ethics. Prereq: Soph. stdg. and PHIL 1001.

PHIL 3780. Africana Philosophy. 3 cr. hrs.
Introduction to central philosophical issues and figures from Africa and the African Diaspora. Perennial issues in philosophy of human nature and social/political philosophy will be approached from an Africana perspective, and may include the ontological status of race, the nature of racism, the relation between race and personal identity, contemporary race relations, global feminism and the existence of a distinctly "African" philosophy. The course may include such authors as Zera Yacob, Kwame Appiah, WEB DuBois, Marcus Garvey, Frantz Fanon, Paget Henry, Sylvia Wynter, Angela Davis, Charles Mills, and Lewis Gordon. Prereq: Soph. stdg. and PHIL 1001.

PHIL 4000. Modern Logic. 3 cr. hrs.
Introduction to modern symbolic logic, with primary emphasis on translation into symbolic form and natural deduction. Propositional logic and predicate logic with identity are covered.

PHIL 4320. Contemporary Ethical Problems. 3 cr. hrs.
Ethical considerations such as human rights and responsibilities in social and racial justice, war and international relations, expression of dissent, and sexual conduct. Prereq: Jr. stdg. and PHIL 2310.
PHIL 4330. Business Ethics. 3 cr. hrs.
An application of theories of ethics to the moral dimensions of business endeavors and their effects on individuals, organizations, and society. Selected topics may include issues of responsibility, discrimination and affirmative action in the workplace, whistle blowing, economic justice, environmental impact, and the effects of the "global economy." Prereq: Jr. stndg. and PHIL 2310.

PHIL 4335. Biomedical Ethics. 3 cr. hrs.
Examination of fundamental ethical issues that arise in the practice of medicine and other health care professions. Among possible topics are the definition of death, the morality of suicide and euthanasia, patient-physician confidentiality, informed consent, refusal of lifesaving medical treatment, the morality of abortion, genetic engineering, human cloning, the allocation of scarce medical resources, and other issues involving health care and society. Prereq: Soph. stndg. and PHIL 2310.

PHIL 4336. Applied Ethics for the Health Sciences. 1 cr. hr.
An introduction to issues in professional ethics for students in the College of Health Sciences. Course is designed to provide a bridge to ethical topics covered in professional phase of study. Topics include: dignity of life, codes of medical ethics; the nature of the patient-medical provider relationship; confidentiality, the determination of patient competence; critical patient care, and justice in health care. Prereq: Enrolled in Health Sciences, Jr. stndg., and PHIL 2310.

PHIL 4450. Philosophy of Mind. 3 cr. hrs.
A consideration of some of the philosophical problems concerning the nature of mind and its interaction with the physical world. Topics may include the traditional mind-body problem and various significant historical and contemporary responses; the causal efficacy of content; neurophysiology vs. folk psychological approaches; other minds; intentionality; consciousness; and the reconciliation of contemporary science and our natural first person conception of the mind. Prereq: Jr. stndg. or Cons. of dept. ch.

PHIL 4470. Philosophy of Science. 3 cr. hrs.
Examination of fundamental epistemological and metaphysical issues that arise in the practice of science. Among possible topics are theories of scientific method, problems of confirmation, models of scientific explanation, scientific revolutions, the observational-theoretical distinction, the reality of theoretical entities, the relation between science and religion, science and art, and the limits of scientific knowledge. Prereq: Soph. stndg., PHIL 1001, and two semesters of science.

PHIL 4510. Philosophy of Religion. 3 cr. hrs.
A philosophical inquiry into the nature and function of religious life. Topics which may be covered include: the nature of faith, belief, and religious experience, the role and meaning of religious practice, prayer and worship, God's existence and attributes, divine foreknowledge, freewill and the problem of evil. Prereq: Soph. stndg. and PHIL 1001.

PHIL 4540. Philosophy of Education. 3 cr. hrs.
Critical examination of important principles, methods and conclusions of various philosophies and their implications for education. Attention to professional ethics and students' development of their own philosophies of education. This course is equivalent to EDUC 4540. Prereq: Jr. stndg. and PHIL 1001.

PHIL 4931. Topics in Philosophy. 1-3 cr. hrs.
Prereq: Jr. stndg. and PHIL 1001.

PHIL 4953. Undergraduate Seminar. 3 cr. hrs..
Designed to initiate a selected group of qualified undergraduates in the technique and discipline of scholarly research by concentrated work in a restricted field. Critical reading and analysis of sources. Specific subjects of seminars to be announced in the Schedule of Classes. Prereq: Jr. stndg., PHIL 1001, and cons. of instr.

PHIL 4960. Research in Philosophy. 3 cr. hrs.
Draws upon prior coursework in philosophy and integrates both the factual knowledge and the arts of philosophical reasoning and research developed in prior courses culminating in a substantive research project. Prereq: Jr. stndg. and Cons. of dept. ch.

PHIL 4995. Independent Study. 1-3 cr. hrs.
Prereq: Jr. stndg., PHIL 1001, and cons. of dept. ch.

PHIL 4999. Senior Thesis. 3 cr. hrs.
Preparation of a thesis by approved students under direction of an adviser. Prereq: Cons. of dept. ch.
Physics

Chairperson: Brian Bennett, D.Phil.
Department of Physics website (http://www.marquette.edu/physics)

The Physics Department at Marquette offers courses that prepare students for graduate study in physics as well as employment and further study in a variety of fields. Students achieve a general understanding of leading edge computational, theoretical and experimental approaches to explaining diverse natural phenomena from sub atomic particles to exotic stars and galaxies. The methods of physics develop powerful problem solving skills that find application in many disciplines. Physics graduates can go on to graduate study in areas as diverse as medicine, law, engineering and finance, as well as mainstream areas of physics such as particle physics, astrophysics, solid state, atomic and molecular physics. Minors are offered in Astrophysics and Biophysics. In addition, together with the Graduate School of Management, the Department of Physics offers a five-year B.S./M.B.A. accelerated degree program.

Major in Physics

The major in physics consists of thirty credit hours. Students complete the common physics core: one required physics core sequence of two courses (8 credit hours) and five required physics core courses (14 credit hours) for a total of 22 credit hours. In addition, eight credit hours of upper division physics elective courses are required. Physics majors must also complete four required mathematics courses (16 credit hours) and two chemistry courses (8 credit hours) for a total of 24 credit hours of background course work.

Note:

• Students may develop areas of concentration that prepare them for specific careers. These concentrations build on the foundation of the common physics core. Students should refer to the section, Areas of Concentration in Physics.

Common Physics Core:

Required Physics Core Sequence: Choose one of the following: 8

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 1001 &amp; PHYS 1002</td>
<td>General Physics 1 and General Physics 2</td>
</tr>
<tr>
<td>PHYS 1003 &amp; PHYS 1004</td>
<td>General Physics with Introductory Calculus 1 and General Physics with Introductory Calculus 2</td>
</tr>
<tr>
<td>PHYS 1013 &amp; PHYS 1014</td>
<td>Classical and Modern Physics with Calculus 1 and Classical and Modern Physics with Calculus 2</td>
</tr>
</tbody>
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Required Physics Core Courses: 3

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>PHYS 2004</td>
<td>Modern Physics: Atoms, Particles, and Quanta</td>
</tr>
<tr>
<td>PHYS 2005</td>
<td>Modern Physics: The States of Matter</td>
</tr>
<tr>
<td>PHYS 2055</td>
<td>Electronics Lab</td>
</tr>
<tr>
<td>PHYS 3011</td>
<td>Classical Mechanics</td>
</tr>
<tr>
<td>PHYS 4031</td>
<td>Electricity and Magnetism 1</td>
</tr>
</tbody>
</table>

Electives: Upper-division Physics courses: 8

Total Credit Hours: 30

Note:

• PHYS 1013 Classical and Modern Physics with Calculus 1 and PHYS 1014 Classical and Modern Physics with Calculus 2 are studio style courses recommended for students considering a physics major.

Required Background Mathematics and Chemistry Courses:

Mathematics Courses: 4

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>MATH 1450</td>
<td>Calculus 1</td>
</tr>
<tr>
<td>MATH 1451</td>
<td>Calculus 2</td>
</tr>
<tr>
<td>MATH 2450</td>
<td>Calculus 3</td>
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<tr>
<td>MATH 2451</td>
<td>Differential Equations</td>
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Chemistry Courses: 4

<table>
<thead>
<tr>
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<th>Title</th>
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<tbody>
<tr>
<td>CHEM 1001</td>
<td>General Chemistry 1</td>
</tr>
<tr>
<td>CHEM 1002</td>
<td>General Chemistry 2</td>
</tr>
<tr>
<td>or CHEM 1014</td>
<td>General Chemistry 2 for Majors</td>
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Total Credit Hours: 24
## Typical Program for Physics Majors

### Freshman

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 1013 (recommended)</td>
<td>4</td>
<td>PHYS 1014 (recommended)</td>
<td>4</td>
</tr>
<tr>
<td>MATH 1450</td>
<td>4</td>
<td>ENGL 1002</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1001</td>
<td>3</td>
<td>MATH 1451</td>
<td>4</td>
</tr>
<tr>
<td>UCCS-Hist. of Cultures &amp; Soc.</td>
<td>3</td>
<td>THEO 1001</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>14</strong></td>
<td><strong>Total</strong></td>
<td><strong>14</strong></td>
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### Sophomore

<table>
<thead>
<tr>
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<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 1018 (recommended)</td>
<td>0</td>
<td>PHYS 2005</td>
<td>3</td>
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<tr>
<td>PHYS 2004</td>
<td>3</td>
<td>PHYS 2055</td>
<td>2</td>
</tr>
<tr>
<td>CHEM 1001</td>
<td>4</td>
<td>CHEM 1002 or 1014</td>
<td>4</td>
</tr>
<tr>
<td>MATH 2450</td>
<td>4</td>
<td>MATH 2451</td>
<td>4</td>
</tr>
<tr>
<td>PHIL 1001</td>
<td>3</td>
<td>UCCS-Lit./Performing Arts</td>
<td>3</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>14</strong></td>
<td><strong>Total</strong></td>
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### Junior

<table>
<thead>
<tr>
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<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 3011</td>
<td>3</td>
<td>Physics elective (upper division)</td>
<td>6</td>
</tr>
<tr>
<td>PHYS 4031</td>
<td>3</td>
<td>UCCS-Diverse Cultures</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 2310</td>
<td>3</td>
<td>Math Elective</td>
<td>3</td>
</tr>
<tr>
<td>UCCS-Indiv. &amp; Soc. Behav.</td>
<td>3</td>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
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</tbody>
</table>

### Senior

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics elective (upper division)</td>
<td>3</td>
<td>Physics elective (upper division)</td>
<td>3</td>
</tr>
<tr>
<td>UCCS-Indiv. &amp; Soc. Behav.</td>
<td>3</td>
<td>Electives</td>
<td>12</td>
</tr>
<tr>
<td>UCCS-Theology</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electives</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18</strong></td>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

Total credit hours: **121**

**Note:**

Physics Electives: A minimum of 8 credits of upper division physics courses (3000 and above) are required. Courses may range from 1 credit hour to 3 credit hours.

**For Students Considering Graduate Study in Physics:**

To meet admission expectations for graduate study in physics, students should complete the following which consists of the common physics core (22 credit hours), in addition to the recommended curriculum for graduate study in physics as listed below. Physics majors must also complete the background course work in mathematics (16 credit hours) and chemistry (8 credit hours) courses listed under the Physics major.

**Common Physics Core:**

**Required Physics Core Sequence: Choose one of the following.**
### Areas of Concentration

Students may use their electives to develop concentrations that prepare them for specific careers. These concentrations build on the foundation of the common physics core as well as the background course work in mathematics and chemistry. Students should refer to the requirements listed under **Major in Physics**. Students should also consult with their pre-professional adviser for specifics regarding the various medical and dental school admission requirements. Several possible concentrations are outlined below.

#### Pre-medical/Pre-dental Concentration for Physics Majors

To pursue medical or dental professional studies, students should follow the pre-medical/pre-dental concentration or the physics in medicine concentration. The pre-medical/pre-dental concentration consists of the common physics core (22 credit hours in physics), as well as three biology courses (9 credit hours), and two chemistry courses (8 credit hours), as listed below. Physics majors must also complete the background course work in mathematics (16 credit hours) and chemistry (8 credit hours) courses listed under the Physics major.

**Common Physics Core:**

**Required Physics Core Sequence:** Choose one of the following.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 1001</td>
<td>General Physics 1</td>
<td>3</td>
</tr>
<tr>
<td>&amp; PHYS 1002</td>
<td>and General Physics 2</td>
<td></td>
</tr>
<tr>
<td>PHYS 1003</td>
<td>General Physics with Introductory Calculus 1</td>
<td>3</td>
</tr>
<tr>
<td>&amp; PHYS 1004</td>
<td>and General Physics with Introductory Calculus 2</td>
<td></td>
</tr>
<tr>
<td>PHYS 1013</td>
<td>Classical and Modern Physics with Calculus 1</td>
<td>3</td>
</tr>
<tr>
<td>&amp; PHYS 1014</td>
<td>and Classical and Modern Physics with Calculus 2</td>
<td></td>
</tr>
</tbody>
</table>

**Required Physics Core Courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 2004</td>
<td>Modern Physics: Atoms, Particles, and Quanta</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 2005</td>
<td>Modern Physics: The States of Matter</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 2055</td>
<td>Electronics Lab</td>
<td>2</td>
</tr>
<tr>
<td>PHYS 3011</td>
<td>Classical Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 4031</td>
<td>Electricity and Magnetism 1</td>
<td>3</td>
</tr>
</tbody>
</table>

**Recommended Program for Graduate Study in Physics:**

**Physics Courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 3056</td>
<td>Contemporary Physics Lab 1</td>
<td>2</td>
</tr>
<tr>
<td>PHYS 4012</td>
<td>Quantum Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 4024</td>
<td>Modern Optics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 4032</td>
<td>Electricity and Magnetism 2</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 4057</td>
<td>Contemporary Physics Lab 2</td>
<td>2</td>
</tr>
<tr>
<td>PHYS 4062</td>
<td>Introduction to Thermodynamics</td>
<td>3</td>
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</table>

**Mathematics Course:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 4210</td>
<td>Complex Variables</td>
<td>3</td>
</tr>
</tbody>
</table>

**Additional Course:** 3 credit hours in upper-division MATH

**Total Credit Hours**

44

### Marquette University - Undergraduate Bulletin

295
Typical Program for Physics Majors - Pre-medical/Pre-dental Concentration

**Freshman**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Course</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>BIOL 1001</td>
<td>3</td>
<td>BIOL 2001</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1001</td>
<td>3</td>
<td>ENGL 1002</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1450</td>
<td>4</td>
<td>MATH 1451</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 1013</td>
<td>4</td>
<td>PHYS 1014</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PHYS 1018</td>
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</tr>
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**Sophomore**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 1001</td>
<td>4</td>
<td>BIOL 1002</td>
<td>3</td>
</tr>
<tr>
<td>MATH 2450</td>
<td>4</td>
<td>CHEM 1002 or 1014</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 2004</td>
<td>3</td>
<td>MATH 2451</td>
<td>4</td>
</tr>
<tr>
<td>UCCS-Indiv. &amp; Soc. Behav.</td>
<td>3</td>
<td>PHYS 2005</td>
<td>3</td>
</tr>
</tbody>
</table>

**Junior**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Course</th>
<th>Hours</th>
</tr>
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<tbody>
<tr>
<td>CHEM 2113</td>
<td>4</td>
<td>BIOL 4101</td>
<td>3</td>
</tr>
<tr>
<td>UCCS-Hist. of Cultures &amp; Soc.</td>
<td>3</td>
<td>CHEM 2114</td>
<td>4</td>
</tr>
<tr>
<td>UCCS-Lit./Performing Arts</td>
<td>3</td>
<td>Physics elective</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 1001</td>
<td>3</td>
<td>PHIL 2310</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 3011</td>
<td>3</td>
<td>THEO 1001</td>
<td>3</td>
</tr>
</tbody>
</table>

**Senior**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 4031</td>
<td>3</td>
<td>Physics elective</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 2055</td>
<td>2</td>
<td>Electives</td>
<td>9</td>
</tr>
<tr>
<td>Physics elective</td>
<td>3</td>
<td>UCCS-Diverse Cultures</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UCCS-Theology</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total credit hours: 120
Physics in Medicine Concentration (Research)

The physics in medicine concentration, which is recommended for students interested in biomedical research, consists of the common physics core (22 credit hours), as well as the recommended courses in biology, chemistry, mathematics and physics as listed below. Physics majors must also complete the background course work in mathematics (16 credit hours) and chemistry (8 credit hours), listed under the Physics major.

Common Physics Core:

Required Physics Core Sequence: Choose one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 1001 &amp; PHYS 1002</td>
<td>General Physics 1 and General Physics 2</td>
<td>8</td>
</tr>
<tr>
<td>PHYS 1003 &amp; PHYS 1004</td>
<td>General Physics with Introductory Calculus 1 and General Physics with Introductory Calculus 2</td>
<td>8</td>
</tr>
<tr>
<td>PHYS 1013 &amp; PHYS 1014</td>
<td>Classical and Modern Physics with Calculus 1 and Classical and Modern Physics with Calculus 2</td>
<td>8</td>
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</table>

Required Physics Core Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>PHYS 2004</td>
<td>Modern Physics: Atoms, Particles, and Quanta</td>
<td>3</td>
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<tr>
<td>PHYS 2005</td>
<td>Modern Physics: The States of Matter</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 2055</td>
<td>Electronics Lab</td>
<td>2</td>
</tr>
<tr>
<td>PHYS 3011</td>
<td>Classical Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 4031</td>
<td>Electricity and Magnetism 1</td>
<td>3</td>
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</table>

Medicine Concentration (Research):

Biology Courses:

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<th>Title</th>
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</tr>
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<tbody>
<tr>
<td>BIOL 1001</td>
<td>General Biology 1</td>
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<td>BIOL 1002</td>
<td>General Biology 2</td>
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<td>BIOL 2001</td>
<td>Principles of Biological Investigation</td>
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Chemistry Courses:

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<th>Title</th>
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<td>CHEM 2113</td>
<td>Organic Chemistry for Majors 1</td>
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<td>CHEM 2114</td>
<td>Organic Chemistry for Majors 2</td>
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Mathematics Course:

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Physics Course:

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Physics electives should include:

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<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>PHYS 4012</td>
<td>Quantum Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 4032</td>
<td>Electricity and Magnetism 2</td>
<td>3</td>
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</table>

Total Credit Hours

| Credit Hours | 49 |

Typical Program for Physics Majors - Medicine Concentration

**Freshman**

<table>
<thead>
<tr>
<th>Term</th>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
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**Sophomore**

<table>
<thead>
<tr>
<th>Term</th>
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<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
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<tbody>
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<td>Hours</td>
<td>Second Term</td>
<td>Hours</td>
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<td>UCCS-Lit./Performing Arts</td>
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<td>THEO 1001</td>
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<tr>
<td>PHYS 3011</td>
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<td>3</td>
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<td>1</td>
<td>UCCS-Diverse Cultures</td>
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<td><strong>Junior</strong></td>
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<table>
<thead>
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<th>Second Term</th>
<th>Hours</th>
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<td>PHYS 4012</td>
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<td>PHYS 2055</td>
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<td>2</td>
<td>Biophysics Seminar</td>
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</tr>
<tr>
<td>UCCS-Theology</td>
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<td>3</td>
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</tr>
<tr>
<td>Biophysics Seminar</td>
<td></td>
<td>1</td>
<td>Electives</td>
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</tr>
<tr>
<td>COSC-Database</td>
<td></td>
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<td><strong>Senior</strong></td>
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<td>15</td>
<td>15-16</td>
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</table>

Total credit hours: 120-121

**Computational Physics Concentration**

The computational physics concentration serves to develop competence in using the computer as a scientific tool. It consists of the common physics core (22 credit hours), as well as the recommended courses in mathematics, computer science and physics as listed below. Physics majors must also complete the background course work in mathematics (16 credit hours) and chemistry (8 credit hours), listed under the Physics major.

Common Physics Core:

Required Physics Core Sequence: Choose one of the following.

<table>
<thead>
<tr>
<th>Course</th>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>PHYS 1001 &amp; PHYS 1002</td>
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<tr>
<td>General Physics 1 &amp; General Physics 2</td>
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<td></td>
</tr>
<tr>
<td>PHYS 1003 &amp; PHYS 1004</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>General Physics with Introductory Calculus 1 &amp; General Physics with Introductory Calculus 2</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>PHYS 1013 &amp; PHYS 1014</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Classical and Modern Physics with Calculus 1 &amp; Classical and Modern Physics with Calculus 2</td>
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Required Physics Core Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>PHYS 2004</td>
<td></td>
<td></td>
<td>Modern Physics: Atoms, Particles, and Quanta</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 2005</td>
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<td></td>
<td>Modern Physics: The States of Matter</td>
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<td>PHYS 2055</td>
<td></td>
<td></td>
<td>Electronics Lab</td>
<td>2</td>
</tr>
<tr>
<td>PHYS 3011</td>
<td></td>
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<td>Classical Mechanics</td>
<td>3</td>
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<tr>
<td>PHYS 4031</td>
<td></td>
<td></td>
<td>Electricity and Magnetism 1</td>
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Computational Physics Concentration:

Mathematics Course:

<table>
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<tr>
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<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>MATH 3100</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

Computer Science Courses:
COSC 1010  Introduction to Computer Programming  4
COSC 1020  Object-Oriented Software Design  4
COSC 2100  Data Structures and Algorithms 1  3
COSC 2200  Hardware Systems  3

Two additional upper-level COSC courses.

Physics elective course:
PHYS 2049  Computational Physics  3

Total Credit Hours  48

**Typical Program for Physics Majors - Computational Physics Concentration**

**Freshman**  

<table>
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<tr>
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<th>Hours</th>
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<tbody>
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<td>MATH 1450</td>
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<tr>
<td>PHYS 1013</td>
<td>4</td>
<td>PHYS 1014</td>
<td>4</td>
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<tr>
<td>UCCS-Hist. of Cultures &amp; Soc.</td>
<td>3</td>
<td>UCCS-Indiv. &amp; Soc. Behav.</td>
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**Sophomore**  

<table>
<thead>
<tr>
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<th>Hours</th>
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<th>Hours</th>
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<tr>
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<td>COSC 1020</td>
<td>4</td>
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<tr>
<td>MATH 2450</td>
<td>4</td>
<td>MATH 2451</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 2004</td>
<td>3</td>
<td>PHYS 2005</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 1001</td>
<td>3</td>
<td>PHIL 2310</td>
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**Junior**  

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<th>Hours</th>
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<tbody>
<tr>
<td>COSC 2200</td>
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<td>COSC 2100</td>
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<td>MATH 3100</td>
<td>3</td>
<td>PHYS 3056</td>
<td>2</td>
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<tr>
<td>PHYS 3011</td>
<td>3</td>
<td>UCCS-Lit./Performing Arts</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 2055</td>
<td>2</td>
<td>Physics elective</td>
<td>3</td>
</tr>
<tr>
<td>THEO 1001</td>
<td>3</td>
<td>Electives</td>
<td>6</td>
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**Senior**  

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
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<th>Hours</th>
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<tbody>
<tr>
<td>MATH 4540</td>
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<td>PHYS 4031</td>
<td>3</td>
<td>PHYS 2049</td>
<td>3</td>
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<tr>
<td>Computer Science electives</td>
<td>6</td>
<td>Physics elective</td>
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</table>
Mathematical Physics Concentration

The mathematical physics concentration develops the mathematical aspects of physics. It consists of the common physics core (22 credit hours), as well as the recommended mathematics and physics courses listed below. Physics majors must also complete the background course work in mathematics (16 credit hours) and chemistry (8 credit hours), listed under the Physics major.

Common Physics Core:

Required Physics Core Sequence: Choose one of the following:

<table>
<thead>
<tr>
<th>Course</th>
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<th>Credit Hours</th>
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<tr>
<td>PHYS 1001 &amp; PHYS 1002</td>
<td>General Physics 1 and General Physics 2</td>
<td>8</td>
</tr>
<tr>
<td>PHYS 1003 &amp; PHYS 1004</td>
<td>General Physics with Introductory Calculus 1 and General Physics with Introductory Calculus 2</td>
<td>8</td>
</tr>
<tr>
<td>PHYS 1013 &amp; PHYS 1014</td>
<td>Classical and Modern Physics with Calculus 1 and Classical and Modern Physics with Calculus 2</td>
<td>8</td>
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Required Physics Core Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>PHYS 2004</td>
<td>Modern Physics: Atoms, Particles, and Quanta</td>
<td>3</td>
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<tr>
<td>PHYS 2005</td>
<td>Modern Physics: The States of Matter</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 2055</td>
<td>Electronics Lab</td>
<td>2</td>
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<tr>
<td>PHYS 3011</td>
<td>Classical Mechanics</td>
<td>3</td>
</tr>
<tr>
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Mathematical Physics Concentration:

Mathematics Courses:

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<th>Title</th>
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<tr>
<td>MATH 3100</td>
<td>Linear Algebra and Matrix Theory</td>
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<td>MATH 4120</td>
<td>Abstract Algebra 1</td>
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<td>MATH 4210</td>
<td>Complex Variables</td>
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Two physics elective courses:

<table>
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<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>PHYS 4012</td>
<td>Quantum Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 4062</td>
<td>Introduction to Thermodynamics</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours: 37

Note:

- Students pursuing the computational physics or mathematical physics concentrations may request from the physics department a waiver of the CHEM 1001 General Chemistry 1, CHEM 1002 General Chemistry 2/CHEM 1014 General Chemistry 2 for Majors requirements, to substitute additional COSC or MATH courses.

Physics B.S./M.B.A. Accelerated Degree Program

The Department of Physics together with the Graduate School of Management offers an accelerated degree program which allows students to earn both their B.S. in Physics and master of business administration (M.B.A.) all within in a five-year time period.

During the first four years of the program, students complete both their coursework requirements for their Physics B.S. degree and the necessary prerequisite courses for the M.B.A. degree in the College of Business Administration. In addition, undergraduate students begin their M.B.A. graduate work in their senior year by taking two graduate level courses.

To be considered for admission to the B.S./M.B.A. five-year program, applicants must formally apply to the Graduate School of Management during their junior year at Marquette University. For more detailed information and details of a typical five-year coursework plan, please refer to the Graduate School of Management Bulletin and contact the Department of Physics or the Graduate School of Management.

Major in Biophysics

The major in biophysics consists of 50 credit hours. Students complete the common physics core: one required physics core sequence of two courses (8 credit hours) and five required physics core courses (15 credit hours); one required biology core sequence (6 credit hours), and three required biology courses (9 credit hours); six credit hours of approved physics electives from Group A and six additional credit hours of approved upper division
electives in either biology, chemistry, mathematics, or physics, taken from Groups A and B, listed below. In addition, students complete four required mathematics courses (16 credit hours), and four required chemistry courses (16 credit hours) for a total of 32 credit hours of background course work.

**Common Biophysics Core:**

**Required Physics Core:**

Choose one sequence of the following, although PHYS 1013 / PHYS 1014 is recommended:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit</th>
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<tbody>
<tr>
<td>PHYS 1001</td>
<td>General Physics 1</td>
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</tr>
<tr>
<td>&amp; PHYS 1002</td>
<td>and General Physics 2</td>
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<tr>
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<td>General Physics with Introductory Calculus 1</td>
<td>4</td>
</tr>
<tr>
<td>&amp; PHYS 1004</td>
<td>and General Physics with Introductory Calculus 2</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 1013</td>
<td>Classical and Modern Physics with Calculus 1</td>
<td>4</td>
</tr>
<tr>
<td>&amp; PHYS 1014</td>
<td>and Classical and Modern Physics with Calculus 2</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 2004</td>
<td>Modern Physics: Atoms, Particles, and Quanta</td>
<td>3</td>
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<tr>
<td>PHYS 2005</td>
<td>Modern Physics: The States of Matter</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 4031</td>
<td>Electricity and Magnetism 1</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 4046</td>
<td>The Physical Basis of Biological Structure and Function</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 4065</td>
<td>Experimental Methods in Molecular Biophysics</td>
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**Required Biology Core:**

<table>
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<th>Title</th>
<th>Credit</th>
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<tr>
<td>BIOL 1001</td>
<td>General Biology 1</td>
<td>4</td>
</tr>
<tr>
<td>&amp; BIOL 1002</td>
<td>and General Biology 2</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 2301</td>
<td>Cell Biology</td>
<td>3</td>
</tr>
<tr>
<td>or BIOL 4102</td>
<td>Experimental Molecular Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 4101</td>
<td>Biochemistry and the Molecular Basis of Biology</td>
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Electives: Upper-division courses in Biology, Chemistry, Mathematics or Physics from the list of recommended electives below.

<table>
<thead>
<tr>
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<th>Title</th>
<th>Credit</th>
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<tbody>
<tr>
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<td>Classical Mechanics</td>
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</tr>
<tr>
<td>PHYS 4012</td>
<td>Quantum Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 4032</td>
<td>Electricity and Magnetism 2</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 4062</td>
<td>Introduction to Thermodynamics</td>
<td>3</td>
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</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit</th>
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<tbody>
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<td>BIOL 2201</td>
<td>Genetics</td>
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<td>BIOL 3202</td>
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<td>BIOL 3302</td>
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<td>3</td>
</tr>
<tr>
<td>BIOL 3501</td>
<td>Neurobiology</td>
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<tr>
<td>BIOL 3502</td>
<td>Experimental Neurobiology</td>
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<td>BIOL 3701</td>
<td>Human Physiology</td>
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<td>BIOL 3702</td>
<td>Experimental Physiology</td>
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<td>BIOL 4102</td>
<td>Experimental Molecular Biology</td>
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<td>BIOL 4956</td>
<td>Laboratory Research Project in Biological Sciences *</td>
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</tr>
<tr>
<td>BIOL 8101</td>
<td>Protein Structure and Function **</td>
<td>2</td>
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</table>

Note: PHYS 1013 (http://bulletin.marquette.edu/undergrad/helenwayklinglercollegeofartsandsciences/physics_phys) Classical and Modern Physics with Calculus 1 and PHYS 1014 (http://bulletin.marquette.edu/undergrad/helenwayklinglercollegeofartsandsciences/physics_phys) Classical and Modern Physics with Calculus 2 are studio style courses recommended for students considering a physics major.

**Biophysics Major Recommended Electives:**

The major requires 12 credit hours of electives which should be drawn from these lists as follows: 6 credit hours of approved upper division electives in physics must be taken from Group A; six additional credit hours of approved upper division electives in biology, chemistry, mathematics or physics must be taken from courses in either Group A or Group B. Any exceptions must be approved by the Physics Department.

**Group A:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit</th>
</tr>
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<tbody>
<tr>
<td>PHYS 3011</td>
<td>Classical Mechanics</td>
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</tr>
<tr>
<td>PHYS 4012</td>
<td>Quantum Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 4032</td>
<td>Electricity and Magnetism 2</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 4062</td>
<td>Introduction to Thermodynamics</td>
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**Group B:**

<table>
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<th>Title</th>
<th>Credit</th>
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<td>Experimental Genetics</td>
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<td>BIOL 3302</td>
<td>Experimental Cell Biology</td>
<td>3</td>
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<td>BIOL 3501</td>
<td>Neurobiology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 3502</td>
<td>Experimental Neurobiology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 3701</td>
<td>Human Physiology</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 3702</td>
<td>Experimental Physiology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 4102</td>
<td>Experimental Molecular Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 4956</td>
<td>Laboratory Research Project in Biological Sciences *</td>
<td>1-3</td>
</tr>
<tr>
<td>BIOL 8101</td>
<td>Protein Structure and Function **</td>
<td>2</td>
</tr>
</tbody>
</table>
### Required Background Mathematics and Chemistry Courses:

**Math Courses:**
- MATH 1450 & MATH 1451: Calculus 1 and Calculus 2 (8 hours)
- MATH 2450: Calculus 3 (4 hours)
- MATH 2451: Differential Equations (4 hours)

**Chemistry Courses:**
- CHEM 1001 & CHEM 1002: General Chemistry 1 and General Chemistry 2 (8 hours)
- CHEM 2111 & CHEM 2112: Organic Chemistry 1 and Organic Chemistry 2 (8 hours)

### Typical Program for Biophysics Majors

#### First Year

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 1001, 1003, or 1013</td>
<td>4</td>
<td>PHYS 1002, 1004, or 1014</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 1001</td>
<td>3</td>
<td>BIOL 1002</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1001</td>
<td>4</td>
<td>CHEM 1002</td>
<td>4</td>
</tr>
<tr>
<td>ENGL 1001</td>
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<td>ENGL 1002</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>14</td>
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<td>14</td>
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</table>

#### Second Year

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1450</td>
<td>4</td>
<td>MATH 1451</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 2301</td>
<td>3</td>
<td>Literature Elective</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 2111</td>
<td>4</td>
<td>PHYS 2055</td>
<td>2</td>
</tr>
<tr>
<td>PHIL 1001</td>
<td>3</td>
<td>CHEM 2112</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 1018 (Recommended)</td>
<td>0</td>
<td>Elective</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td></td>
<td>16</td>
</tr>
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</table>

#### Third Year

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 2004</td>
<td>3</td>
<td>PHYS 2005</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 4031</td>
<td>3</td>
<td>BIOL 3302 or 4102</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 4101</td>
<td>3</td>
<td>Individual and Social Behavior Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

* Credits from these courses to satisfy elective requirements require prior recommendation of academic adviser, course instructor and consent of department chair. Highly recommended for students interested in a research career in biophysics.

** Requires consent of Biology Department for undergraduate admission to a graduate level course.
HIST 1301, 1401, or 1501\(^2\)  
MATH 2450

Fourth Year

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 4046</td>
<td>3</td>
<td>PHYS 4065</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 2310</td>
<td>3</td>
<td>Group A Elective(^4)</td>
<td>3</td>
</tr>
<tr>
<td>2000 Level Theology</td>
<td>3</td>
<td>Group A or B Elective(^5)</td>
<td>3</td>
</tr>
<tr>
<td>Group A Elective(^4)</td>
<td>3</td>
<td>Group A or B Elective(^5)</td>
<td>3</td>
</tr>
<tr>
<td>Group A or B Elective(^5)</td>
<td>3</td>
<td>Group A or B Elective(^5)</td>
<td>3</td>
</tr>
</tbody>
</table>

Total credit hours: 120

1 PHYS 1013 recommended.  
2 Satisfies both Diverse Cultures and Histories of Cultures and Societies UCCS requirements  
3 BIOL 4102 may be substituted. BIOL 4102 is offered in the fall term. BIOL 4102 requires BIOL 4101, which may be taken concurrently.  
4 Upper division physics elective from PHYS 3011, PHYS 4012 (strongly recommended), PHYS 4032 and PHYS 4062 (strongly recommended).  
5 From: PHYS 3011, 3995\(^*\), 4012, 4032, 4062; BIOL 2201, 3202, 3501, 3502, 3701, 4956\(^*\), 8101, 8102, 8506; CHEM 4431, 4433, 4434, 4530, 4956\(^*\); MATH 4740. *These courses require prior recommendation of academic adviser and consent of department chair; these courses are highly recommended for student interested in a career in biophysics research.

### Minor in Physics

The minor in physics consists of a total of 20 credit hours: one required physics sequence (8 credit hours) and 12 credit hours in physics elective courses as listed below:

**Required Physics Sequence:** Choose one of the following:

<table>
<thead>
<tr>
<th>Courses</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 1001 &amp; PHYS 1002</td>
<td>General Physics 1 and General Physics 2</td>
</tr>
<tr>
<td>PHYS 1003 &amp; PHYS 1004</td>
<td>General Physics with Introductory Calculus 1 and General Physics with Introductory Calculus 2</td>
</tr>
<tr>
<td>PHYS 1013 &amp; PHYS 1014</td>
<td>Classical and Modern Physics with Calculus 1 and Classical and Modern Physics with Calculus 2</td>
</tr>
</tbody>
</table>

**Electives:** Choose 12 credit hours of Physics courses

**Total Credit Hours:** 20

### Department of Public Instruction Certification

To pursue Department of Public Instruction certification, College of Education students should complete the following requirements which consist of a total of 22 credit hours: one required physics sequence (8 credit hours), three required physics courses (9 credit hours) and 5 credit hours in physics elective courses as listed below:

**Required Physics Sequence:** Choose one of the following:

<table>
<thead>
<tr>
<th>Courses</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 1001 &amp; PHYS 1002</td>
<td>General Physics 1 and General Physics 2</td>
</tr>
<tr>
<td>PHYS 1003 &amp; PHYS 1004</td>
<td>General Physics with Introductory Calculus 1 and General Physics with Introductory Calculus 2</td>
</tr>
<tr>
<td>PHYS 1013 &amp; PHYS 1014</td>
<td>Classical and Modern Physics with Calculus 1 and Classical and Modern Physics with Calculus 2</td>
</tr>
</tbody>
</table>

**Required Physics Courses:**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 1009</td>
<td>Earth and Environmental Physics</td>
</tr>
<tr>
<td>PHYS 2004</td>
<td>Modern Physics: Atoms, Particles, and Quanta</td>
</tr>
<tr>
<td>PHYS 2005</td>
<td>Modern Physics: The States of Matter</td>
</tr>
</tbody>
</table>

**Total Credit Hours:** 20
Minor in Astronomy

The Astronomy Minor is intended for students who are interested in learning about modern astronomy and astrophysics.

NON-PHYSICS MAJORS: the minor in astronomy requires one introductory physics sequences (8 credit hours) and four required physics courses (12 credit hours) for a total of 20 credit hours as listed below:

Required Physics Sequence: Choose one of the following.

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 1001 &amp; PHYS 1002</td>
<td>General Physics 1 and General Physics 2</td>
<td>8</td>
</tr>
<tr>
<td>PHYS 1003 &amp; PHYS 1004</td>
<td>General Physics with Introductory Calculus 1 and General Physics with Introductory Calculus 2</td>
<td>8</td>
</tr>
<tr>
<td>PHYS 1013 &amp; PHYS 1014</td>
<td>Classical and Modern Physics with Calculus 1 and Classical and Modern Physics with Calculus 2</td>
<td>8</td>
</tr>
</tbody>
</table>

Required Physics Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 1008</td>
<td>Astronomy and Space Physics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 2004</td>
<td>Modern Physics: Atoms, Particles, and Quanta</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 3021</td>
<td>Introduction to Theoretical Astrophysics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 3022</td>
<td>Introduction to Observational Astronomy</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours 20

Note:

- Students who complete PHYS 1001 General Physics 1 and PHYS 1002 General Physics 2 must also take the math requisites for PHYS 1003 General Physics with Introductory Calculus 1 and PHYS 1004 General Physics with Introductory Calculus 2 (MATH 1450 Calculus 1 and MATH 1451 Calculus 2) in order to meet the mathematics level of PHYS 3021 Introduction to Theoretical Astrophysics and PHYS 3022 Introduction to Observational Astronomy.

PHYSICS MAJORS: the minor in astronomy requires the following, taken under the guidance of one of our astronomy/astrophysics faculty with a topic being in the realm of astronomy or astrophysics. Note that the PHYS 4931 Topics in Contemporary Physics course is then used for the astronomy minor requirement and may not then be used for a physics major elective course requirement. The astronomy minor for a physics major requires a total of 12 credit hours beyond the physics major requirements.

Required Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 1008</td>
<td>Astronomy and Space Physics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 3021</td>
<td>Introduction to Theoretical Astrophysics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 3022</td>
<td>Introduction to Observational Astronomy</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 4931</td>
<td>Topics in Contemporary Physics</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours 12

Minor in Biophysics

Biophysics is concerned with the application of the concepts and methods of physics to the solution of biological problems and to the understanding of biological processes. Students who complete the biophysics minor achieve a grasp of physics as it relates to solving biological problems, a general understanding of the nature of biological problems and of proteins and cell membranes in particular and of several techniques based on physics principles that are used in biological investigations.

Cognate requirements for the minor are one year each of introductory biology and introductory chemistry as follows:

Cognate Course Requirements:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1001 &amp; BIOL 1002</td>
<td>General Biology 1 and General Biology 2</td>
<td>6</td>
</tr>
<tr>
<td>CHEM 1001 &amp; CHEM 1002</td>
<td>General Chemistry 1 and General Chemistry 2</td>
<td>8</td>
</tr>
</tbody>
</table>

Total Credit Hours 14
Biophysics Minor Course Requirements:

Required Introduction to Organic Chemistry: Choose one of the following.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 2111 &amp; CHEM 2112</td>
<td>Organic Chemistry 1 and Organic Chemistry 2</td>
<td>2-8</td>
</tr>
<tr>
<td>CHEM 2113 &amp; CHEM 2114</td>
<td>Organic Chemistry for Majors 1 and Organic Chemistry for Majors 2</td>
<td></td>
</tr>
<tr>
<td>BISC 2050</td>
<td>Organic Chemistry for the Health Sciences</td>
<td></td>
</tr>
</tbody>
</table>

Required Differential and Integral Calculus: Choose one of the following.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1410</td>
<td>Calculus for the Biological Sciences</td>
<td>3-4</td>
</tr>
<tr>
<td>MATH 1450</td>
<td>Calculus 1</td>
<td></td>
</tr>
</tbody>
</table>

Required Physics Sequence: Choose one of the following sequences.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 1001 &amp; PHYS 1002</td>
<td>General Physics 1 and General Physics 2</td>
<td>8</td>
</tr>
<tr>
<td>PHYS 1003 &amp; PHYS 1004</td>
<td>General Physics with Introductory Calculus 1 and General Physics with Introductory Calculus 2</td>
<td></td>
</tr>
<tr>
<td>PHYS 1013 &amp; PHYS 1014</td>
<td>Classical and Modern Physics with Calculus 1 and Classical and Modern Physics with Calculus 2</td>
<td></td>
</tr>
</tbody>
</table>

Physics Course Requirements:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 3953</td>
<td>Biophysics Seminar</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 3995</td>
<td>Undergraduate Research (must be 3 cr. hrs.*)</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 4046</td>
<td>The Physical Basis of Biological Structure and Function (or equivalent by consent of Physics Dept)</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 4065</td>
<td>Experimental Methods in Molecular Biophysics</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours: 23-30

Note: *PHYS 3995 Undergraduate Research must be taken for 3 cr. hrs.

Courses

**PHYS 1001. General Physics 1. 4 cr. hrs.**

Newton's laws, linear motion, circular and harmonic motion, fluids, heat, kinetic theory, wave motion and sound. 4 hrs. lec., 2 hrs. lab. Prereq: High school algebra, geometry, and trigonometry or equivalent.

**PHYS 1002. General Physics 2. 4 cr. hrs.**

Continuation of PHYS 1001. Electrostatics, DC circuits, magnetism, electromagnetic induction, light, optical instruments, interference and diffraction of light, modern physics. 4 hrs. lec., 2 hrs. lab. Prereq: PHYS 1001.

**PHYS 1003. General Physics with Introductory Calculus 1. 4 cr. hrs.**

Survey of classical physics for science and engineering majors. Kinematics in one and two dimensions. Newton's laws of motion and dynamics, including rotation of rigid bodies. Energy concepts in physical systems. Newton's law of universal gravitation. The first law of thermodynamics, harmonic motion, and Einstein's special relativity. A command of high school algebra, geometry and trigonometry is assumed. Requires the use of introductory calculus. 3 hrs. lec., 2 hrs. lab., 1 hr. dis. Prereq: MATH 1450 can be taken concurrently.

**PHYS 1004. General Physics with Introductory Calculus 2. 4 cr. hrs.**

A continuation of PHYS 1003. A survey of classical electromagnetic theory, with an introduction to modern physics. Electricity and magnetism: Coulomb's law, Gauss' law, the electric field and the electric potential, DC circuits, Ampere's law, Faraday's law, electromagnetic waves. Classical and quantum waves, interference, thermodynamics and an introduction to statistical mechanics. 3 hrs. lec., 2 hrs. lab., 1 hr. dis. Prereq: MATH 1450 and PHYS 1003 or PHYS 1013. MATH 1451 or MATH 1455, can be taken concurrently.

**PHYS 1005. Perspectives in Physical Sciences. 3 cr. hrs.**

Basic concepts in the physical sciences and their impact on technology, the humanities and the world. Course designed for non-science majors. This course satisfies the Arts and Sciences College Curriculum Natural Science requirement.

**PHYS 1007. Survey of Meteorology. 3 cr. hrs.**

An introduction to the science of the atmosphere as it relates to the weather of the earth. Topics will include the gas laws, heat transfer, causes of the seasons, atmospheric optics, humidity, clouds, atmospheric stability, causes of precipitation, atmospheric motions, air masses, fronts and pressure systems, thunderstorms, tornados, and hurricanes. Emphasis will be put on how weather is forecast and how it relates to everyone's life. This course satisfies the Arts and Sciences College Curriculum Natural Science requirement.
PHYS 1008. Astronomy and Space Physics. 3 cr. hrs.
Physics of the solar system, stars, galaxies, and the universe. Experimental methods of observational astronomy, telescopes, and space probes. Special topics such as black holes, neutron stars and quasars are covered. This course satisfies the Arts and Sciences College Curriculum Natural Science requirement.

PHYS 1009. Earth and Environmental Physics. 3 cr. hrs.
Impact of human activities on the environment, especially the consumption of fossil fuels. Population distribution and growth. Energy balance of the earth. Energy, land and water use, the water cycle. Effects of chemical and physical pollutants on water and the atmosphere. Course designed for non-science majors. This course satisfies the Arts and Sciences College Curriculum Natural Science requirement.

PHYS 1013. Classical and Modern Physics with Calculus 1. 4 cr. hrs.
A study of motion in its various forms, translational, rotational, and vibrational, that emphasizes their underlying unity, especially the central role of energy and its conservation, and their basis in the fundamental Newtonian laws of motion and Einstein's special relativity. These ideas are used to explain thermal processes. 3 hrs. lec., 2 hrs. lab., 1 hr. quiz. Prereq: MATH 1450, which may be taken concurrently. A command of high school algebra, geometry, trigonometry is assumed. Requires the use of introductory calculus. Students cannot receive credit for both PHYS 1003 and PHYS 1013.

PHYS 1018. Introduction to Research. 0 cr. hrs.
An overview of research activity, specialties, and opportunities for undergraduate research is provided through an in-depth visit each week to a different research laboratory at Marquette University and the Medical College of Wisconsin. All science students interested in learning about research are encouraged to take this course. SNC/UNC grade assessment.

PHYS 1020. Physics Laboratory Only. 1 cr. hr.
Prereq: Cons. of dept. ch.

PHYS 1030. Physics Lecture Only. 1-3 cr. hrs.
Prereq: Cons. of dept. ch.

A survey of 20th century physics concentrating on atoms and particles. Quantum mechanics: origins, the Schrödinger equation, the hydrogen atom, many-electron atoms and angular momentum. Introduction to special relativity. Nuclear structure, radioactivity, nuclear reactions, fission and fusion. Elementary particles, conservation laws, reactions, the Standard Model, and cosmology. Prereq: MATH 2450 and PHYS 1002; MATH 2450 and PHYS 1004; or MATH 2450 and PHYS 1014. Prerequisites may be taken concurrently.

A survey of the physics of matter and materials. Atoms and the forces between them, molecules, the states of matter, kinetic theory, perfect and imperfect gases. Statistical physics: classical statistics and the Boltzmann factor, quantum statistics. The solid state: cohesion and structure, electrical, magnetic, thermal and elastic properties. The liquid state: cohesion and structure, latent heat and melting, flow in ideal and real liquids. Prereq: MATH 2450 and PHYS 1002; MATH 2450 and PHYS 1004; or MATH 2450 and PHYS 1014. Prerequisites may be taken concurrently.

PHYS 2009. Computational Physics. 3 cr. hrs.
Computational techniques applied to problems in the physical sciences. Construction of models of physical systems. Generation and analysis of data. The role of models in developing physical theories. Course assignments will use a variety of programming environments and commercial software.

PHYS 2055. Electronics Lab. 2 cr. hrs.
Introduction to electronic measuring equipment and circuits. Voltmeters, ammeters, ohmmeters, oscilloscopes, DC and AC circuits, resistance, impedance, passive and active filters, power supplies, op-amps, amplifiers, and analog-digital conversion. An introduction to error analysis and precision of measurement. 1 hr. lec., 3 hrs. lab. Prereq: PHYS 1004 or PHYS 1014.
PHYS 3011. Classical Mechanics. 3 cr. hrs.
Three-dimensional motion of a particle in both Cartesian and spherical coordinate systems. Newtonian dynamics, the classical harmonic oscillator, central forces. Lagrange and Hamilton's formulations of analytical mechanics, angular momentum, Kepler's problem, and the dynamics of a rigid body. Coupled oscillators. Prereq: MATH 2451 and PHYS 1002; MATH 2451 and PHYS 1004; or MATH 2451 and PHYS 1014. Prerequisites may be taken concurrently.

PHYS 3021. Introduction to Theoretical Astrophysics. 3 cr. hrs.
Introduction to astrophysical problems, with emphasis on underlying physical principles; includes the nature of stars, equations of state, stellar energy generations, stellar structure and evolution, astrophysical neutrinos, binary stars, white dwarfs, neutron stars and pulsars and novae and supernovae. Prereq: PHYS 1013 and PHYS 1014 or PHYS 1003 and PHYS 1004 or PHYS 1001 and PHYS 1002 and cons. of instr.

PHYS 3022. Introduction to Observational Astronomy. 3 cr. hrs.
Nature of the Milky Way galaxy from an observer's perspective: stellar statistics and distributions, stellar populations, spiral structure, the nucleus and halo. Nature of ordinary galaxies, galaxies in our Local Group, structure of voids and superclusters. Nature of peculiar objects: Seyfert galaxies, starburst galaxies, and quasars. Elementary aspects of physical cosmology. Introduction to techniques used in modern optical and radio astronomy with emphasis on the physical and mathematical understanding of the detection of electromagnetic radiation. Prereq: PHYS 1013 and PHYS 1014 or PHYS 1003 and PHYS 1004 or (PHYS 1001 and PHYS 1002 and cons. of instr.) and PHYS 2004 and PHYS 3021.

PHYS 3056. Contemporary Physics Lab 1. 2 cr. hrs.
Experiments in molecular, nuclear, atomic, solid state physics, and in geometrical and physical optics. Application of error analysis, precision of measurement, and propagation of errors. 1 hr. lec., 3 hrs. lab. Prereq: PHYS 2055.

PHYS 3953. Biophysics Seminar. 1 cr. hr.
The frontiers of research in biophysics, and the techniques employed, are explored through attending the weekly Biophysics Seminar at the Medical College of Wisconsin and participating in a follow-on discussion after each seminar. Prereq: Jr. stndg. May be taken more than once for credit. This course may not be used to satisfy the 30 cr. hr. minimum requirements for a bachelor's degree in physics.

PHYS 3995. Undergraduate Research. 1-3 cr. hrs.
Experimental or theoretical research in an area of contemporary physics under the guidance of a physics faculty member who has expertise in that area. Successful completion of the course includes a summary paper and an oral presentation to the regular physics faculty. This course may not be used to satisfy the 30 cr. hr. minimum requirements for a bachelor of science in physics. Prereq: Jr. stndg. and cons. of dept. ch.; cons. of a regular physics faculty member.

PHYS 4012. Quantum Mechanics. 3 cr. hrs.

PHYS 4024. Modern Optics. 3 cr. hrs.
Geometric optics, classical wave theory of optics, interference, diffraction, polarization, electromagnetic theory of light, interaction of light and matter, lasers and coherence. Prereq: MATH 1451 and PHYS 1002; or MATH 1451 and PHYS 1004; or MATH 1451 and PHYS 1014.

PHYS 4031. Electricity and Magnetism 1. 3 cr. hrs.
Electrostatics: Coulomb's law and Gauss' law. The electric field in dielectric materials. Microscopic theory of Ohm's law and steady state currents. The magnetic field, Biot-Savart law, Ampere's law, the vector potential. Magnetic materials. Electromagnetic induction, Faraday's law. Maxwell's equations and electromagnetic waves. Prereq: MATH 2450 and PHYS 1002; or MATH 2450 and PHYS 1004; or MATH 2450 and PHYS 1014.

PHYS 4032. Electricity and Magnetism 2. 3 cr. hrs.

PHYS 4046. The Physical Basis of Biological Structure and Function. 3 cr. hrs.
The molecular processes of life occur in a complex aqueous molecular environment. Biological molecules and their environments are governed by the principles of physics. This course presents and explains physical techniques and models based on mechanics, thermodynamics, and electricity and magnetism, and shows how they apply to help characterize and understand the environments in which cells and biological molecules operate, while also helping to explain cellular and physiological processes. Prereq: PHYS 1002, 1004 or 1014 and CHEM 1002, MATH 1410 or MATH 1451.

PHYS 4057. Contemporary Physics Lab 2. 2 cr. hrs.
Continuation of the experiments in PHYS 3056. Measurement and propagation of uncertainty, curve fitting, automated data collection and experiment control. 1 hr. lec., 3 hrs. lab. Prereq: PHYS 3056.

PHYS 4062. Introduction to Thermodynamics. 3 cr. hrs.
PHYS 4065. Experimental Methods in Molecular Biophysics. 3 cr. hrs.
An introduction to the field of biological physics which develops the science and illustrates the applications of the techniques of X-ray diffraction and spin resonance to problems of biological interest: protein structural dynamics, ion channels and transport through cell membranes. Prereq: PHYS 2004 and PHYS 4031, or PHYS 4046.

PHYS 4071. Atomic Physics. 3 cr. hrs.

PHYS 4072. Introduction to Nuclear and Elementary Particle Physics. 3 cr. hrs.

PHYS 4075. Introduction to Solid State Physics. 3 cr. hrs.

PHYS 4931. Topics in Contemporary Physics. 3 cr. hrs.
Topics drawn from areas of current interest such as astrophysics, atmospheric physics, biophysics, condensed matter physics or particle physics. Prereq: Cons. of dept. ch.

PHYS 4953. Seminar in Physics. 1 cr. hr.
Critical analysis of the original works of scientists who have made significant contributions to Physics. This course may not be used to satisfy the 30 cr. hr. minimum requirements for a bachelor of science in physics. Prereq: Cons. of dept. ch.

PHYS 4995. Independent Study in Physics. 1-3 cr. hrs.
Independent study of special topics in physics under faculty supervision. Topics selected by students. This course may not be used to satisfy the 30 cr. hr. minimum requirements for a bachelor of science in physics. Prereq: Cons. of dept. ch.

PHYS 4999. Senior Thesis. 2 cr. hrs.
Independent research under the guidance of physics faculty. The topic may be chosen from any area of physics. Successful completion of the course includes a written thesis on the research and an oral presentation. This course may not be used to satisfy the 30 cr. hr. minimum requirements for a bachelor of science in physics. Prereq: Sr. stndg. and cons. of dept. ch.; cons. of a regular physics faculty member.
Political Science

Chairperson: Lowell Barrington, Ph.D.
Department of Political Science website (http://www.marquette.edu/polisci)

Studying politics offers a way to understand and engage in some of the most critical issues of our times. Our country’s political processes are deeply divided, and our institutions suffer partisanship and gridlock. Our media, too, often substitute hyperbole for reasonable discussion. Our economy continues to struggle to respond to the challenges of globalization and to distribute economic gains across American society. Meanwhile newly rising economies give other countries increasing power. As we wind down the major wars of the last decade, we continue to face threats ranging from global environmental problems to terrorism. The Political Science Department offers courses that engage these and other timely issues. Students can choose to specialize in American politics, law and politics, global politics, political economy and public policy, or general politics. These concentrations draw from courses in American politics, comparative politics, international politics, and political philosophy. We offer hands-on experience in local internships and a semester program in Washington D.C., at the Les Aspin Center. And our extensive alumni network can help graduating students start careers in fields as diverse as law; federal, state, and local government; electoral politics; intelligence; business; and international and domestic community service.

The major requires 33 credit hours of courses in any one of our five concentrations. Minors require 18 credit hours. Majors and minors are also offered for students in the College of Education pursuing a teaching specialization in political science. The accelerated five-year B.A./M.A. in Political Science and in International Affairs attracts a number of students.

Standard course numbering for the various groups referred to in the requirements:

- **Group I:** American Politics: POSC 2201, 4201-4376
- **Group II:** Comparative Politics: POSC 2401, 4406-4561
- **Group III:** International Politics: POSC 2601, 4601-4741
- **Group IV:** Political Theory: POSC 2801, 4801-4881

Major in Political Science

The major in political science consists of 33 credit hours of political science courses. Students must complete one of the five concentrations listed below, including 6 credit hours in major writing development classes.

Notes:

- Students must take two additional social science courses outside of the Political Science major. This requirement can be satisfied by taking any two courses that have one or more of the following subject codes: ANTH, CRLS, ECON, PSYC, SOCI, or SOWJ. Courses with the ANTH subject code must be in the area of cultural anthropology rather than biological anthropology.
- Students may count an introductory course (POSC 2201, POSC 2401, POSC 2601, or POSC 2801) as a Political Science elective, provided it is not already counting as a required Political Science course.
- Students may take up to 6 credit hours of POSC 4995 Independent Study in Political Science with department approval.
- Students enrolled in the Les Aspin Washington Center for Government program may count a maximum of nine credit hours in political science taken in the program toward the major.

Concentration I: Politics

Required Courses:

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<thead>
<tr>
<th>Course</th>
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<th>Credits</th>
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<tbody>
<tr>
<td>POSC 2201</td>
<td>American Politics</td>
<td>3</td>
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<tr>
<td>POSC 2401</td>
<td>Comparative Politics</td>
<td>3</td>
</tr>
<tr>
<td>POSC 2601</td>
<td>International Politics</td>
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</tr>
<tr>
<td>POSC 2801</td>
<td>Justice and Power</td>
<td>3</td>
</tr>
</tbody>
</table>

Choose seven upper-division POSC courses (4101 to 4999). These must include one course each from at least 3 of the 4 Groups (I-IV) listed below:

- **Group I:** American Politics (POSC courses numbered 4201-4376)
- **Group II:** Comparative Politics (POSC courses numbered 4406-4561)
- **Group III:** International Politics (POSC courses numbered 4601-4741)
- **Group IV:** Political Theory (POSC courses numbered 4801-4881)

Total Credit Hours 33
### Concentration II: Law and Politics

**Required Courses:**
- POSC 2201 American Politics 3
- POSC 2801 Justice and Power 3

Choose one of the following courses: 3
- POSC 2401 Comparative Politics
- POSC 2601 International Politics

Choose three of the following courses: 9
- POSC 4211 American Constitutional Law and Development
- POSC 4251 The Politics of Civil Rights and Liberties
- POSC 4271 Courts and Public Policy
- POSC 4601 International Law
- POSC 4651 The Politics of Human Rights

Choose one course from Group IV (POSC courses numbered 4801-4899) 3
Choose four additional POSC courses 12

Total Credit Hours 33

### Concentration III: Global Politics

**Required Courses:**
- POSC 2201 American Politics 3
- POSC 2401 Comparative Politics 3
- POSC 2601 International Politics 3

Choose two POSC courses from Group II (POSC courses numbered 4401-4599): 6
Choose two POSC courses from Group III (POSC courses numbered 4601-4699): 6
Choose four additional POSC courses, including at least one course from either Group I (POSC courses numbered 4201-4399) or Group IV (POSC courses numbered 4801-4899) 12

Total Credit Hours 33

### Concentration IV: Political Economy and Public Policy

Choose three of the following POSC courses: 9
- POSC 2201 American Politics
- POSC 2401 Comparative Politics
- POSC 2601 International Politics
- POSC 2801 Justice and Power

Choose four of the following POSC courses: 12
- POSC 4321 Business and Politics
- POSC 4341 Politics of American Capitalism
- POSC 4411 Politics, Economics, and Democracy
- POSC 4621 Politics of the World Economy
- POSC 4641 Politics of the Illicit Global Economy
- POSC 4661 The Political Economy of Development
- POSC 4861 The Political Philosophy of Capitalism

Choose four additional POSC courses 12

Required cognate courses:
- ECON 1103 Principles of Microeconomics
- ECON 1104 Principles of Macroeconomics

Total Credit Hours 33

### Concentration V: American Politics

**Required Course:**
- POSC 2201 American Politics 3
Choose two of the following POSC courses:

<table>
<thead>
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</thead>
<tbody>
<tr>
<td>POSC 2401</td>
<td>Comparative Politics</td>
<td>3</td>
</tr>
<tr>
<td>POSC 2601</td>
<td>International Politics</td>
<td>3</td>
</tr>
<tr>
<td>POSC 2801</td>
<td>Justice and Power</td>
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Choose three of the following POSC courses:

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<tr>
<td>POSC 4201</td>
<td>The United States Congress</td>
<td>3</td>
</tr>
<tr>
<td>POSC 4211</td>
<td>The American Presidency</td>
<td>3</td>
</tr>
<tr>
<td>POSC 4212</td>
<td>American Political Parties</td>
<td>3</td>
</tr>
<tr>
<td>POSC 4213</td>
<td>Elections, Public Opinion and Participation</td>
<td>3</td>
</tr>
<tr>
<td>POSC 4216</td>
<td>American Public Policy</td>
<td>3</td>
</tr>
<tr>
<td>POSC 4241</td>
<td>American Constitutional Law and Development</td>
<td>3</td>
</tr>
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</table>

Choose five additional POSC courses, including at least one course from Group II (POSC courses numbered 4401-4599), Group III (POSC courses numbered 4601-4799), OR Group IV (POSC courses numbered 4801-4899).

Total Credit Hours: 33

**Department of Public Instruction Certification - Political Science Major**

College of Education students pursuing Department of Public Instruction Certification should note that persons holding Wisconsin's Broad Field Social Studies license will be qualified to teach political science, if they complete 9 credit hours in political science.

Students pursuing certification with a political science major must complete 33 credit hours of political science courses as specified in Concentration I, with the exception that they should complete one upper-division course in all four of the groups listed. It is important that prospective teachers carefully review the College of Education section of this bulletin and consult with their Political Science Department adviser regarding university and state requirements (in addition to department requirements) for teacher certification.

**Required Courses:**

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</tr>
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<td>POSC 2801</td>
<td>Justice and Power</td>
<td>3</td>
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</tbody>
</table>

Choose four upper-division POSC courses, one from each of the Groups (I-IV) listed below:

| Group I: American Politics (POSC courses numbered 4201-4376) | 3 |
| Group II: Comparative Politics (POSC courses numbered 4406-4561) | 3 |
| Group III: International Politics (POSC courses numbered 4601-4741) | 3 |
| Group IV: Political Theory (POSC courses numbered 4801-4881) | 3 |

Electives: Choose three upper-division POSC courses

Total Credit Hours: 33

**Political Science B.A./M.A. Accelerated Degree Program**

The Political Science Department offers a five-year B.A./M.A. in Political Science. Students admitted to this program, may count a number of courses taken during their senior year toward both the B.A. and the M.A. degrees. This enables a student to complete both a B.A. and a M.A. in five years instead of the six that would normally be required.

The M.A. programs in political science offer courses that can take a student far beyond the undergraduate level. Those who have completed our M.A. degree have gone on to some of the finest graduate schools, launched careers in a variety of government agencies and gained employment in various settings in the private sector.

Graduate courses in our program offer students the possibility to pursue topics of interest to them in more depth than they are able to in undergraduate classes. These courses couple smaller class sizes and more opportunities for participation with an emphasis on the refinement of student research skills.

**Minor in Political Science**

The minor in political science consists of six courses (18 credit hours): four required courses (12 credit hours) and two elective courses (6 credit hours) as listed below:

**Required Courses:**
Department of Public Instruction Certification - Political Science Minor

College of Education students wishing to pursue Department of Public Instruction Certification must complete eight courses (24 credit hours): four required courses (12 credit hours) and four upper-division elective courses (12 credit hours) from Group I-IV as listed below:

Required Courses:

<table>
<thead>
<tr>
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<td>3</td>
</tr>
<tr>
<td>POSC 2801</td>
<td>Justice and Power</td>
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</tbody>
</table>

Group I: Choose one upper-division course

Group II: Choose one upper-division course

Group III: Choose one upper-division course

Group IV: Choose one upper-division course

Total Credit Hours: 24

Courses

POSC 2201. American Politics. 3 cr. hrs.

POSC 2201H. Honors American Politics. 3 cr. hrs.

POSC 2401. Comparative Politics. 3 cr. hrs.
Types of government, ranging from democratic to totalitarian. The parliamentary alternative to presidential democracy. Political modernization and revolution.

POSC 2401H. Honors Comparative Politics. 3 cr. hrs.
Types of government, ranging from democratic to totalitarian. The parliamentary alternative to presidential democracy. Political modernization and revolution. Prereq: Admission to Marquette University Honors Program.

POSC 2601. International Politics. 3 cr. hrs.

POSC 2801. Justice and Power. 3 cr. hrs.
Explores the difference between justice and power with special reference to the authority of a higher law or principle of right; selections from the works of Thucydides, Plato, Machiavelli and others are read.

POSC 2953. Undergraduate Seminar. 3 cr. hrs.
 Designed to initiate a selected group of qualified undergraduates in the techniques and discipline of scholarly research by concentrated work in a restricted field. Students pursue course reading in preparation of reports, while working under close supervision of a professor. Course intended primarily for Political Science majors, but other qualified students may apply. Specific subjects of seminars to be announced in the Schedule of Classes. Prereq: Jr. stndg. and cons. of instr.

POSC 4191. The Logic of Social Inquiry: The Kennedy Assassination. 3 cr. hrs.
The Kennedy Assassination. The question of who killed President John F. Kennedy, and whether there was a conspiracy. The physical evidence; eyewitness testimony; Lee Harvey Oswald, Jack Ruby, and suspected conspirators. The logic of social inquiry, and how we can approach "conspiracy" as an hypothesis to be tested. Prereq: POSC 2201 or Jr. stndg.

POSC 4193. Environmental Politics and Policy. 3 cr. hrs.
Tackles the key political and policy debates surrounding the many dimensions of environmental issues, to include global human security to local pollution controls. Focuses on a core set of debates that frame intellectual and practical approaches to solving environmental challenges. Prereq: POSC 2201 or POSC 2601 or Jr. stndg.
POSC 4195. Politics of the Internet. 3 cr. hrs.
The origins and growth of the Internet. Legal and regulatory dilemmas posed by the Internet. The impact of the Internet on politics, society and economics. Prereq: POSC 2201 or POSC 2401 or POSC 2601 or POSC 2801 or Jr. stndg.

POSC 4201. The United States Congress. 3 cr. hrs.
Membership, legislative process, and internal distribution of power in the U.S. Congress. Congressional relationships with the presidency, executive bureaucracy, interest groups, and public. Prereq: POSC 2201 or Jr. stndg.

POSC 4202. The United States Congress. 3 cr. hrs.
Membership, legislative process, and internal distribution of power in the U.S. Congress. Congressional relationships with the presidency, executive bureaucracy, interest groups, and public. Prereq: POSC 2201 or Jr. stndg.

POSC 4211. The American Presidency. 3 cr. hrs.
The evolution and contemporary status of the American presidency. Presidential elections, policy-making, advisory systems, and relationships with Congress, the bureaucracy, and the courts. Problems and techniques of decision making. Prereq: POSC 2201 or Jr. stndg.

POSC 4212. American Political Parties. 3 cr. hrs.
Examines the nature and development of American political parties. Traces continuity and change in the American party system beginning in the early Republic, assessing the rise and fall of the Whigs, the dynamic between machine politics and progressive reform, and the shifts in party ideas and policy stances that inform contemporary political debates. The question of ideological change in American political parties is further explored by contemporary work on factions, polarization, and culture war. Assesses changes to the parties as organizations in the wake of reforms to the candidate selection process from an institutional perspective. Explores the question of how American political parties compare to their counterparts in other advanced industrial democracies. Prereq: POSC or Jr. stndg.

POSC 4213. Elections, Public Opinion and Participation. 3 cr. hrs.
Covers explanations for political behavior at the individual, group, and national levels. Begins with an examination of public opinion and political attitudes, followed by questions about voter turnout, political participation, and theories of voter choice. Culminates in a unit exploring perspectives on how to explain and interpret election outcomes. Prereq: POSC 2201 or Jr. stndg.

POSC 4216. American Public Policy. 3 cr. hrs.
U.S. domestic policy with special attention to the politics of national policy in the areas of the economy, social welfare, and the environment. The stages of the policy process: agenda-building, formation, budgeting, implementation, and evaluation. Prereq: POSC 2201 or Jr. stndg.

POSC 4221. Interest Group Politics. 3 cr. hrs.
How groups are organized around particular economic interests and political preferences in order to influence policy-making institutions. The internal incentive structure of political organizations, including business, professional, trade union, and "public interest" groups. Functions of, and biases inherent in, the group process. Offered only at Les Aspin Center. Prereq: POSC 2201 or Jr. stndg.

POSC 4231. Political Organizations. 3 cr. hrs.
Political parties, social movements, interest groups, and civic associations. How citizens organize themselves to participate in the political process. How democratic institutions resolve the tension between individual citizenship and collective action. Explores theories of mobilization, questions of influence, and explanations of success. Prereq: POSC 2201 or Jr. stndg.

POSC 4241. American Constitutional Law and Development. 3 cr. hrs.
An examination of the historical development of American constitutional law and politics, including the areas of judicial review, separation of powers, federalism, the powers of Congress and the presidency, and the rise and decline of due process property rights. Explores the judiciary's role in constructing constitutional law and how this role has been contested over time. Considers how political institutions and forces, in addition to the judiciary, have shaped American constitutionalism. Prereq: POSC 2201 or Jr. stndg.

POSC 4251. The Politics of Civil Rights and Liberties. 3 cr. hrs.
An examination of civil rights and liberties policies in the United States, with an emphasis on the development of these policies over the course of American political history. Explores how the Supreme Court's contribution to this development is connected with the broader historical and political context in which it sits. The Court does not play an exclusive role in this process. Expanding, contracting, or otherwise altering the meaning of a right or a liberty involves a range of political actors in a variety of venues. Coverage includes free speech, religious freedom, political participation, privacy, criminal procedures and the rights of minority groups and women. Prereq: POSC 2201 or Jr. stndg.

POSC 4276. Courts and Public Policy. 3 cr. hrs.
An examination of the role and influence of courts in shaping American public policy, particularly from the 1950s to the present. Includes consideration of key institutional characteristics of the judiciary, the influence of law and politics on judicial decisionmaking, the interaction between the courts and other political branches, the reasons for the courts' emergence as battlegrounds in public policy problems. Prereq: POSC 2201 or Jr. stndg.

POSC 4281. Urban Public Policy. 3 cr. hrs.
Conditions in American cities and the extent to which they can be improved by political activity. Race relations, ethnicity and class and their effects on housing, education and income. Prereq: POSC 2201 or Jr. stndg.

POSC 4291. Business and Politics. 3 cr. hrs.
POSC 4331. Politics and Regulation. 3 cr. hrs.
Economic and social regulation in America. Why we have regulations. Who is regulated. Who does the regulating. What the consequences of regulation are. Primary focus on business regulation and related topics. Prereq: POSC 2201; or Jr. stndg.

POSC 4341. Politics of American Capitalism. 3 cr. hrs.
Political economy of U.S. history. Individuals, firms, and business associations and their role in politics. Economic development and conflict as sources of political change. Prereq: POSC 2201; or Jr. stndg.

POSC 4346. Politics of the American Civil War. 3 cr. hrs.
Examines the American Civil War (1861-1865) as a crisis provoked by unresolved constitutional issues concerning nullification and secession, tariffs and the status of slavery. Readings include primary source material, select documents and speeches composed by leading statesmen from the time of the founding until 1866. Prereq: POSC 2201 or POSC 2801 or Jr. stndg. or cons. of instr.

POSC 4361. Politics of Race, Ethnicity, and Gender. 3 cr. hrs.
The role of African-Americans, Asian Americans, Hispanics, white ethnics, American Indians, and women in shaping American politics through elections, political parties, and public office. The nature and impact of political organizations representing these groups. Prereq: POSC 2201 or Jr. stndg.

POSC 4366. Religion and Politics. 3 cr. hrs.
Religion and politics in contemporary America. The historic patterns and current interactions of religious movements, denominations, and individuals involved in American politics. Specific attention given to the rationales used for religious involvement in politics, the types of political behavior employed, and the consequences of that behavior. Prereq: POSC 2201 or Jr. stndg.

POSC 4371. Media and Politics in the U.S.. 3 cr. hrs.
Explores role and power of media in American political systems; history and development of national press, including court interpretations of freedom of the press; quality and impact of political reporting, with emphasis on election coverage; and media’s relationships with other political actors. Prereq: POSC 2201 or Jr. stndg.

POSC 4376. American National Security Policy. 3 cr. hrs.
Defense policy processes in the United States; issues in defense decision-making, including the roles of the public, interest groups, Congress, the President, and executive agencies, with emphasis on the defense establishment; U.S. strategic doctrines since World War II; budgeting; civil-military relations. Prereq: POSC 2201 or Jr. stndg.

Examines the American health care system policies, and underlying politics. Provides an overview of the organization and financing of health care in the United States. Examines an overview of the political system, political parties and interest groups, and values on the health care system and health policies at national and state levels. Pays particular attention to the enactment and implementation of the 2010 health care reform law, but also covers the social determinants of health and policies for vulnerable populations. Prereq: Jr. stndg.

POSC 4406. Public Policy in Industrial Democracies. 3 cr. hrs.
Politics of public policies in democratic political systems, with special attention to North America, Western Europe, and Japan. Alternative theoretical perspectives on the problem of social choice in democracies. Problems and policies in the areas of the economy, education, health, welfare, and the environment. Prereq: POSC 2401 or Jr. stndg.

POSC 4411. Politics, Economics, and Democracy. 3 cr. hrs.
The relationship between capitalism and democracy. The impact of economic factors on politics. The political consequences of the organization and power of private business. The impact of democratic politics and political institutions on economic actors and performance in capitalists democracies. Prereq: POSC 2401; or Jr. stndg.

POSC 4421. Democracy, Authoritarianism, and Totalitarianism. 3 cr. hrs.
Three "ideal types" of political systems, and their manifestations in countries at different points in time. Topics include power, legitimacy, ruling elites, institution, and economics. Examination of political system change through coup, revolution, and peaceful transition. Prereq: POSC 2401 or Jr. stndg.

POSC 4431. Modern Revolutions. 3 cr. hrs.
Types and causes of revolutions. Modern case studies. The American, French, Russian, German and selected "Third World" revolutions, with attention to ideas, institutions, socio-economic conditions, and the nature of actual changes. Prereq: POSC 2401 or Jr. stndg.

POSC 4441. Designing Liberal Democracy. 3 cr. hrs.
Exploring liberal democracy in theory practice, especially as concerns emerging democracies in the developing world. Includes consideration of the impact of economic development, ethnicity, language, Legacies of colonialism and/or indigenous political organization, internal democracy, corruption, strategic location and institutional design. Prereq: POSC 2401 or Jr. stndg.

POSC 4451. Comparative Judicial Politics. 3 cr. hrs.
Provides a detailed introduction to the empirical and normative debates surrounding judicial power including origins of judicial review, courts as strategic actors and the development of stronger courts over time in American and comparative context. Focuses on the development of rule of law, and in particular, how the court as a governing institution interacts with legislative and executive powers. POSC 4241 recommended.
POSC 4461. Comparative Health Politics and Policy. 3 cr. hrs.
Explores through comparative analysis the ways in which different nations address the goals of equitable access, affordability and quality in health care. Considers the similarities and differences in health policy challenges facing rich and developing nations. Employs comparative analysis of different models of health care provisions and financing, and examines the underlying politics of health care systems and policies in different countries. Offered annually. Prereq: Jr. stdgd.

POSC 4501. European Politics. 3 cr. hrs.
Nationalism and European identity; evolution of executive and legislative institutions; political parties; ongoing changes in the welfare state and state socialism; transformation of class structure; the challenge of post-industrial society. Include both Eastern and Western Europe. Prereq: POSC 2401 or Jr. stdgd.

POSC 4511. Russian and Post-Soviet Politics. 3 cr. hrs.
Developments in Russia and the other countries which emerge from the collapse of the Soviet Union. Brief coverage of tsarist and Soviet politics, with a particular emphasis on reasons for the USSR's collapse and Soviet legacies, followed by an overview of domestic and international politics in the region. Prereq: POSC 2401 or Jr. stdgd.

POSC 4521. Chinese Politics. 3 cr. hrs.

POSC 4541. Latin American Politics. 3 cr. hrs.
Government and politics in major Latin American countries. The politics of social change and development, seizures of power and rule by the military, and the role of external factors. Prereq: POSC 2401 or Jr. stdgd.

Politics of agricultural development, industrialization, military intervention, and social and cultural conflict in Third World Countries. Prereq: POSC 2401 or Jr. stdgd.

POSC 4601. International Law. 3 cr. hrs.
Introduces students to the theoretical frameworks, empirical cases, and cutting-edge debates in the field of international law. Focuses on different theoretical perspectives for understanding international law. Examines the general principles of international law, including actors of international law, the creation and interpretation of international law, and the relationship between international law and domestic law. Explores several specialized areas of international law, such as human rights, environment, international criminal justice, trade, and the use of force. Prereq: POSC 2601 or Jr. stdgd.

POSC 4611. International Organizations. 3 cr. hrs.
Introduces students to the theoretical frameworks, empirical cases, and cutting-edge debates in the field of international organizations. Focuses on different theoretical perspectives for understanding international organizations. Examines the effects of international organizations in world politics, such as the role of international organizations in fostering interstate cooperation, the power of international organizations in shaping state interests and identities, the pathologies of international organizations as global bureaucracies, and the interactions between international organizations and other non-state actors like nongovernmental organizations. Prereq: POSC 2601 or Jr. stdgd.

POSC 4621. Politics of the World Economy. 3 cr. hrs.
Political and economic dynamics of the world economy; historical and theoretical roots; international trade and monetary relations and the impact of hegemony, interdependence, regimes, and domestic politics; trade, debt, multinational corporations, and the dynamics of dependency and development; communism, capitalism, and change. Prereq: ECON 2004 and POSC 2601 or Jr. stdgd.

POSC 4631. World Conflict and Security. 3 cr. hrs.
Classical and contemporary theories of war and peace; just and unjust wars; principles of strategic analysis, arms control, and security policy-making; the proliferation of nuclear, chemical, and biological weapons. The international trade in arms; nationalism, ethnic conflict, and wars of secession. Prereq: POSC 2601 or Jr. stdgd.

POSC 4633. Human Security. 3 cr. hrs.
What is human security? What happens when we label a social, economic or political problem a 'human security' issue? Notions of security now include a broader range of concerns, from the structural violence of poverty to the impact of crime, migration, disease epidemics and climate change. Traces the normative, political and intellectual history of this policy lens, and examines its real world implications across several key issue areas. Prereq: POSC 2601 or Jr. stdgd.

POSC 4636. Terrorism. 3 cr. hrs.
Why do militant groups employ terrorist methods? What forces or pressures drive militant leaders to employ such controversial forms of violence in pursuit of their aims? Study what terrorists do, and why they do it, and formulate answers to these questions. Develop and apply alternative theories or lenses through which militant groups can be analyzed. Examine case studies of diverse domestic and foreign militant groups. Prereq: POSC 2601 or Jr. stdgd.

POSC 4641. Politics of the Illicit Global Economy. 3 cr. hrs.
Political and economic dynamics of the illicit dimension of the global economy; historical and theoretical roots; state efforts to control illicit flows of goods and services including drug trafficking, arms smuggling, illegal migration, traffic in women and children, money laundering; exploration of transnational organized crime as a challenge to state power. Prereq: POSC 2601 or Jr. stdgd.
POSC 4651. The Politics of Human Rights. 3 cr. hrs.
Introduces students to the theoretical frameworks, empirical cases, policy instruments and cutting-edge debates in the field of human rights. Examines different theoretical perspectives for understanding human rights, the philosophical foundations and historical origins of human rights, various mechanisms and actors for promoting and protecting human rights, the trajectory and effectiveness of humanitarian intervention and various forms of transitional justice. Prereq: POSC 2601 or Jr. stndg.

POSC 4661. The Political Economy of Development. 3 cr. hrs.
Introduces interaction between politics and economics in developing countries by examining political and economic development (and underdevelopment) through the lenses of the principal theoretical debates and substantive issues. Areas of inquiry include the general theories that underpin the study of the processes of economic and political reform, the roles of international and domestic institutions, and the influence of private interests including business, labor and civil society organizations. Substantive issues include poverty, conflict, human rights, foreign aid, investment and the environment. Prereq: ECON 2004 and either POSC 2601 or Jr. stndg.

POSC 4701. United States Foreign Policy. 3 cr. hrs.
Objectives of American foreign policy. Problems facing the United States in its relations with other countries. Trade, aid, propaganda and alliances as instruments of foreign policy. Prereq: POSC 2601 or Jr. stndg.

POSC 4711. International Politics of Europe. 3 cr. hrs.
Evolution of the post-war settlement in Europe. Western European and Eastern European integration, relations between Western and Eastern Europe, and the superpowers, French-German and intra-German relations, Europe and the Third World, European security issues. Prereq: POSC 2601 or Jr. stndg.

POSC 4721. International Politics of the Middle East. 3 cr. hrs.
Historical and religious background of Middle East politics; comparative ideologies and political systems in the Middle East; Arab-Israeli relations; Persian Gulf politics; politics in the Maghreb; great power interests in the region. Prereq: POSC 2601 or Jr. stndg.

POSC 4731. International Politics of Asia. 3 cr. hrs.
Principal patterns and problems of international politics in Asia, including international political economy, development and security issues, and the impact of global trends. Regional focus varies with instructor. Prereq: POSC 2401 or POSC 2601 or Jr. stndg.

POSC 4741. United States-Latin American Relations. 3 cr. hrs.
United States response to reform and revolutionary movements and governments in Latin America. The politics of trade, foreign investment, foreign assistance, and human rights. Prereq: POSC 2601 or Jr. stndg.

POSC 4801. Citizens, Beasts, or Gods?. 3 cr. hrs.
Evaluates the comparative congeniality to mankind of pre-political 'states of nature,' political citizenship, and the life of philosophy; selections from the works of Rousseau, Nietzsche, Chesterton and Aristotle are read. Prereq: POSC 2801 or Jr. stndg.

POSC 4811. The Best Constitution. 3 cr. hrs.
Examines the relationship between constitutional design and human flourishing; selections from the works of Plato and others are read. Prereq: POSC 2801 or Jr. stndg.

POSC 4812. Ethics and Politics. 3 cr. hrs.
Examines whether the good life we seek by forming and abiding in political communities is to be found chiefly in enjoying pleasure, in winning honor, or in contemplating truth. Is moral virtue a necessary condition of living well, or can standards of justice sometimes be compromised for citizens to partake more fully in the good life? Just what is virtue and how might it be fostered? Readings include Aristotle's Nicomachean Ethics, as well as Machiavelli's Prince and Plato's Meno. Prereq: POSC 2801 or Jr. stndg.

POSC 4813. Nietzsche and Christianity. 3 cr. hrs.
Examines Friedrich Nietzsche's penetrating analysis of the contemporary crisis of Western Civilization, as well as his more dubious first principles of the "will to Power" and the "eternal return," in juxtaposition with G.K. Chesterton's and Josef Pieper's celebration of Christian orthodoxy. Readings include Nietzsche's Beyond Good and Evil, Chesterton's Orthodoxy and Pieper's In Tune with the World. Prereq: POSC 2801 or Jr. stndg.

POSC 4821. Democracy and Its Problems. 3 cr. hrs.
Diagnoses the instability of popular governments in antiquity and considers the remedy provided by the American constitutional republic; selections from the works of Thucydides, Publius, Tocqueville and others. Prereq: POSC 2801 or Jr. stndg.

POSC 4841. Enlightenment Political Thought. 3 cr. hrs.
The Enlightenment's contribution to modern doctrines of individual rights, representative government, popular sovereignty, free enterprise, religious toleration, and freedom of speech. Authors such as Locke, Voltaire, Hume, Publius, Rousseau and Burke. Prereq: POSC 2801 or Jr. stndg.

POSC 4851. Karl Marx. 3 cr. hrs.
Primary works on freedom and alienation, history, capitalism, revolution, and socialism that have inspired Marxist movements. Prereq: POSC 2801 or Jr. stndg.

POSC 4861. The Political Philosophy of Capitalism. 3 cr. hrs.
Is capitalist society just or unjust? Does capitalism promote or inhibit the realization of freedom? Does capitalism promote or inhibit the pursuit of human excellence? Authors such as Rousseau, Adam Smith, Marx, Weber. Prereq: POSC 2801; or Jr. stndg.
POSC 4871. Politics and Literature. 3 cr. hrs.
Study of the central questions of political philosophy through the lens of literature, with special focus on how literature approaches the questions of the best regime and the best type of human life. Prereq: POSC 2801 or Jr. stndg.

POSC 4881. Postmodern Politics. 3 cr. hrs.
Nietzsche and his successors on the insufficiency of modern ethics and modern politics since the Enlightenment. Focus on the postmodern critique of modernity’s contributions to consumerism, globalization and technology. Prereq: POSC 2801 or Jr. stndg.

POSC 4931. Topics in Political Science. 2-3 cr. hrs.
Lectures and discussion in a broad area which, because of its topicality, is not the subject of a regular course. May be taken a maximum of three times. Prereq: Jr. stndg.

POSC 4951. MU Led Travel/Study Abroad. 3 cr. hrs.
Course taught in an international setting by Marquette professors and where students earn Marquette credit. Study Abroad expenses apply.

POSC 4986. Internship in Political Science. 3 cr. hrs.
Practical learning experience in politics through the Les Aspin Program. Evaluation will require the student to relate the experience to literature on the subject. S/U grade assessment. Prereq: POSC 2201; admitted to the Les Aspin Center for Government program.

POSC 4987. Internships as Field Experience. 3 cr. hrs.
For students who are completing or have just completed an internship. Through readings, discussions, and assignments, students develop analytical skills and acquire thematic knowledge complementary to the practical experiences of the internship. Specific topics vary by semester, depending on the class composition. Prereq: POSC 2201 or 2401 or 2061; or Jr. stndg.

POSC 4995. Independent Study in Political Science. 1-3 cr. hrs.
Prereq: Jr. stndg., cons. of instr., and cons. of dept. ch.

POSC 4999. Senior Thesis. 3 cr. hrs.
Preparation of a thesis by approved students under the direction of an adviser. Prereq: Sr. stndg., POSC 4995, which may be taken concurrently, and cons. of dept. ch. Three semester hours of POSC 4995 are required.
Psychology

Chairperson: John H. Grych, Ph.D.
Department of Psychology website (http://www.marquette.edu/psyc)

Psychology is the science that studies behavior, emotions and mental processes. Psychologists use scientific methods in an attempt to understand and change, if necessary, the way that people think, feel and behave. The Department of Psychology at Marquette University trains both undergraduate and graduate students.

There are many types of psychologists. Developmental psychologists study how people behave and change throughout life. Social psychologists are concerned with the effects of social situations on human behavior. Personality psychologists study individual differences in how people behave. Neuropsychologists study the effects of brain damage, disorder or disease on behavioral and brain function. Biological psychologists and Neuroscientists are concerned with the biological bases of behavior. Cognitive psychologists investigate memory, thought, problem solving, and the psychological aspects of learning. Clinical psychologists study ways to help individuals, couples, families and groups change problematic behavior. Industrial psychologists study the effects of the physical and social aspects of people's work environments on productivity and business. The department takes pride in having nationally recognized scholars in all of these areas. All faculty teach undergraduate courses and are involved in graduate student training.

Major in Psychology

The major in psychology consists of a total of 35 credit hours divided as follows: three required courses (11 credit hours), one course from each of the five psychology content areas (15 credit hours) and three elective psychology courses, two of which must be upper-division (9 credit hours).

Required Courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 1001</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 2001</td>
<td>Psychological Measurements and Statistics</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 2050</td>
<td>Research Methods and Designs in Psychology</td>
<td>4</td>
</tr>
</tbody>
</table>

Content Areas: Choose one upper-division course from each content area:

Developmental Psychology - Choose one of the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 3101</td>
<td>Developmental Psychology: Conception Through Adolescence</td>
<td>3</td>
</tr>
<tr>
<td>or PSYC 3120</td>
<td>Developmental Psychology: Adulthood and Aging</td>
<td>3</td>
</tr>
</tbody>
</table>

Social Psychology - Choose one of the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 3201</td>
<td>Introductory Social Psychology</td>
<td>3</td>
</tr>
<tr>
<td>or PSYC 3230</td>
<td>Business and Organizational Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

Cognitive Psychology - Choose one of the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 3301</td>
<td>Learning and Behavior</td>
<td>3</td>
</tr>
<tr>
<td>or PSYC 3320</td>
<td>Cognition</td>
<td>3</td>
</tr>
<tr>
<td>or PSYC 4330</td>
<td>Human Factors Engineering</td>
<td>3</td>
</tr>
</tbody>
</table>

Clinical Psychology - Choose one of the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 3401</td>
<td>Abnormal Psychology</td>
<td>3</td>
</tr>
<tr>
<td>or PSYC 3501</td>
<td>Theories of Personality</td>
<td>3</td>
</tr>
</tbody>
</table>

Biological Psychology - Choose one of the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 3601</td>
<td>Biopsychology</td>
<td>3</td>
</tr>
<tr>
<td>or PSYC 3650</td>
<td>Affective Neuroscience</td>
<td>3</td>
</tr>
</tbody>
</table>

Elective Courses - Choose three PSYC courses, two of which must be upper-division:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>9</td>
</tr>
</tbody>
</table>

Total Credit Hours

35

Additional Cognate Course Requirements:

Social Science Requirement: Two courses from one or more of the following programs: ANTH, CRLS, ECON, POSC, SOCI, SOWJ. Courses with the ANTH subject code cannot be chosen from ANTH 1201 or ANTH 2201.

Mathematics Requirement: Two courses, PSYC 2001 and at least three credits from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1300</td>
<td>The Nature of Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1390</td>
<td>Finite Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1400</td>
<td>Elements of Calculus</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1410</td>
<td>Calculus for the Biological Sciences</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1450</td>
<td>Calculus 1</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1419</td>
<td>Linear Algebra</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours

35
Department of Public Instruction Certification - Elementary/Middle School Education

College of Education students majoring in Elementary/Middle School Education majors who wish to pursue a second major in psychology must complete a total of 35 credit hours divided as follows: three required courses (11 credit hours), one course from each of the five psychology content areas (15 credit hours) and three elective psychology courses (9 credit hours), two of which must be upper-division courses, as listed below.

Required Courses:

<table>
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<tr>
<th>Course</th>
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<td>PSYC 1001</td>
<td>General Psychology</td>
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<td>PSYC 2001</td>
<td>Psychological Measurements and Statistics</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 2050</td>
<td>Research Methods and Designs in Psychology</td>
<td>4</td>
</tr>
</tbody>
</table>

Content Areas: Choose one course from each area as listed below:

**Developmental Psychology: Required Course**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 3101</td>
<td>Developmental Psychology: Conception Through Adolescence</td>
<td>3</td>
</tr>
</tbody>
</table>

**Social Psychology: Choose one of the following courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 3201</td>
<td>Introductory Social Psychology</td>
<td>3</td>
</tr>
<tr>
<td>or PSYC 3230</td>
<td>Business and Organizational Psychology</td>
<td></td>
</tr>
</tbody>
</table>

**Cognitive Psychology: Choose one of the following courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 3301</td>
<td>Learning and Behavior</td>
<td>3</td>
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<tr>
<td>or PSYC 3320</td>
<td>Cognition</td>
<td></td>
</tr>
<tr>
<td>or PSYC 4330</td>
<td>Human Factors Engineering</td>
<td></td>
</tr>
</tbody>
</table>

**Clinical Psychology - Choose one of the following courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 3401</td>
<td>Abnormal Psychology</td>
<td>3</td>
</tr>
<tr>
<td>or PSYC 3501</td>
<td>Theories of Personality</td>
<td></td>
</tr>
</tbody>
</table>

**Biological Psychology - Choose one of the following courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 3601</td>
<td>Biopsychology</td>
<td>3</td>
</tr>
<tr>
<td>or PSYC 3650</td>
<td>Affective Neuroscience</td>
<td></td>
</tr>
</tbody>
</table>

Elective Courses: Choose three PSYC courses, two of which must be upper-division

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
</table>

Notes:

- PSYC 3101 Developmental Psychology: Conception Through Adolescence may be taken instead of EDUC 1220 Psychology of Human Development in Children and Adolescents in a Diverse Society.
- EDUC 4217 Methods of Teaching Children/Youth with Exceptional Needs may be taken as an elective in the major as an equivalent of PSYC 3130 The Psychology of the Exceptional Child for Education primary majors only.

Department of Public Instruction Certification - Middle/Secondary Education

College of Education students majoring in Middle/Secondary School Education who wish to pursue a second major in psychology must complete a total of 35 credit hours divided as follows: three required courses (11 credit hours), one course from each of the five psychology content areas (15 credit hours) and three elective psychology courses (9 credit hours), two of which must be upper-division courses, as listed below.

Required Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 1001</td>
<td>General Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 2001</td>
<td>Psychological Measurements and Statistics</td>
<td>4</td>
</tr>
<tr>
<td>PSYC 2050</td>
<td>Research Methods and Designs in Psychology</td>
<td>4</td>
</tr>
</tbody>
</table>

Content Areas - Choose one course from each of the areas listed below:

**Developmental Psychology - Required Course**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 3101</td>
<td>Developmental Psychology: Conception Through Adolescence</td>
<td>3</td>
</tr>
</tbody>
</table>

**Social Psychology - Required Course**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 3201</td>
<td>Introductory Social Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

**Cognitive Psychology - Choose one of the following courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 3301</td>
<td>Learning and Behavior</td>
<td>3</td>
</tr>
</tbody>
</table>
or PSYC 3320

Clinical Psychology - Required course:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 3501</td>
<td>Theories of Personality</td>
</tr>
</tbody>
</table>

Biological Psychology - Choose one of the following courses:

<table>
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<tr>
<th>Course</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>PSYC 3601</td>
<td>Biopsychology</td>
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<tr>
<td>or PSYC 3650</td>
<td>Affective Neuroscience</td>
</tr>
</tbody>
</table>

Elective Courses: Choose three PSYC courses, two of which must be upper-division

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</tbody>
</table>

Total Credit Hours 35

Notes:

- PSYC 3101 Developmental Psychology: Conception Through Adolescence may be taken instead of EDUC 1220 Psychology of Human Development in Children and Adolescents in a Diverse Society.
- EDUC 4217 Methods of Teaching Children/Youth with Exceptional Needs may be taken as an elective in the major as an equivalent of PSYC 3130 The Psychology of the Exceptional Child for Education primary majors only.

Minor in Psychology

The minor in psychology consists of six courses (18 credit hours), including one required course (3 credit hours) and five elective PSYC courses (15 credit hours), three of which must be upper-division courses, as listed below.

Required Course:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 1001</td>
<td>General Psychology</td>
</tr>
</tbody>
</table>

Elective Courses: Choose five PSYC courses, three of which must be upper-division

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
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</thead>
<tbody>
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</tbody>
</table>

Total Credit Hours 18

Department of Public Instruction Certification - Minor in Psychology

College of Education students pursuing Department of Public Instruction certification must complete seven required courses (23 credit hours) and one upper-division elective course (3 credit hours) for a total of 26 credit hours, as listed below.

Required Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 1001</td>
<td>General Psychology</td>
</tr>
<tr>
<td>PSYC 2001</td>
<td>Psychological Measurements and Statistics</td>
</tr>
<tr>
<td>PSYC 2050</td>
<td>Research Methods and Designs in Psychology</td>
</tr>
<tr>
<td>PSYC 3101</td>
<td>Developmental Psychology: Conception Through Adolescence</td>
</tr>
<tr>
<td>PSYC 3201</td>
<td>Introductory Social Psychology</td>
</tr>
<tr>
<td>PSYC 3501</td>
<td>Theories of Personality</td>
</tr>
<tr>
<td>PSYC 4801</td>
<td>History and Systems of Psychology</td>
</tr>
</tbody>
</table>

Elective: Choose one upper-division PSYC course

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Credit Hours 26

Curricular Requirements

- Students must complete 4 credit hours of Honors Psychology Research Seminar. A final paper and/or presentation is a course requirement.
- Students must complete at least 2 credit hours of PSYC 4956H with the supervising faculty member.
- Students must have at least a final 3.500 cumulative GPA in Psychology to graduate with Disciplinary Honors in Psychology.

Academic Standards

Students must achieve a 3.200 cumulative GPA and a 3.500 cumulative Psychology GPA in order to graduate with a Comprehensive Honors degree. If a student drops below a 3.200 in any given term during the junior year or any subsequent year, the student receives a letter of warning from the University Honors Program director. If a student drops below a 3.200 cumulative GPA, they are placed on Honors Program academic probation; if they do not achieve a 3.200 cumulative by the end of the following term, they are removed from the program. Students must earn a grade of C or better in a course for it to count toward the Comprehensive Honors Degree.
Eligibility

The program is structured to be completed over the last two years of a student’s academic career. Sophomores are eligible to apply to the program near the end of the spring term as long as they meet the 3.500 minimum cumulative Psychology GPA requirement.

Application

- Students must submit an application to the Honors in Psychology program in Spring term. In the application the student must indicate which psychology faculty member the student would like to work with and describe his/her research experience.

- When submitting an application, the student must have junior standing and have at least a 3.500 cumulative overall GPA for entry into the Disciplinary Honors in Psychology program.

- Student must complete PSYC 2050H Honors Research Methods and Designs in Psychology to be eligible for acceptance into the Disciplinary Honors in Psychology Program.

Courses

PSYC 1001. General Psychology. 3 cr. hrs.
Introduction to scientific psychology: biological bases of behavior; perception; principles of learning; intelligence and personality testing; current theories of personality; conflict, adjustment and mental health; interpersonal relations; social processes; applications of psychological principles to human affairs. Three hours of classroom instruction and one optional discussion hour for review of exams and special assistance with selected areas of course content.

Logic and rationale of psychological measurement. Scales of measurement and statistical techniques. Descriptive statistics, the normal distribution and sampling theory, introduction to statistical inference. T-test, simple analysis of variance, chi square, measures of correlation. Prereq: PSYC 1001 or equiv.; three years of high school mathematics or MATH 1100 or its equiv.

PSYC 2050. Research Methods and Designs in Psychology. 4 cr. hrs.
Scientific methods and their application in psychology with emphasis on the experimental method. May include experimental, quasi experimental, correlational and survey designs, as well as selection and implementation of descriptive and statistical analyses, individual laboratory projects, and preparation of scientific reports. Prereq: PSYC 1001 or equivalent and PSYC 2001.

PSYC 2050H. Honors Research Methods and Designs in Psychology. 4 cr. hrs.
Scientific methods and their application in psychology with emphasis on the experimental method. May include experimental, quasi experimental, correlational and survey designs, as well as selection and implementation of descriptive and statistical analyses, individual laboratory projects, and preparation of scientific reports. Prereq: PSYC 1001 or equiv.; PSYC 2001 and admission to Marquette University Honors Program.

PSYC 2101. Introduction to Life-Span Developmental Psychology for Nursing Students. 3 cr. hrs.
Principles, theories, and research in development. The entire life-span from conception to death will be studied with emphasis on theoretical approaches and empirically obtained data. The effects of genetic, social, and environmental factors on typical development patterns. Counts towards the major in Psychology only for students with double majors in Nursing and Psychology. Prereq: PSYC 1001 or equiv.

PSYC 3101. Developmental Psychology: Conception Through Adolescence. 3 cr. hrs.
Examines the developing human being from conception through adolescence. The concepts, methods, and theories relevant to the study of the developing child and adolescent will be considered. Investigates the major physical, cognitive, social and emotional changes during the phase of the life course, as well as the genetic and contextual influences on development. Prereq: PSYC 1001 or equiv.

PSYC 3120. Developmental Psychology: Adulthood and Aging. 3 cr. hrs.
Survey of theory and research in adulthood. Emphasis on adulthood, middle age, and old age. Typical developmental patterns will be analyzed, as will genetic, social, and environmental determinants. Prereq: PSYC 1001 or equiv.

PSYC 3130. The Psychology of the Exceptional Child. 3 cr. hrs.
Description and psychological implications of various forms of physical and mental deviations. Educational, vocational, therapeutic and social facilities for exceptional children. May be taken for credit in special education by minors in special education-speech therapy. Prereq: PSYC 3101 or equiv.; or cons. of instr.

PSYC 3201. Introductory Social Psychology. 3 cr. hrs.
The nature and concept of social psychology. Socialization of the child. Small group behavior including conformity, leadership, problem-solving. Attitudes and attitude change, prejudice, racism and sexism. Comparative studies in social behavior. Social psychology of the research situation. Prereq: PSYC 1001 or equiv.

PSYC 3210. The Psychology of Prejudice. 3 cr. hrs.
An overview of theory and research on the psychological underpinnings of intergroup intolerance, with emphasis given to racism, sexism, and heterosexism. Prereq: PSYC 2050.
PSYC 3220. Human Sexuality. 3 cr. hrs.
The scientific study of human sexuality from both a biological and behavioral perspective. Topics include: male and female sexual anatomy and sexual functioning, conception, pregnancy, childbirth, sexual variations, and sexually transmitted diseases. Prereq: PSYC 1001 or equiv., or IWGS major or minor.

PSYC 3230. Business and Organizational Psychology. 3 cr. hrs.
Psychology applied to basic problems of industry: personnel selection, motivation, training, job satisfaction, job safety, leadership, performance appraisal, job analysis, and pertinent legal issues. Prereq: PSYC 1001 or equiv.

PSYC 3301. Learning and Behavior. 3 cr. hrs.
A comprehensive survey of methods and findings of classical and operant conditioning. Some introduction to theories of learning. Prereq: PSYC 1001 or equiv.

PSYC 3320. Cognition. 3 cr. hrs.
A systematic survey of classical and contemporary research topics in human learning; information processing, concept formation, problem-solving, verbal and motor learning. Prereq: PSYC 1001 or equiv.

PSYC 3401. Abnormal Psychology. 3 cr. hrs.
Psychological disorders are examined, including schizophrenia, mood disorders, anxiety disorders, substance use, eating disorders and personality disorders. Causes and treatments of these conditions are addressed, including psychological, biological and cultural factors. Prereq: PSYC 1001 or equiv.

PSYC 3410. Childhood Psychopathology. 3 cr. hrs.
The major types of psychological disturbances in children viewed as deviations from normal development. Causative factors in the genesis of behavior problems, with emphasis on social learning. Behavior modification techniques used with children. Prereq: PSYC 3101.

PSYC 3420. Health Psychology. 3 cr. hrs.
This course examines the psychological aspects of health and illness. Topics include health promotion, stress and coping, prevention, lifestyle and health, psychological adaptation to chronic illness and pain, rehabilitation, and health service delivery. Prereq: PSYC 2050 or PSYC 3601.

PSYC 3501. Theories of Personality. 3 cr. hrs.
The formulation of personality theory, its purpose and problems. Psychoanalytic, behavioral, humanistic, and other theories of personality and their various applications to human behavior. Review of relevant research findings. Prereq: PSYC 1001 or equiv.

PSYC 3550. Psychology of Gender Roles. 3 cr. hrs.
Biological and cultural bases of gender roles; the psychology of women and men and the consequent relationships between the sexes; the pressures of gender stereotype and the bases of non-stereotypic childrearing; implications of anthropological investigations for an understanding of sex role ascriptions; relationship between gender role and responses to sexuality; remedial education for personhood. Prereq: PSYC 2001 or IWGS major or minor.

PSYC 3560. Psychology of Religion. 3 cr. hrs.
Empirical research and findings pertinent to religion and religious experiences; psychological theories regarding religion; religious practices and experiences, religious orientation and awareness. Prereq: PSYC 1001.

PSYC 3601. Biopsychology. 3 cr. hrs.
Biological foundations of behavior with emphasis on the nervous system. Physiological mechanism in sensation, perception, motivation, emotion and learning. Functional neuroanatomy. Offered without a laboratory component. Prereq: PSYC 1001.

PSYC 3610. Animal Behavior. 3 cr. hrs.
Animal behavior, both in natural and experimental situations, emphasizing early experience, motivation, physiological mechanisms, adaptiveness and the evolution of behavior. Prereq: PSYC 1001 or equiv.

PSYC 3650. Affective Neuroscience. 3 cr. hrs.
Explores the biological foundations of emotion and other affective states. Emphasizes the role of the nervous system (including brain, hormones, neurons, physiology) in the elaboration of affective states (e.g. sexual behavior, fear, social isolation, feeding, joy, pain) in both animals and humans. Includes study of current technologies for visualizing brain processes. Prereq: PSYC 1001.

PSYC 3701. Principles of Psychological Testing. 3 cr. hrs.

PSYC 3830. The Psychology of Fantasy and Imagination. 3 cr. hrs.
Review of theoretical, experimental, and clinical literature on fantasy and imagination; development of imaginal processes; types of imagery; cerebral asymmetries and the imaging process; physiology of imagination; imagery and learning; imagery and verbal communication; role of fantasy and imagination in creativity; imagination and make believe play; function of fantasy in sexual behavior; diagnostic and therapeutic uses of fantasy and imagination; role of imagination in hypnosis. Prereq: PSYC 1001 or equiv.

PSYC 3840. Psychology of Happiness. 3 cr. hrs.
Focuses on the emerging research and theory in positive psychology on the nature of happiness. The determinants and correlates of happiness will be examined, including the role played by love, humor, forgiveness, religion, compassion, and spirituality in creating happiness. Prereq: PSYC 1001.
PSYC 4320. Learning and Memory. 3 cr. hrs.
Theoretical foundations and empirical evidence concerning the processes of learning and memory. Typically, includes the different types and neural bases of learning and memory, and factors and contexts that affect how and why we learn, remember or forget. Prereq: PSYC 3320 or PSYC 3601.

PSYC 4330. Human Factors Engineering. 3 cr. hrs.
Person-machine interactions, including sensory and motor phenomena and human limitations, controls and displays for computer-based and conventional machines, human information processing and artificial intelligence, workspace and environmental factors that influence optimal performance, relevant legal issues and human functioning in outer space. Prereq: PSYC 1001; or engineering major; or cons. of intr.

PSYC 4350. The Psychology of Death and Dying. 3 cr. hrs.

PSYC 4701. Introduction to Clinical Psychology. 3 cr. hrs.
Clinical psychology as a science and profession is discussed. Topics include the history, ethics, theories, roles and methods of clinical psychology. Also addressed are current issues concerning the practice of clinical psychology. Prereq: PSYC 3401.

PSYC 4720. Psychology of Marriage and Family. 3 cr. hrs.
Psychological theory and research pertinent to understanding marital and family functioning. Topics vary, but include the development of intimate relationships, the transition to parenthood, divorce and family violence. Prereq: PSYC 2050 or IWGS major or minor.

PSYC 4801. History and Systems of Psychology. 3 cr. hrs.
The development of psychological thinking from the 17th century to the present. The contributions of Descartes and Newton to Locke and the other British empiricists and, through them, to German mechanism and physiological psychology. The influence of Darwin, Freud, behaviorism and Gestalt psychology. The phenomenological and humanistic movement after World War II. Prereq: PSYC 1001.

PSYC 4931. Topics in Psychology. 3 cr. hrs.
Contemporary theoretical and research trends in selected contemporary areas of psychology. Topics to be announced. Prereq: Cons. of instr.

PSYC 4956. Advanced Undergraduate Research. 1-3 cr. hrs.
Readings, discussion and application of psychological research under the direction of a Psychology faculty adviser. Students are expected to review the literature on an assigned or negotiated topic and design and propose a specific research project that parallels or expands upon their semester experience. 1-3 semester credits. Course may be repeated for credit. A maximum of six credits of PSYC 4956, 4995, and 4999 combined may be counted as electives toward the minimum requirements for the major. Prereq: Cons. of instr.

PSYC 4960. Advanced Undergraduate Seminar. 3 cr. hrs.
Readings and discussion course designed to provide a high level overview of psychology with an emphasis on selected current topics. Each student will be expected to design and propose, but not necessarily conduct, a specific scholarly project. Prereq: Cons. of instr.

PSYC 4964. Field Experience in Psychology. 3 cr. hrs.
Placement in a specially selected applied setting in which the student has the opportunity to observe psychological knowledge, skills, and values demonstrated in one or more professional roles. Requires supervision in the setting and direction by the course instructor. Accompanied by seminar with readings, journals and reflections, presentations a term paper and demonstrated knowledge of appropriate ethical principles. Prereq: Sr. stndg., psychology major, and cons. of dept. ch.

PSYC 4995. Independent Study in Psychology. 1-3 cr. hrs.
Independent study and research under the direction of a faculty member. Prereq: Cons. of dept. ch.

PSYC 4999. Senior Thesis. 3 cr. hrs.
Conduct empirical research involving an original research question under the direction of a psychology faculty adviser. Open to psychology majors. Prereq: 3.000 GPA, PSYC 2050, and cons. of dept. ch.; or Sr. stndg., 3.000 GPA, and cons. of dept. ch.; grade point average of at least 3.500 in Psychology. Maximum of six credits available for PSYC 4999 alone or PSYC 4995 and PSYC 4999 combined.
Reserve Officers' Training Corps Minors

There are three Reserve Officers' Training Corps (ROTC) programs at Marquette University - Air Force (AFROTC), Army (AROTC) and Navy (NROTC). Each program prepares students for military commissioning, as well as offers a minor that students may choose to complete.

For more detailed information about each of the ROTC programs, see the Reserve Officers' Training Corps Programs (p. 40) section of this bulletin.
Air Force Aerospace Studies

Chairperson: Christopher L. Van Hoof, Lt Col, USAF
Department of Air Force ROTC website (http://www.marquette.edu/rotc/airforce)

AFAS courses are available to all Marquette University students, and especially intended for those enrolled in the Air Force ROTC Program.

For information on the Air Force Reserve Officer Training Corps Commissioning program see Reserve Officers' Training Corps (p. 40) in the university section of this bulletin.

Note:

- AFROTC students should note that most programs will probably entail more than the 120 hours normally required for graduation.

Minor in Air Force Aerospace Studies

The minor in air force aerospace studies consists of 22-23 credit hours: 16 credit hours of required AFAS courses, and an additional 6 credit hours in POSC, MISL and NASC courses to obtain breadth of knowledge and a basis for understanding Joint Military Doctrine as listed below.

Required Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
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<tbody>
<tr>
<td>AFAS 1011</td>
<td>Foundations of the United States Air Force 1</td>
<td>1</td>
</tr>
<tr>
<td>AFAS 1012</td>
<td>Foundations of the United States Air Force 2</td>
<td>1</td>
</tr>
<tr>
<td>AFAS 2021</td>
<td>Evolution of the Air Force/Air and Space Power 1</td>
<td>1</td>
</tr>
<tr>
<td>AFAS 2022</td>
<td>Evolution of the Air Force/Air and Space Power 2</td>
<td>1</td>
</tr>
<tr>
<td>AFAS 3131</td>
<td>Air Force Leadership Studies 1</td>
<td>3</td>
</tr>
<tr>
<td>AFAS 3132</td>
<td>Air Force Leadership Studies 2</td>
<td>3</td>
</tr>
<tr>
<td>AFAS 4141</td>
<td>National Security Affairs/Preparation for Active Duty 1</td>
<td>3</td>
</tr>
<tr>
<td>AFAS 4142</td>
<td>National Security Affairs/Preparation for Active Duty 2</td>
<td>3</td>
</tr>
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</table>

*The following course must be taken each term:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFAS 1051</td>
<td>Leadership Laboratory</td>
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</table>

Additional Courses - Choose one from each of the following: 6-7

Political Science

<table>
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<tbody>
<tr>
<td>POSC 4201</td>
<td>The United States Congress</td>
<td></td>
</tr>
<tr>
<td>POSC 4376</td>
<td>American National Security Policy</td>
<td></td>
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</table>

Military Science/Army

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
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</thead>
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<tr>
<td>MISL 1100</td>
<td>Foundations of Officership</td>
<td></td>
</tr>
<tr>
<td>MISL 1200</td>
<td>Basic Leadership</td>
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Naval Science/Navy

<table>
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<tr>
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<th>Title</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>NASC 1009</td>
<td>Introduction to Naval Science</td>
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</tr>
<tr>
<td>NASC 1022</td>
<td>Sea Power and Maritime Affairs</td>
<td></td>
</tr>
</tbody>
</table>

Total Credit Hours 22-23

Notes:

- Students need to complete the Air Force required field training (usually taken between sophomore and junior year) before taking the Army and Navy courses.
- *Only those students pursuing a commission need to enroll in AFAS 1051 Leadership Laboratory each semester.

Courses

AFAS 1011. Foundations of the United States Air Force 1. 1 cr. hr.
Designed to introduce students to the United States Air Force and provide an overview of the basic characteristics, missions, and organization of the Air Force. Includes an introduction to communication skills. Open to all students. Students pursuing an Air Force commission must also be concurrently enrolled in AFAS 1051.

AFAS 1012. Foundations of the United States Air Force 2. 1 cr. hr.
Continuation of AFAS 1011. Open to all students. Students pursuing an Air Force commission must also be concurrently enrolled in AFAS 1051.
AFAS 1051. Leadership Laboratory. 0 cr. hrs.
A dynamic and integrated grouping of leadership developmental activities designed to meet the needs and expectations of prospective Air Force second lieutenants and complement the AFROTC academic program. It is a student planned, organized and executed practicum conducted under the supervision of the detachment commander and operations flight commander. The Leadership Laboratory averages two hours per week throughout the student's enrollment in AFROTC. Air Force customs and courtesies, drill and ceremonies, career opportunities and the life and work of an Air Force junior officer are emphasized. All students pursuing an Air Force commission must enroll in this course. SNC/UNC grade assessment.

AFAS 2021. Evolution of the Air Force/Air and Space Power 1. 1 cr. hr.
Features topics on Air Force heritage and leaders; introduction to air and space power through examination of distinctive capabilities and functions; and continued application of communication skills. Instills an appreciation of the development and employment of air and space power and to motivate sophomore students to transition from AFROTC cadet to Air Force ROTC officer candidate. Open to all students. Students pursuing an Air Force commission must also be concurrently enrolled in AFAS 1051.

AFAS 2022. Evolution of the Air Force/Air and Space Power 2. 1 cr. hr.
Continuation of AFAS 2021. Open to all students. Students pursuing an Air Force commission must also be concurrently enrolled in AFAS 1051.

AFAS 2964. Air Force Field Training. 0 cr. hrs.
Off-campus summer program held at Maxwell Air Force Base, Montgomery, Alabama. Provides practical leadership experience and extensive practical training in fundamental leadership and military skills. Students pursuing an Air Force Commission are competitively selected for this course. Offered only during the summer. S/U grade assessment. Prereq: Cons. of dept. ch.

AFAS 3131. Air Force Leadership Studies 1. 3 cr. hrs.
Study of leadership and quality management fundamentals, professional knowledge, leadership ethics, and communicative skills required of an Air Force officer. Case studies are used to examine Air Force leadership and management situations as a means of demonstrating and exercising practical application of the concepts being studied. All students pursuing Air Force commission must also be concurrently enrolled in AFAS 1051.

AFAS 3132. Air Force Leadership Studies 2. 3 cr. hrs.
Continuation of AFAS 3131. All students pursuing an Air Force commission must also be concurrently enrolled in AFAS 1051.

AFAS 4141. National Security Affairs/Preparation for Active Duty 1. 3 cr. hrs.
Examines the national security policy process, regional studies, and formulation of the American defense policy, strategy and joint doctrine. Special topics of interest focus on the military as a profession; US Air Force functions, competencies and doctrine; officership; the military justice system; civilian control of the military; preparation for Air Force active duty; and current issues affecting military professionalism. Within this structure, continued emphasis is given to the refinement of communication skills. Students pursuing Air Force commission must also be concurrently enrolled in AFAS 1051.

AFAS 4142. National Security Affairs/Preparation for Active Duty 2. 3 cr. hrs.
Continuation of AFAS 4141. All students pursuing Air Force commission must also be concurrently enrolled in AFAS 1051.

AFAS 4995. Independent Study in Air Force and Aerospace Studies. 1-3 cr. hrs.
Independent study of special topics in Aerospace Studies under faculty supervision. Topics selected by student/faculty conference. Prereq: Cons. of dept. ch.
Military Science and Leadership

Chairperson: Michael Gibson, Lt. Col.
Department of Army ROTC website (http://www.marquette.edu/rotc/army)

The Department of Military Science and Leadership (Army ROTC) was established under the auspices of the Klingler College of Arts and Sciences at Marquette University in 1951. Army ROTC (AROTC) is a leadership development program consisting of three interconnected components: 1) on-campus, 2) off-campus and 3) the Leadership Development Program (LDP). By design, the three components provide seamless, progressive and sequential leader development and prepare men and women to receive commissions as second lieutenants in the U.S. Army, Army National Guard or the U.S. Army Reserve.

For more information see the Reserve Officers’ Training Corps (p. 41) section of this bulletin.

Minor in Military Science and Leadership

The minor in military science and leadership consists of 27 credit hours of MISL courses as listed below.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>MISL 1001</td>
<td>Military Physical Training Laboratory 1</td>
<td>1</td>
</tr>
<tr>
<td>MISL 1002</td>
<td>Military Physical Training Laboratory 2</td>
<td>1</td>
</tr>
<tr>
<td>MISL 2001</td>
<td>Military Physical Training Laboratory 3</td>
<td>1</td>
</tr>
<tr>
<td>MISL 2002</td>
<td>Military Physical Training Laboratory 4</td>
<td>1</td>
</tr>
<tr>
<td>MISL 3001</td>
<td>Military Physical Training Laboratory 5</td>
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</tr>
<tr>
<td>MISL 3002</td>
<td>Military Physical Training Laboratory 6</td>
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<td>MISL 4001</td>
<td>Military Physical Training Laboratory 7</td>
<td>1</td>
</tr>
<tr>
<td>MISL 4002</td>
<td>Military Physical Training Laboratory 8</td>
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</tr>
<tr>
<td>MISL 1100</td>
<td>Foundations of Officership</td>
<td>1</td>
</tr>
<tr>
<td>MISL 1200</td>
<td>Basic Leadership</td>
<td>1</td>
</tr>
<tr>
<td>MISL 1800</td>
<td>American Crucible: The Military and the Development of the United States</td>
<td>3</td>
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<tr>
<td>or HIST 3118</td>
<td>American Military History</td>
<td></td>
</tr>
<tr>
<td>MISL 2100</td>
<td>Individual Leadership Studies</td>
<td>2</td>
</tr>
<tr>
<td>MISL 2200</td>
<td>Leadership and Teamwork</td>
<td>2</td>
</tr>
<tr>
<td>MISL 3100</td>
<td>Leadership and Problem Solving</td>
<td>2</td>
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<tr>
<td>MISL 3101</td>
<td>Applied Leadership Laboratory 1</td>
<td>1</td>
</tr>
<tr>
<td>MISL 3200</td>
<td>Leadership and Ethics</td>
<td>2</td>
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<tr>
<td>MISL 3202</td>
<td>Applied Leadership Laboratory 2</td>
<td>1</td>
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<tr>
<td>MISL 4100</td>
<td>Officership</td>
<td>2</td>
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<tr>
<td>MISL 4101</td>
<td>Advanced Leadership Laboratory 1</td>
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<tr>
<td>MISL 4200</td>
<td>Leadership and Management</td>
<td>2</td>
</tr>
<tr>
<td>MISL 4202</td>
<td>Advanced Leadership Laboratory 2</td>
<td>0</td>
</tr>
</tbody>
</table>

Total Credit Hours 27

Notes:

- The required history for senior AROTC students is HIST 3118 American Military History or MISL 1800 American Crucible: The Military and the Development of the United States, offered fall and spring terms.
- Army Reserve Officers’ Training Corps students should note that when most majors are combined with the Military Science and Leadership program, graduation and commissioning requirements will exceed the 128–134 semester hours normally required for graduation.

Courses

MISL 1001. Military Physical Training Laboratory 1. 1 cr. hr.

This goal-oriented, small unit approach to physical conditioning and military drill is required for all cadets enrolled in Military Science courses. This lab is conducted three times per week. It is oriented toward strength, mobility and endurance development. Physical development and the ability to master principles of small unit leadership are also stressed. Student physical development is measured via the Army Physical Fitness Test, consisting of push-ups, sit-ups, and a timed two-mile run. Drill instruction is conducted on Fridays, and stresses fundamentals of unit organization, wear of the uniform, and practical application of small unit leadership techniques. Non-Military Science students may elect to take only the physical conditioning portion of the laboratory.
MISL 1002. Military Physical Training Laboratory 2. 1 cr. hr.
This goal-oriented, small unit approach to physical conditioning and military drill is required for all cadets enrolled in Military Science courses. This lab is conducted three times per week. It is oriented toward strength, mobility and endurance development. Physical development and the ability to master principles of small unit leadership are also stressed. Student physical development is measured via the Army Physical Fitness Test, consisting of push-ups, sit-ups, and a timed two-mile run. Drill instruction is conducted on Fridays, and stresses fundamentals of unit organization, wear of the uniform, and practical application of small unit leadership techniques. Non-Military Science students may elect to take only the physical conditioning portion of the laboratory.

MISL 1100. Foundations of Officerhip. 1 cr. hr.
Introduction to issues and competencies that are central to a commissioned officer’s responsibilities. This course is designed to establish a framework for understanding officerhip, leadership, and Army values. Additionally, the semester addresses “life skills” including fitness and time management. The MISL 1100 course is designed to give the student an accurate insight into the Army Profession and the officer’s role within the Army.

MISL 1200. Basic Leadership. 1 cr. hr.
MISL 1200 is designed to build on the experiences of the fall term and further broaden the student's introduction to the Army. Students receive an introduction to communication principles, military briefings, effective writing, problem solving, goal setting, listening and speaking skills, and counseling. Students are provided a broad overview of life in the Army, including the employment benefits and work experiences of junior officers.

This course explores American military history from the colonial period to the present through the lens of military affairs and primarily through the land component of the military, the Army. This course will use the Army and the military itself as a lens through which to explore the impact of governmental structures and policies, international affairs, societal change, technological and industrial innovation, and geography on American development. Prereq: Cons. of dept. ch.

MISL 2001. Military Physical Training Laboratory 3. 1 cr. hr.
This goal-oriented, small unit approach to physical conditioning and military drill is required for all cadets enrolled in Military Science courses. This lab is conducted three times per week. It is oriented toward strength, mobility and endurance development. Physical development and the ability to master principles of small unit leadership are also stressed. Student physical development is measured via the Army Physical Fitness Test, consisting of push-ups, sit-ups, and a timed two-mile run. Drill instruction is conducted on Fridays, and stresses fundamentals of unit organization, wear of the uniform, and practical application of small unit leadership techniques. Non-Military Science students may elect to take only the physical conditioning portion of the laboratory.

MISL 2002. Military Physical Training Laboratory 4. 1 cr. hr.
This goal-oriented, small unit approach to physical conditioning and military drill is required for all cadets enrolled in Military Science courses. This lab is conducted three times per week. It is oriented toward strength, mobility and endurance development. Physical development and the ability to master principles of small unit leadership are also stressed. Student physical development is measured via the Army Physical Fitness Test, consisting of push-ups, sit-ups, and a timed two-mile run. Drill instruction is conducted on Fridays, and stresses fundamentals of unit organization, wear of the uniform, and practical application of small unit leadership techniques. Non-Military Science students may elect to take only the physical conditioning portion of the laboratory.

MISL 2100. Individual Leadership Studies. 2 cr. hrs.
Explores the dimensions of creative and innovative tactical leadership strategies and styles by examining team dynamics and two historical leadership theories that form the basis of Army leadership framework. Aspects of personal motivation and team building are; practiced planning, executing and assessing team exercises. While participation in the leadership lab is not mandatory during the MISL II year, significant experience can be gained in a multitude of areas and participation in the labs is highly encouraged. The focus continues to build on developing knowledge of the leadership attributes and core leader competencies through the understanding of Army rank, structure and duties as well as broadening knowledge of land navigation and squad tactics. Case studies will provide a tangible context for learning the Soldier's Creed and Warrior Ethos as they apply in the contemporary operating environment. The key objective of this semester is to continue to develop knowledge of the Army’s leadership philosophies and integrate this knowledge into tactical strategies and team development. Prereq: MISL 1100 and MISL 1200.

MISL 2200. Leadership and Teamwork. 2 cr. hrs.
Examines the challenges of leading tactical teams in the complex contemporary operating environment (COE). Highlights dimensions of terrain analysis, patrolling and operation orders. Further study of the theoretical basis of the Army Leadership Requirements Model explores the dynamics of adaptive leadership in the context of military operations. MISL 2200 provides a smooth transition to MISL 3100. Cadets develop greater self-awareness as they assess their own leadership styles and practice communication and team-building skills. COE case studies give insight into the importance and practice of teamwork and tactics in real-world scenarios. The key learning objective of this semester is to explore leadership in the contemporary environment incorporating terrain analysis, tactical strategies and team development. Prereq: MISL 1100 and MISL 1200, or cons. of instr.

MISL 3001. Military Physical Training Laboratory 5. 1 cr. hr.
This goal-oriented, small unit approach to physical conditioning and military drill is required for all cadets enrolled in Military Science courses. This lab is conducted three times per week. It is oriented toward strength, mobility and endurance development. Physical development and the ability to master principles of small unit leadership are also stressed. Student physical development is measured via the Army Physical Fitness Test, consisting of push-ups, sit-ups, and a timed two-mile run. Drill instruction is conducted on Fridays, and stresses fundamentals of unit organization, wear of the uniform, and practical application of small unit leadership techniques. Non-Military Science students may elect to take only the physical conditioning portion of the laboratory.
MISL 3002. Military Physical Training Laboratory 6. 1 cr. hr.
This goal-oriented small unit approach to physical conditioning and military drill is required for all cadets enrolled in Military Science courses. This lab is conducted three times per week. It is oriented toward strength, mobility and endurance development. Physical development and the ability to master principles of small unit leadership are also stressed. Student physical development is measured via the Army Physical Fitness Test, consisting of push-ups, sit-ups, and a timed two-mile run. Drill instruction is conducted on Fridays, and stresses fundamentals of unit organization, wear of the uniform, and practical application of small unit leadership techniques. Non-Military Science students may elect to take only the physical conditioning portion of the laboratory.

MISL 3100. Leadership and Problem Solving. 2 cr. hrs.
Designed to help prepare students for the challenges of accepting greater responsibility in teaching and participating in Military Science and Leadership Labs. It is the first course that all students seeking a commission in the United States Army must take. Students will be introduced to the principles in the Leader Development Program, the Army's troop leading procedures, and taught how to plan and conduct individual and small unit training. Prereq: MISL 3101, which may be taken concurrently, MISL 1100, MISL 1200, MISL 2100, and MISL 2200, or cons. of instr.

MISL 3101. Applied Leadership Laboratory 1. 1 cr. hr.
Practical exercises and evaluations in military leadership skills including operational planning, quality management and inspections, and controlling small groups in realistic settings. Students develop training programs, plan training sessions, and present classes for this and other Military Science Leadership labs. Topics include individual and small unit movement techniques, communicating by tactical radio, water survival (drownproofing), drill and ceremony, and land navigation skills. Prereq: MISL 3100 which may be taken concurrently.

MISL 3200. Leadership and Ethics. 2 cr. hrs.
Designed to continue the student's development as a leader as he/she receives further instruction in interpersonal communication, values and ethics, and leadership. Additionally, students receive an introduction and overview of various summer training opportunities such as, airborne school and the National Advanced Leadership Camp (NALC). Students are also introduced to the many career choices the Army has to offer. Prereq: MISL 3100 and MISL 3202, which may be taken concurrently.

MISL 3202. Applied Leadership Laboratory 2. 1 cr. hr.
Practical exercises and evaluations in military leadership skills including operational planning, quality management and inspections, and controlling small groups in realistic settings. Students develop training programs, plan training sessions, and present classes for Military Science Leadership labs. Topics include field training exercises, tactical leadership, decision making, and squad level offensive and defensive battle drills. Prereq: MISL 3200, which may be taken concurrently.

MISL 3964. Military Science Practicum. 6 cr. hrs.
Off-campus summer program offered at the U.S. Army Reserve Officers' Training Corps Basic Camp, Fort Knox, Kentucky. This program counts as completion of the Basic Course. The six-week program provides the student with practical leadership experience and extensive practical training in fundamental leadership and military skills. Students do not incur military obligation, do not pay expenses, but do receive pay for this training. The program is offered in lieu of MISL 1100, MISL 1200, MISL 2100, and MISL 2200. Offered only during the summer. Prereq: Cons. of dept. ch.

MISL 4001. Military Physical Training Laboratory 7. 1 cr. hr.
This goal-oriented small unit approach to physical conditioning and military drill is required for all cadets enrolled in Military Science courses. This lab is conducted three times per week. It is oriented toward strength, mobility and endurance development. Physical development and the ability to master principles of small unit leadership are also stressed. Student physical development is measured via the Army Physical Fitness Test, consisting of push-ups, sit-ups, and a timed two-mile run. Drill instruction is conducted on Fridays, and stresses fundamentals of unit organization, wear of the uniform, and practical application of small unit leadership techniques. Non-Military Science students may elect to take only the physical conditioning portion of the laboratory.

MISL 4002. Military Physical Training Laboratory 8. 1 cr. hr.
This goal-oriented small unit approach to physical conditioning and military drill is required for all cadets enrolled in Military Science courses. This lab is conducted three times per week. It is oriented toward strength, mobility and endurance development. Physical development and the ability to master principles of small unit leadership are also stressed. Student physical development is measured via the Army Physical Fitness Test, consisting of push-ups, sit-ups, and a timed two-mile run. Drill instruction is conducted on Fridays, and stresses fundamentals of unit organization, wear of the uniform, and practical application of small unit leadership techniques. Non-Military Science students may elect to take only the physical conditioning portion of the laboratory.

MISL 4100. Officership. 2 cr. hrs.
Focuses students on three main areas: the Military Decision Making Process, the Army's Training Management System, and ethical leadership and decision making. It also covers several critical areas needed to operate effectively as an Army officer, including: coordinating activities with staffs, counseling theory and practice within the "army context" and ethics. Prereq: MISL 3100, MISL 3200 and MISL 4101, which may be taken concurrently.

MISL 4101. Advanced Leadership Laboratory 1. 0 cr. hrs.
Weekly practical exercises and preparatory periods for command staff functions, drill and ceremonies, assistant instructor roles and field training exercises. Students perform roles of cadet officers in assigned positions or tasks. Prereq: MISL 4100, which may be taken concurrently. SNC/UNC grade assessment.
MISL 4200. Leadership and Management. 2 cr. hrs.
Focuses on completing the transition from cadet to lieutenant. Students receive instruction on the legal aspects of decision-making and leadership, operations from the tactical to strategic level, administrative and logistical management, and a series of Capstone Seminars focusing on entering the Army as a new Lieutenant. These seminars require students, both individually and collectively, to apply their knowledge to solve problems and confront situations commonly faced by junior officers. Prereq: MISL 4100, MISL 4101 and MISL 4202, which may be taken concurrently.

MISL 4202. Advanced Leadership Laboratory. 2. 0 cr. hrs.
Weekly practical exercises and preparatory periods for command staff functions, drill and ceremonies, assistant instructor roles and field training exercises. Students perform roles of cadet officers in assigned positions or tasks. Prereq: MISL 4200, which may be taken concurrently. SNC/UNC grade assessment.

MISL 4964. Command Group Leadership. 2 cr. hrs.
Provides seniors who will be leading the Golden Eagle Battalion with in-depth practical applications and analyses of leadership at the senior command level of battalion-level organizations. Topics include developing training plans for battalion-size units, staff management, garrison operations, tactical operations and directly leading the university's Army ROTC battalion. Prereq: Sr. stndg., and cons. of dept. ch.

MISL 4995. Independent Study in Military Science and Leadership. 1-3 cr. hrs.
Independent study of special topics in Military Science under faculty supervision. Topics selected by student/faculty conference. Prereq: Cons. of dept. ch.
Naval Science

Chairperson: Dan Olson, CAPT, USN
Department of Navy ROTC website (http://www.marquette.edu/rotc/navy)

The Marquette University Department of Naval Science offers a naval science minor area of study for undergraduate students interested in pursuing a commission as an officer in the United States Navy or Marine Corps. The primary purpose of this minor is to teach prospective Naval and Marine Corps Officers the history of the Navy, current naval affairs, maritime strategy and the evolution of that strategy throughout the Navy and Marine Corps, operations and functions of current naval vessels, as well as a strong and continuing emphasis on leadership and moral decision making throughout every one of the classes. The course work provides students with the opportunity to acquire sound judgment, leadership, historical knowledge and current naval functions which are essential in becoming an officer in the Navy and Marine Corps.

Minor in Naval Science

The minor in naval science consists of a minimum of 21-23 credit hours of Naval Science courses from the following:

### Naval Science Courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NASC 1009</td>
<td>Introduction to Naval Science</td>
<td>2</td>
</tr>
<tr>
<td>NASC 1022</td>
<td>Sea Power and Maritime Affairs</td>
<td>3</td>
</tr>
<tr>
<td>NASC 2151</td>
<td>Navigation and Naval Operations 1</td>
<td>3</td>
</tr>
<tr>
<td>NASC 2185</td>
<td>Leadership and Management</td>
<td>3</td>
</tr>
<tr>
<td>NASC 3142</td>
<td>Naval Ship Systems 1</td>
<td>3</td>
</tr>
<tr>
<td>NASC 3162</td>
<td>Naval Ship Systems 2</td>
<td>3</td>
</tr>
<tr>
<td>NASC 4152</td>
<td>Navigation and Naval Operations 2</td>
<td>3</td>
</tr>
<tr>
<td>NASC 4186</td>
<td>Leadership and Core-Value-Based Decision-Making</td>
<td>3</td>
</tr>
<tr>
<td>or NASC 4995</td>
<td>Independent Study in Naval Sciences</td>
<td></td>
</tr>
</tbody>
</table>

**Total Credit Hours:** 23

### Marine Option:

Students are required to complete 21 credit hours in NASC courses, as listed below.

### Required Courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NASC 1009</td>
<td>Introduction to Naval Science</td>
<td>2</td>
</tr>
<tr>
<td>NASC 1022</td>
<td>Sea Power and Maritime Affairs</td>
<td>3</td>
</tr>
<tr>
<td>NASC 2185</td>
<td>Leadership and Management</td>
<td>3</td>
</tr>
<tr>
<td>NASC 3161</td>
<td>Evolution of the Art of War</td>
<td>3</td>
</tr>
<tr>
<td>NASC 3181</td>
<td>Amphibious Warfare</td>
<td>3</td>
</tr>
<tr>
<td>NASC 3964</td>
<td>Practicum in U.S. Marine Corps Leadership and Management</td>
<td>4</td>
</tr>
<tr>
<td>NASC 4186</td>
<td>Leadership and Core-Value-Based Decision-Making</td>
<td>3</td>
</tr>
<tr>
<td>or NASC 4995</td>
<td>Independent Study in Naval Sciences</td>
<td></td>
</tr>
</tbody>
</table>

**Total Credit Hours:** 21

Additional Requirements for Navy Option Scholarship Students:

**Calculus - Must complete by end of sophomore year:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>MATH 1450</td>
<td>Calculus 1</td>
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</tr>
<tr>
<td>&amp; MATH 1451</td>
<td>and Calculus 2</td>
<td></td>
</tr>
</tbody>
</table>

**Physics - Must complete by end of junior year:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 1003</td>
<td>General Physics with Introductory Calculus 1</td>
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</tr>
<tr>
<td>&amp; PHYS 1004</td>
<td>and General Physics with Introductory Calculus 2</td>
<td></td>
</tr>
</tbody>
</table>

**History or Political Science Course - Choose one of the following:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 3118</td>
<td>American Military History</td>
<td>3</td>
</tr>
<tr>
<td>or POSC 4376</td>
<td>American National Security Policy</td>
<td></td>
</tr>
</tbody>
</table>

**English - Must complete two courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>6</td>
</tr>
</tbody>
</table>

*World Culture Courses - Choose one of the following courses:

**History Courses:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 1301</td>
<td>Survey of Latin America</td>
<td></td>
</tr>
</tbody>
</table>
### Courses

**NASC 1001. Drill and Information Briefing. 0 cr. hrs.**
Weekly formations focusing on Marine Corps and Navy drill, ceremonies, and inspections. Classroom instruction on special interest areas to the prospective naval officer such as financial responsibilities, career opportunities, leadership, maritime strategy and national security. Instruction and application of the fundamentals of unit organization, the chain of command, and how to properly wear and inspect uniforms. Designed to develop teamwork, leadership, management, and initiative. Required of all NROTC students. SNC/UNC grade assessment.

**NASC 1009. Introduction to Naval Science. 2 cr. hrs.**
General introduction to seapower and the naval service. The instruction places particular emphasis on the mission, organization, regulations and broad warfare components of the Navy. Included is an overview of officer and enlisted rank and rating structures, procurement and recruitment, training and education, promotion and advancement, and retirement policies. Non-NROTC students require cons. of dept. ch.

**NASC 1022. Sea Power and Maritime Affairs. 3 cr. hrs.**
Influence of U.S. Sea Power and Maritime Affairs on international economic and political relationships. Classroom discussions based on independent reading. Non-NROTC students require cons. of dept. ch.

**NASC 2151. Navigation and Naval Operations 1. 3 cr. hrs.**

**NASC 2185. Leadership and Management. 3 cr. hrs.**
Stress on experiential approach to leadership and management with military emphasis. Motivation and communication theory and practice. Group dynamics and decision making techniques. Lines of control and organizational structure. Case studies, experiential exercises and situational problems will be used. Prereq: Non-NROTC students require cons. of dept. ch.

**NASC 3142. Naval Ship Systems 1. 3 cr. hrs.**
Ship design, construction, types and missions. Ship compartmentalization, interior communications, propulsion, auxiliary power and ship control systems. Elements of ship design for safe operation. Ship stability characteristics. Prereq: Non-NROTC students require cons. of dept. ch.

**NASC 3161. Evolution of the Art of War. 3 cr. hrs.**
Military principles and concepts throughout history. Tactical and strategic applications in selected engagements. Prereq: Non-NROTC students require cons. of dept. ch.
NASC 3162. Naval Ship Systems 2. 3 cr. hrs.

NASC 3181. Amphibious Warfare. 3 cr. hrs.
Application of amphibious doctrine to battles throughout history. Prereq: Non-NROTC students require cons. of dept. ch.

NASC 3964. Practicum in U.S. Marine Corps Leadership and Management. 4 cr. hrs.
Provides instruction and practical application of leadership and management techniques used in the Marine Corps and Naval Service. The course is held at the Officer Candidate School at Quantico, Virginia. S/U grade assessment. Prereq: Jr. stndg. in USMC option.

NASC 4152. Navigation and Naval Operations 2. 3 cr. hrs.

NASC 4186. Leadership and Core-Value-Based Decision-Making. 3 cr. hrs.
Application of techniques and theories learned in NASC 1185. Practical application of sound leadership and ethics to Navy situations. Investigation of levels of ethical decision-making: legal, constitutional, utilitarian, divine. Examination of role of honor, courage and commitment in leadership. Prereq: NASC 2185. Non-NROTC students require cons. of dept. ch.

NASC 4995. Independent Study in Naval Sciences. 1-3 cr. hrs.
Independent study of special topics in Military Science under faculty supervision. Topics selected by student/faculty conference. Prereq: cons. of dept. ch.
Social and Cultural Sciences

Chairperson: Jane D. Peterson, Ph.D.

Department of Social and Cultural Sciences website

The Department of Social and Cultural Sciences is a multidisciplinary department, offering four social science majors: Anthropology (ANTH), Criminology and Law Studies (CRLS), Sociology (SOCI) and Social Welfare and Justice (SOWJ). A degree in any one or more of our majors equips students with a broad liberal arts perspective as well as specific skills and areas of knowledge about individual and societal behaviors, interactions and processes, values and social institutions and important socio-economic and socio-political issues of the day.

Because the social sciences are so integral to a quality education that prepares you for a fulfilling life, many of the courses we offer are approved for the University Core of Common Studies, which all students are required to take. Also, many of our courses are integral to several interdisciplinary majors and minors that Marquette University offers, such as Family Studies, Africana Studies, International Affairs, Peace Studies and Women’s and Gender Studies.

The department also offers an internship program for any senior in one of the four majors within the department. Moreover, the department offers students the opportunity to expand their educational horizons by pursuing two majors within the department.

Note:

• A maximum of two approved courses within the department may be counted toward the completion of both majors.
• ANTH 4986 Advanced Internship in Anthropology, CRLS 4986 Advanced Internship and Seminar in Criminology and Law Studies, and SOCI 4986 Advanced Internship and Seminar in Sociology may not be counted toward the major or minor in Anthropology, Criminology and Law Studies, or Sociology. SOWJ 4986 Advanced Internship in Social Welfare and Justice may be counted toward the SOWJ major but not the SOWJ minor.
Anthropology

The Anthropology major is designed to give students exposure to the four main fields of anthropology:

1. Cultural Anthropology, which focuses on living cultures and their social relationships.
2. Physical or Biological Anthropology, which is the comparative study of human variation and evolution.
3. Archaeology, which studies the material remains of past cultures.
4. Linguistics, the study of human languages.

Students gain a rich perspective on both the universal threads that bind humans together and the rich tapestry of global cultural diversity. Students with a major in anthropology leave Marquette with great chances of admission to graduate and professional schools. Others pursue careers in education, public health, international business, archaeology, human rights work, historic preservation and more.

Cultural Anthropology and Linguistics Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 2101</td>
<td>Cultural Anthropology</td>
</tr>
<tr>
<td>ANTH 2203</td>
<td>Human Geography</td>
</tr>
<tr>
<td>ANTH 2301</td>
<td>Language and Culture</td>
</tr>
<tr>
<td>ANTH 3100</td>
<td>Urban Anthropology</td>
</tr>
<tr>
<td>ANTH 3101</td>
<td>Economic Anthropology</td>
</tr>
<tr>
<td>ANTH 3312</td>
<td>Anthropology of Religion</td>
</tr>
<tr>
<td>ANTH 3330</td>
<td>Women and Men in Cross-Cultural Perspective</td>
</tr>
<tr>
<td>ANTH 3350</td>
<td>Native Peoples of North America</td>
</tr>
<tr>
<td>ANTH 3360</td>
<td>People and Cultures of the Middle East</td>
</tr>
<tr>
<td>ANTH 4316</td>
<td>Culture Change and Development</td>
</tr>
<tr>
<td>ANTH 4320</td>
<td>Culture, Law and Violence</td>
</tr>
</tbody>
</table>

Physical Anthropology Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 1201</td>
<td>Introduction to Biological Anthropology</td>
</tr>
<tr>
<td>ANTH 2201</td>
<td>Human Evolutionary Process</td>
</tr>
<tr>
<td>ANTH 3153</td>
<td>Demography</td>
</tr>
<tr>
<td>ANTH 4247</td>
<td>Bioarchaeology: Linking Bones and Behavior</td>
</tr>
<tr>
<td>ANTH 4251</td>
<td>Human Osteology and Odontology</td>
</tr>
<tr>
<td>ANTH 4252</td>
<td>Origins of the Human Species</td>
</tr>
<tr>
<td>ANTH 4253</td>
<td>Forensic Anthropology</td>
</tr>
<tr>
<td>ANTH 4255</td>
<td>Sex and Evolution</td>
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</tbody>
</table>

Archaeology Courses:

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<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 2501</td>
<td>Buried Cities and Lost Tribes</td>
</tr>
<tr>
<td>ANTH 3201</td>
<td>Archaeology and Prehistoric Cultures</td>
</tr>
<tr>
<td>ANTH 3242</td>
<td>Prehistory of South America</td>
</tr>
<tr>
<td>ANTH 3250</td>
<td>Prehistory of North America</td>
</tr>
<tr>
<td>ANTH 3543</td>
<td>Archeology of Ancient Egypt</td>
</tr>
<tr>
<td>ANTH 3546</td>
<td>Archaeology in Action: Ethnographic and Experimental Approaches</td>
</tr>
<tr>
<td>ANTH 4144</td>
<td>The Rise of Agriculture</td>
</tr>
<tr>
<td>ANTH 4245</td>
<td>Archaeology of Complex Societies</td>
</tr>
<tr>
<td>ANTH 4964</td>
<td>Archaeological Fieldwork</td>
</tr>
</tbody>
</table>

Note:

- ANTH 4986 Advanced Internship in Anthropology may not be counted toward the major or minor in Anthropology.

Major in Anthropology

The major in anthropology consists of five required courses (15 credit hours) and five elective courses (15 credit hours) for a total of 30 credit hours as listed below. Four of the electives must be upper-division. The major also requires 6 credit hours of social science from one or more of the following programs: Criminology and Law Studies, Economics, Political Science, Psychology, Social Welfare and Justice or Sociology.

Required Courses:
ANTH 1001  Introductory Anthropology 3
ANTH 2101  Cultural Anthropology 3
ANTH 2201  Human Evolutionary Process 3
ANTH 3201  Archaeology and Prehistoric Cultures 3
ANTH 4997  Capstone: Theory and Practice in Anthropology 3
* Elective Courses: Choose five ANTH courses, four of which must be upper division. 15
  Up to two of the following courses may be counted as electives:
  
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOCI 3500</td>
<td>Culture, Health and Illness</td>
</tr>
<tr>
<td>SOWJ 3450</td>
<td>Arabs and Muslims in Global Context</td>
</tr>
<tr>
<td>SOWJ 4700</td>
<td>Global Aid and Humanitarianism</td>
</tr>
</tbody>
</table>

Total Credit Hours 30

Additional Social Science Requirements:

Two courses from one or more of the following areas: CRLS, ECON, POSC, PSYC, SOWJ, SOCI 6

Total Credit Hours 6

Notes:

- *Electives: Up to two of SOCI 3500 Culture, Health and Illness, SOWJ 3450 Arabs and Muslims in Global Context or SOWJ 4700 Global Aid and Humanitarianism can count as electives in the ANTH major.
- Students wishing to complete double majors in ANTH, SOWJ or SOCI must complete the requirements for both majors. Two courses that are accepted by both majors (see the list of approved courses within each major’s bulletin section) may double count for both majors, for a total of 54 credit hours.

Minor in Anthropology

The minor in anthropology consists of 18 credit hours, including one required introductory anthropology course (3 credit hours) and five courses of electives (15 credit hours).

Required Course:

ANTH 1001  Introductory Anthropology 3

*Elective Courses - Choose five of the following 15

<table>
<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>SOCI 3500</td>
<td>Culture, Health and Illness</td>
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<tr>
<td>SOCI 4420</td>
<td>Sociology of Religion</td>
</tr>
<tr>
<td>SOWJ 3450</td>
<td>Arabs and Muslims in Global Context</td>
</tr>
<tr>
<td>SOWJ 4700</td>
<td>Global Aid and Humanitarianism</td>
</tr>
</tbody>
</table>

Total Credit Hours 18

* Electives may be chosen from among all courses designated as ANTH, as well as one of SOCI 3500 Culture, Health and Illness, SOCI 4420 Sociology of Religion, SOWJ 3450 Arabs and Muslims in Global Context or SOWJ 4700 Global Aid and Humanitarianism.

Courses

ANTH 1001. Introductory Anthropology. 3 cr. hrs.
Introduction to human social and cultural variation. Prehistory as reflected in archaeology. Human biological evolution as manifest in paleontology. Human biological variation in the contemporary world.

ANTH 1201. Introduction to Biological Anthropology. 3 cr. hrs.
The evolution of humans and history of evolutionary concepts. Evolutionary process documented in genetic principles, primate behavior, human ancestors and ongoing evolution in the human species.

ANTH 2101. Cultural Anthropology. 3 cr. hrs.
Fundamentals of ethnology, the comparative study of cultures, through a survey of anthropological community studies that represent a variety of world areas. Examines localized responses to universal human challenges such as meeting subsistence needs, resolving conflict, and coping with change. Traditional approaches to ethnographic fieldwork are reviewed as basis for considering innovations in method and theory.

ANTH 2201. Human Evolutionary Process. 3 cr. hrs.
Darwinian models of evolutionary process. Critiques of the Darwinian model with reference to macroevolutionary process in the order Primates and microevolutionary events in the species sapiens.
ANTH 2203. Human Geography. 3 cr. hrs.
Description and world distribution of landscapes with (1) an analysis of past and present interplay among land forms, biota, and human activity; (2) an investigation into the manner in which culture is both restricted and stimulated by different habitats; and (3) a critique of the ecological problems resulting from modifying the landscape. Fulfills geography requirement for social studies teaching certification.

ANTH 2301. Language and Culture. 3 cr. hrs.
The role of language in human life. Comparative linguistic analysis. Interdependence of language and culture.

ANTH 2501. Buried Cities and Lost Tribes. 3 cr. hrs.
Using the tools of scientific inquiry, critical reasoning, and multicultural understanding, surveys a variety of historic and modern misconceptions about past cultures. Includes how to assess claims about the past, using archeological data and interpretative tools; and apply these new standards to gain appreciation for some truly exciting recent archeological discoveries. Prereq: ANTH 1001 or consent of instructor.

ANTH 3100. Urban Anthropology. 3 cr. hrs.
The anthropological analysis of social and cultural institutions in contemporary, pluralistic, industrial based, urban societies. The course emphasizes the contribution made to understanding such societies by use of the traditional analytic techniques developed by anthropologists for studying the institutions of simpler, smaller communities, techniques that complement those used by other social sciences. Recommended: ANTH 1001 or ANTH 2101.

ANTH 3101. Economic Anthropology. 3 cr. hrs.
The distributive aspects of nonliterate societies. Inter-relations of distribution with productive organization, division of labor, etc. Consideration of the problem and strategies of economic development. ANTH 1001 recommended.

ANTH 3153. Demography. 3 cr. hrs.
Methods of analyzing population structure in small-scale societies, including studies of mortality and fertility patterns in bio-social and environmental contexts. Prereq: ANTH 1001.

ANTH 3201. Archaeology and Prehistoric Cultures. 3 cr. hrs.
Development of human cultures from earliest evidence to literate urban societies in Europe, Asia, Africa, and the Americas. Examination of principal influences on prehistoric culture change.

ANTH 3242. Prehistory of South America. 3 cr. hrs.
Primitive and civilized peoples of ancient Middle and South America from Paleo-Indian period to Aztecs, Mayas, and Incas. Development of the great Indian nations and discussion of marginal areas. ANTH 3201 recommended.

ANTH 3250. Prehistory of North America. 3 cr. hrs.
Archaeology of North America, including Mexico, from earliest migrations to European contact; background for historic Indian peoples. Archaeological methods and controversies. ANTH 3201 recommended.

ANTH 3312. Anthropology of Religion. 3 cr. hrs.
Cross-cultural perspective on religion in human societies. Examples from Western and non-Western societies, rituals, healing, revitalization, role of religion.

ANTH 3330. Women and Men in Cross-Cultural Perspective. 3 cr. hrs.
Examination of roles and statuses of men and women, and of ideology of the nature of men and women, in selected societies around the world, including contemporary American society. The effects of political and economic conditions and policy initiatives on men and women.

ANTH 3350. Native Peoples of North America. 3 cr. hrs.
Ethnology of native peoples of North America: culture areas, major cultural patterns, history, and present conditions. Importance of American Indian studies to anthropological theory.

ANTH 3360. People and Cultures of the Middle East. 3 cr. hrs.
This course explores the variety of Middle Eastern cultures with reference to topics of central concern to cultural anthropology: environment, economics, social structure, political systems, religion, and culture change. Nomadic, rural agricultural, and urban groups are discussed. Recommended: ANTH 1001 or ANTH 2101.

ANTH 3543. Archaeology of Ancient Egypt. 3 cr. hrs.
The archeological and historic record is used to provide a survey of ancient Egyptian socio-cultural development. Emphasis is given to the interaction of economic, political and religious forces involved in state formation. The development of religious belief in Egypt is studied through surveys of iconography and an introduction to reading hieroglyphs. ANTH 1001 or cons. of instr.

ANTH 3546. Archaeology in Action: Ethnographic and Experimental Approaches. 3 cr. hrs.
Introduces students to the theories and methods of ethnoarchaeology: how archaeologists understand material culture patterns and cultural content through the study of living groups. Case studies highlight the historical development of the field and the variety of approaches that are used. Recommended: ANTH 3201.

ANTH 3986. Internship in Anthropology. 3 cr. hrs.
Field experience in a community social service agency for the purpose of furthering the student's integration of theory and practice in a professional setting. Placement is for a minimum of 140 hours per semester under the supervision of agency personnel, and includes a weekly seminar with the internship coordinator. S/U grade assessment. Limited enrollment. Prereq: Sr. stndg., ANTH major, and cons. of internship coordinator.
ANTH 4144. The Rise of Agriculture. 3 cr. hrs.
Process and variation in the development of farming and herding societies. Archaeological record pertaining to domestication of plants and animals in North and South America, Near East, Africa, and East Asia. Prereq: ANTH 3201 or cons. of instr.

ANTH 4245. Archaeology of Complex Societies. 3 cr. hrs.
Patterns of processes involved in the development of complex social systems. Archaeological records of state formation and urbanization in Egypt, Mesopotamia, and Mesoamerica. Prereq: ANTH 3201.

ANTH 4247. Bioarchaeology: Linking Bones and Behavior. 3 cr. hrs.
Reconstruct patterns of human behavior from integrated biological data sets. Archaeological evidence drawn from human skeletal, plant, and faunal remains. Address questions of nutrition, pathology, occupation, and mortuary ritual. Prereq: ANTH 3201 or cons. of instr.

ANTH 4251. Human Osteology and Odontology. 3 cr. hrs.
The anatomy of the skeleton and teeth. Methods of analysis of biological dynamics of past populations including reconstruction of population structure and patterns of disease. Prereq: ANTH 2201.

ANTH 4252. Origins of the Human Species. 3 cr. hrs.
The biological past of the species sapiens. The biological legacy of the non-human primate past and the fossils which exemplify the evolutionary trends of our species. Prereq: ANTH 2201.

ANTH 4253. Forensic Anthropology. 3 cr. hrs.
Survey of the applications of human biology in criminalistics, including forensic applications of skeletal analysis, dermatoglyphics, DNA and hair. Studies methods of handling and analyzing these evidentiary materials, as well as the probative value each has in the criminal justice system. Special emphasis on the methods of personal identification. Reviews case studies of mass disasters, human rights abuses and homicides to demonstrate the utility of techniques taught in the course. Prereq: ANTH 1001.

ANTH 4255. Sex and Evolution. 3 cr. hrs.

ANTH 4316. Culture Change and Development. 3 cr. hrs.
Societal changes analyzed from holistic anthropological perspective. Recognizing factors of long-term cultural change; modernization of the West and Third World countries; ecological and social problems related to development in the contemporary world. Recommended: ANTH 1001 and ANTH 2101.

ANTH 4320. Culture, Law and Violence. 3 cr. hrs.
Explores domestic violence, sexual assault and the death penalty in different legal cultures across the globe. Focuses on how different cultures define and respond to violent crime as it relates to family, intimate partner violence and sexual assault. Includes discussion of cultural variations in the death penalty. Prereq: ANTH 1001, CRLS 1001, SOCI 1001, OR SOWJ 1001.

ANTH 4931. Topics in Anthropology. 3 cr. hrs.
Lectures and discussions in an area which, because of its topicality, is not the subject of a regular course. The special topics will be designated in the Schedule of Classes.

ANTH 4964. Archaeological Fieldwork. 3 cr. hrs.
An introduction to methods used in the excavation and analysis of prehistoric sites. Surveying techniques, stratigraphy, analyses of soils and landforms, analytical fundamentals of prehistoric material remains. Summer term offering only. Prereq: ANTH 3201 and SOCI 2060 or equiv.

ANTH 4986. Advanced Internship in Anthropology. 3 cr. hrs.
Continuation of the internship experience (ANTH 3986). Placement is for a minimum of 140 hours per semester of supervised practice at the same agency as the previous semester and includes a weekly seminar with the internship coordinator. Credits earned cannot be counted toward the major. S/U grade assessment. Limited enrollment. Prereq: Sr. stndg., ANTH 3986, and cons. of internship coordinator.

ANTH 4995. Independent Study in Anthropology. 1-3 cr. hrs.
Supervised study of a specific area or topic in anthropology. Prereq: Cons. of dept. ch.

ANTH 4997. Capstone: Theory and Practice in Anthropology. 3 cr. hrs.
Major theoretical concepts and issues of Anthropology from 19th century beginnings to present. An overview of the development of the science with study of key figures and critiques of current work. Prereq: Sr. stndg and twelve hours of course work in Anthropology.

ANTH 4999. Senior Thesis. 1-3 cr. hrs.
For majors in Anthropology. Research project and paper prepared under faculty supervision. Strongly recommended for students planning to enter graduate programs. Prereq: Sr. stndg. and cons. of dept. ch.
Criminology and Law Studies

The Criminology and Law Studies major is designed to provide a broad-based liberal arts education for undergraduates interested in careers in criminal justice and law. The major also provides preparation for professional and graduate study in law, criminology and public administration. Students in other major fields of study interested in expanding their knowledge of the legal system may elect criminology and law studies courses.

Courses in criminology and law studies are taught by faculty from both the Klingler College of Arts and Sciences and criminal justice practitioners.

Note:

• CRLS 4986 Advanced Internship and Seminar in Criminology and Law Studies may not be counted toward the major or minor in Criminology and Law Studies.

Major in Criminology and Law Studies

The major in criminology and law studies consists of seven required courses (21 credit hours) and four elective courses (12 credit hours) for a total of 33 credit hours as listed below. The major also requires 6 credits of social science from one or more of the following programs: Anthropology, Economics, Political Science, Psychology, Social Welfare and Justice or Sociology. Students majoring in CRLS must also pass a course in statistics as noted below.

Required Courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRLS 1001</td>
<td>Introduction to Criminology</td>
<td>3</td>
</tr>
<tr>
<td>CRLS 2500</td>
<td>Criminal Court Process</td>
<td>3</td>
</tr>
<tr>
<td>CRLS 3050</td>
<td>Methods of Criminological Research</td>
<td>3</td>
</tr>
<tr>
<td>or SOCI 3050</td>
<td>Methods of Social Research</td>
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</tr>
<tr>
<td>CRLS 3100</td>
<td>Corrections: Prisons, Probation and Parole</td>
<td>3</td>
</tr>
<tr>
<td>CRLS 3300</td>
<td>Police and Society</td>
<td>3</td>
</tr>
<tr>
<td>or CRLS 3350</td>
<td>Police Organization and Administration</td>
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</tr>
<tr>
<td>CRLS 4400</td>
<td>Criminal Law and Procedure</td>
<td>3</td>
</tr>
<tr>
<td>CRLS 4997</td>
<td>Capstone Seminar in Criminology and Law Studies</td>
<td>3</td>
</tr>
</tbody>
</table>

* Elective Courses: Choose four CRLS courses.

Up to two of the following courses may be counted as electives:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 4320</td>
<td>Culture, Law and Violence</td>
<td></td>
</tr>
<tr>
<td>CLLS 2050</td>
<td>Forensic Science</td>
<td></td>
</tr>
<tr>
<td>SOCI 3600</td>
<td>Deviance and Social Control</td>
<td></td>
</tr>
<tr>
<td>SOCI 4600</td>
<td>The Social Reality of Crime and Justice</td>
<td></td>
</tr>
<tr>
<td>SOCI 4660</td>
<td>Law and Society</td>
<td></td>
</tr>
<tr>
<td>SOWJ 2300</td>
<td>Conflict Resolution and Restorative Justice</td>
<td></td>
</tr>
<tr>
<td>SOWJ 3320</td>
<td>Victim Services and Policies</td>
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</tbody>
</table>

Total Credit Hours: 33

Additional Course Requirements:

Social Science Requirement: Two courses from one or more of the following programs: ANTH, ECON, POSC, PSYC, SOWJ, SOCI

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<td></td>
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<td></td>
</tr>
<tr>
<td>SOWJ 2300</td>
<td>Conflict Resolution and Restorative Justice</td>
<td></td>
</tr>
</tbody>
</table>

Statistics Requirement: SOCI 2060 (or equivalent with consent of department chair). Students double majoring in CRLS and PSYC should take PSYC 2001.

Total Credit Hours: 3-4

Electives: Students must choose four courses. These courses may be chosen from Criminology and Law Studies (CRLS), or up to two courses from CLLS, SOCI or SOWJ courses listed above. If the student chooses SOCI 3050 Methods of Social Research to fulfill the Methods course requirement, then three out of the four electives must be in Criminology and Law Studies.

Notes:

• SOCI 2060 Social Statistics may be used simultaneously to satisfy the University Core of Common Studies requirement in Mathematical Reasoning.
• Students wishing to complete double majors in CRLS and SOWJ or SOCI must complete the requirements for both majors. Two courses that are accepted by both majors (see the list of approved courses within each major's bulletin entry) may double count for both majors, for a total of 54 credit hours.
Minor in Criminology and Law Studies

The minor consists of 18 credit hours, including a required introduction to criminology course (3 credit hours) and five elective CRLS courses (15 credit hours) (with the exception of CRLS 3986 Internship and Seminar in Criminology and Law Studies), or one of the approved non-CRLS courses as listed below.

Required Course:

CRLS 1001  Introduction to Criminology  3

* Elective Courses: Choose five CRLS courses (with exception of CRLS 3986).

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
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<td>SOWJ 3320</td>
<td>Victim Services and Policies</td>
<td></td>
</tr>
</tbody>
</table>

Total Credit Hours  18

Notes:

• Electives may be chosen from all CRLS courses with the exception of CRLS 3986 Internship and Seminar in Criminology and Law Studies.
• One of the non-CRLS courses listed above may count toward the minor.

Courses

CRLS 1001.  Introduction to Criminology.  3 cr. hrs.
Survey of recent trends in crime and delinquency. The nature of and societal reaction to criminal behavior. Personal and social factors in crime causation. Critical analysis of criminological theories as well as the operation of criminal justice agencies.

CRLS 2001.  Introduction to the Law.  3 cr. hrs.
Legal concepts and classifications; legal philosophy, including the sources and nature and functions of law; legal methods; legal research; legal ethics; basic processes and judicial processes and procedures; the court system, state and federal.

CRLS 2100.  Juvenile Delinquency and Juvenile Justice.  3 cr. hrs.

CRLS 2500.  Criminal Court Process.  3 cr. hrs.
Analysis of the criminal court process from its initial stages through post-conviction review. Topics include court structure, the legal actors of the court process, prosecutorial and defense decision-making, bail setting, pleas bargaining, trial operations, and the organization and management of judicial and prosecutorial discretion.

CRLS 2700.  Ethics in Criminal Justice.  3 cr. hrs.
An introduction to prevailing ethical controversies confronting the process and agencies of contemporary criminal justice. Special attention given to concrete ethical issues and dilemmas which are encountered regularly by participants in the major components of the criminal justice system: police, courts, and corrections. Prereq: CRLS 1001.

CRLS 3000.  Criminological Theory.  3 cr. hrs.
Analysis of the nature and consequences of delinquency and crime. Classical and contemporary examinations of criminal behavior. The effects of social interaction, social class, social organization, small groups, and other variables on crime patterns and efforts to cope with crime. Relationship of criminological theory to social policy issues.

CRLS 3050.  Methods of Criminological Research.  3 cr. hrs.
Basic methodological issues in the study of crime, criminals, and the law; principles, purposes, and limits of research; introduction to empirical research design and methods of inquiry, including formulating and testing hypotheses, sampling procedures, data collection techniques, and ethical issues in preparation of research reports. May not be taken for credit by students who have received credit for SOCI 3050. Prereq: CRLS 1001, or SOWJ 1001, or SOCI 1001 and SOCI 2060 or equiv., or cons. of instr.

CRLS 3100.  Corrections: Prisons, Probation and Parole.  3 cr. hrs.
CRLS 3300. Police and Society. 3 cr. hrs.
Social and historical origins of the police; police organization; police culture, roles and careers; police in the legal system, police discretion in practice, police and the community. Prereq: CRLS 1001.

CRLS 3350. Police Organization and Administration. 3 cr. hrs.
Organization and administration of police agencies. Principles of planning, personnel management, line operations, staff and auxiliary services. Organizational models and leadership styles. Internal control and policy formation. Evaluation of effectiveness.

CRLS 3550. Street Gangs and Crime. 3 cr. hrs.
Examination of the history of gangs and an analysis of the current gang culture and the social context in which it operates. Exploration of the criminological theories of gangs as well as community based and legal intervention strategies. Prereq: CRLS 1001; or cons. of instr.

CRLS 3560. Conflict and Terror. 3 cr. hrs.
Historical origins, causes, consequences, major institutional actors, and public policy choices associated with contemporary international and domestic terrorism. Also explored are political, economic, technological, law enforcement, and military based counterterrorism strategies and tactics. Prereq: CRLS 1001; or cons. of instr.

CRLS 3570. Drug Crime and Policy in America. 3 cr. hrs.
Presents a problem-oriented approach to understanding the effects of illegal drugs and drug trafficking on individuals and communities. Explores drug treatment and policies aimed at controlling drug use. Considers the effects of current enforcement strategies on drug use and drug markets and, ultimately, on American society.

CRLS 3600. Victimology. 3 cr. hrs.
Examination of the roles and functions of the victim within the civil and criminal justice systems. An investigation into victim attitudes, beliefs, problems, and needs; theories of victimization; experiences of victims within the legal system; victim assistance programs; and public policy and victimology.

CRLS 3640. Domestic Violence in the United States. 3 cr. hrs.
Focuses on the ways in which race and ethnicity shape definitions of and experiences with domestic violence and how different cultural groups interact with community and legal resources designed to assist victims and perpetrators of domestic violence. Examines the implications this has for policy, practice and justice in society. Prereq: CRLS 1001 or SOWJ 1001 or cons. of instr.

CRLS 3660. Sex Offenses and Offenders. 3 cr. hrs.
Examines the nature of distribution of sex offenses and the various types of sex offenders. Approaches of mental health and criminal justice systems are examined, including an analysis of laws, policies and practices surrounding treatment, management and control of sex offenders. Impact on sex offenders, families and victims will also be addressed. Prereq: CRLS 1001 or consent of instructor.

CRLS 3750. History and Philosophy of Crime and Punishment. 3 cr. hrs.
A study of crime and punishment from both the historical and philosophical perspectives. The course will emphasize the European experiences as a foundation for understanding American developments. Emphasis will be placed on the interdisciplinary aspects of crime and punishment. Prereq: Soph. stndg. and PHIL 1001. Same as HIST 3751 and PHIL 3751.

CRLS 3986. Internship and Seminar in Criminology and Law Studies. 3 cr. hrs.
Field experience in a community social service agency for the purpose of furthering the student's integration of theory and practice in a professional setting. Placement is for a minimum of 140 hours per semester under the supervision of agency personnel, and includes a weekly seminar with the internship coordinator. S/U grade assessment. Limited enrollment. Prereq: Sr. stndg., CRLS major and cons. of internship coordinator.

CRLS 4100. Ultimate Penalties in the Criminal Justice System. 3 cr. hrs.
A critical look at the rationales and history of corporal punishment, capital punishment, and life imprisonment without possibility of parole in order to understand the endurance of these types of sanctions in modern society. The focus will be on the philosophical, legal, social, and political aspects of the punishments. Research on ultimate punishments, such as frequency of use, characteristics of offenses and offenders, will also be presented. In addition, the course will examine the experience of sentenced offenders and their families, and correctional staff in implementing the punishments. Prereq: CRLS 1001.

CRLS 4110. Media Perspectives on Urban Crime. 3 cr. hrs.
Historical overview of how urban crime has been portrayed in the media. Analysis of contemporary media presentations of urban crime, criminals, and the criminal justice system (including police, courts, and the correctional system). Social scientific theory and analysis regarding media portrayals of crime, criminals, and the criminal justice system. Prereq: CRLS 1001.

CRLS 4120. Comparative Justice Systems. 3 cr. hrs.
The nature and character of police, prosecutorial, court, and correctional activity and operations in world legal systems. An examination of common law, civil law, socialist, and Islamic systems of law and social control. Prereq: CRLS 1001.

CRLS 4130. Women, Crime, and Criminal Justice. 3 cr. hrs.
Examination of the roles of women in the criminal justice system. Critical analysis of the relationship of women as offenders, as victims, and as agents of social control. Review of relevant theories and practices and both historical and contemporary issues. Prereq: CRLS 1001.

CRLS 4140. Race, Crime and Punishment. 3 cr. hrs.
Focus on racial differences on offending and violence; racial discrimination in the criminal justice system; and the impact of criminal punishment on racial inequality. Course will cover current and classical research in race, crime and social control and explore their theoretical and empirical dimensions. Prereq: CRLS 1001 or consent of instructor.
CRLS 4150. White Collar Crime. 3 cr. hrs.
Survey of current theoretical, research and public policy issues regarding white-collar crime. Definitions of white-collar crime as well as various
typologies of white-collar crime activity. The nature, extent, and consequences of white-collar crime in the U.S. strategies for combatting white-collar
crime as well as prospects of alternative systems of control, such as civil litigation, will be assessed. Prereq: CRLS 1001.

CRLS 4170. Organized Crime. 3 cr. hrs.
Examination of the political, social, and economic conditions involved in the appearance and expansion of organized crime in the United States.
Descriptions of structures as well as internal and external dynamics, including incentives and penalties employed by criminal groups. Explanation of
investigative techniques and impact of police, courts, and correctional agencies. Prereq: CRLS 1001.

CRLS 4250. Clinical Criminology. 3 cr. hrs.
The theory, research and practice dimensions of clinical criminology, with a focus on sociological, psychiatric, biological, biosocial learning, cognitive,
psychoanalytic theory. Examination of deviant and/or criminal interactions and their consequences. Topics for possible inclusion: substance abusers,
psychopathic and violent offenders, spouse and child abusers, sex offenders, juvenile offenders, female offenders. Orientation to clinical techniques and
therapy as they apply to intervention, decision-making, incarceration and sentencing, and modifications of behavior. Prereq: CRLS 1001.

CRLS 4340. Financial Crime Investigation. 3 cr. hrs.
Introduces current perspectives and procedures used by the financial investigator in detecting and resolving financial crimes. Includes specific study of:
methods of tracing funds, financial record keeping, accounting, interviewing techniques and law and evidence as they relate to financial investigations.
Prereq: CRLS 1001.

CRLS 4400. Criminal Law and Procedure. 3 cr. hrs.
Studies criminal substantive law; constitutional limits and principles of criminal law and liability; defenses to criminal liability; definitions and classification;
criminal procedure of crimes; constitutional limits and protections of criminal procedure. Prereq: CRLS 1001 and CRLS 2500; or cons. of instr.

CRLS 4500. Criminal Investigation. 3 cr. hrs.
Fundamental principles and procedures of criminal investigation. Crime scene search and recording. Collection and preservation of physical evidence.
Prereq: CRLS 1001.

CRLS 4550. Crime Control. 3 cr. hrs.
Contemporary issues in criminal justice and social control. Evaluates the effectiveness of various crime control strategies and explore their social utility
and implications for social stratification. Discusses crucial socio-legal questions and philosophical debates concerning crime control policies. Prereq:
CRLS 1001.

CRLS 4600. Evidence. 3 cr. hrs.
Basic principles of the law of evidence. Presentation of oral and demonstrative evidence in the trial process. The quantum of proof in criminal
proceedings. Prereq: CRLS 1001.

CRLS 4640. Family Violence and Public Intervention. 3 cr. hrs.
Analysis of maltreatment of children, youth, spouses, and seniors within the family. Examination of causes and intervention methods emphasizing the

CRLS 4660. Criminal Violence in America. 3 cr. hrs.
Analysis of violent crime in American society and ways in which the criminal justice system responds to it. Examination of the causes of violent crime,
its prevention, treatment and public policy ramifications. Historical and contemporary understanding of the significance of violence in American culture.
Critical evaluation of methods utilized to deal with violent offenders. Prereq: CRLS 1001.

CRLS 4931. Topics in Criminology and Law. 3 cr. hrs.
Lectures and discussions in an area which, because of its topicality, is not the subject of a regular course. The special topics will be designated in the
Schedule of Classes.

CRLS 4951. MU Led Travel/Study Abroad. 3 cr. hrs.
Course taught in an international setting by Marquette professors and where students earn Marquette credit. Study Abroad expenses apply. Prereq: cons.
of the Office of International Education.

CRLS 4986. Advanced Internship and Seminar in Criminology and Law Studies. 3 cr. hrs.
Continuation of the internship experience (CRLS 3986). Placement is for a minimum of 140 hours per semester of supervised practise at the same
agency as the previous semester and includes a weekly seminar with the internship coordinator. Credits earned cannot be counted toward the major. S/U
grade assessment. Limited enrollment. Prereq: Sr. stndg., CRLS 3986 and cons. of internship coordinator.

CRLS 4995. Independent Study in Criminology and Law Studies. 1-3 cr. hrs.
Readings and research on a particular problem or subject of interest to the student. Prereq: Cons. of instr. and cons. of dept. ch.

CRLS 4997. Capstone Seminar in Criminology and Law Studies. 3 cr. hrs.
Students define and carry out an independent research project drawing on previous coursework and experiences. Project components include
developing a research question, conducting a literature review, and analyzing a body of data. Goal is to engage specific theories, methods, and
concepts of Criminology and Law Studies in a student-centered research project. Prereq: Sr. stndng., CRLS major, CRLS 3050 or SOCI 3050, or cons.
of dept. ch.
Sociology

The sociology major is designed to provide students with the knowledge and experience needed to navigate the many social worlds of peers, family, work and other cultural and institutional settings. Through course work, service learning and opportunities for research and internships, students gain the understanding of and ability to analyze human behavior and contemporary social issues and to evaluate and interpret research findings.

A major in sociology prepares students for professions in such fields as human resources, social services, student services, management, marketing and education, among others. The sociology major also prepares students well for graduate study in sociology or other fields, as well as professional study in social work, law and medical fields.

**Prerequisites:** The department recommends SOCI 1001 Principles of Sociology as the beginning course in Sociology. Most upper-division courses have a recommended prerequisite of SOCI 1001 Principles of Sociology. This means that the instructor teaches the course as if all students enrolled have completed satisfactory work in the prerequisite. Students who have not taken SOCI 1001 Principles of Sociology may enroll in most upper-division courses, but they should be prepared to take full responsibility for independently obtaining an adequate background should they or the instructor feel that it is necessary.

**Note:**

- SOCI 4986 Advanced Internship and Seminar in Sociology may not be counted toward the major or minor in Sociology.

**Major in Sociology**

The major in sociology consists of five required courses (15 credit hours) and five elective courses (15 credit hours) for a total of 30 credit hours as listed below. The major also requires 6 credits of social science from one or more of the following areas: Anthropology, Criminology and Law Studies, Economics, Political Science, Psychology, Social Welfare and Justice.

<table>
<thead>
<tr>
<th>Required Courses</th>
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<tbody>
<tr>
<td>SOCI 1001 Principles of Sociology</td>
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<tr>
<td>SOCI 2060 Social Statistics</td>
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<tr>
<td>SOCI 3000 Sociological Theory</td>
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<th>Methods Course</th>
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<tbody>
<tr>
<td>SOCI 3050 Methods of Social Research</td>
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<tr>
<td>or CRLS 3050 Methods of Criminological Research</td>
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<thead>
<tr>
<th>Capstone Seminar</th>
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</thead>
<tbody>
<tr>
<td>SOCI 4997 Capstone Seminar in Sociology</td>
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</tbody>
</table>

* Elective Courses: Choose five SOCI courses, three of which must be upper-division.

**Up to two of the following courses may be counted as electives:**

- **Anthropology Course:**
  - ANTH 2101 Cultural Anthropology
  - ANTH 2301 Language and Culture
  - ANTH 4320 Culture, Law and Violence

- **Criminology and Law Studies Courses:**
  - CRLS 2100 Juvenile Delinquency and Juvenile Justice
  - CRLS 3000 Criminological Theory
  - CRLS 4130 Women, Crime, and Criminal Justice
  - CRLS 4140 Race, Crime and Punishment
  - CRLS 4640 Family Violence and Public Intervention

- **Social Welfare and Justice Courses:**
  - SOWJ 2150 Immigrants and their Communities
  - SOWJ 2200 Human Behavior in the Social Environment
  - SOWJ 3450 Arabs and Muslims in Global Context
  - SOWJ 4600 Faith-based Activism

**Total Credit Hours**

30

**Additional Social Science Requirements:**

Two courses from one or more of the following programs: ANTH, CRLS, ECON, POSC, PSYC, SOWJ

**Total Credit Hours**

6
Electives: Students must choose five courses, three of which must be upper-division (3000 or above). These courses may be chosen from Sociology (SOCI) or up to two courses from the ANTH, CRLS, or SOWJ courses listed above. If the student chooses CRLS 3050 Methods of Criminological Research to fulfill the Methods Course Requirement, then four out of the five elective courses must be in Sociology.

Notes:

- An elementary course in statistics from another department may substitute for SOCI 2060 Social Statistics with the approval of the department chair, but 30 credit hours in Sociology will still be required.
- SOCI 2060 Social Statistics may be used simultaneously to satisfy the University Core of Common Studies requirement in Mathematical Reasoning.
- SOCI 4997 Capstone Seminar in Sociology will ordinarily be taken in the final year of the major after 21 credit hours in Sociology have been earned.
- Students wishing to complete double majors in SOCI and ANTH, CRLS or SOWJ must complete the requirements for both majors. Two courses that are accepted by both majors (see the list of approved courses within each major's bulletin entry) may double count for both majors, for a total of 54 credit hours.

**Minor in Sociology**

Eighteen credit hours, including SOCI 1001 Principles of Sociology and either SOCI 3000 Sociological Theory or SOCI 3050 Methods of Social Research (preferably both). The remaining four elective courses (12 credit hours) may be chosen from among all courses designated as SOCI, as well as one of the approved non-SOCI courses listed below.

**Required Courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOCI 1001</td>
<td>Principles of Sociology</td>
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</tr>
<tr>
<td>SOCI 3000</td>
<td>Sociological Theory</td>
<td>3</td>
</tr>
<tr>
<td>or SOCI 3050</td>
<td>Methods of Social Research</td>
<td></td>
</tr>
</tbody>
</table>

**Elective Courses: Choose four courses from SOCI**

12 credit hours

**Anthropology Course:**

- ANTH 2101 Cultural Anthropology
- ANTH 2301 Language and Culture
- ANTH 4320 Culture, Law and Violence

**Criminology and Law Studies Courses:**

- CRLS 2100 Juvenile Delinquency and Juvenile Justice
- CRLS 3000 Criminological Theory
- CRLS 3050 Methods of Criminological Research
- CRLS 4130 Women, Crime, and Criminal Justice
- CRLS 4140 Race, Crime and Punishment
- CRLS 4640 Family Violence and Public Intervention

**Social Welfare and Justice Courses:**

- SOWJ 2150 Immigrants and their Communities
- SOWJ 2200 Human Behavior in the Social Environment
- SOWJ 3450 Arabs and Muslims in Global Context
- SOWJ 4600 Faith-based Activism

**Total Credit Hours**

18 credit hours

**Department of Public Instruction Certification - Sociology Minor**

College of Education students pursuing Department of Public Instruction certification, must complete six courses (18 credit hours), including three required courses (9 credit hours) and three elective courses (9 credit hours) in sociology, as listed below.

**Required Courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOCI 1001</td>
<td>Principles of Sociology</td>
<td>3</td>
</tr>
<tr>
<td>SOCI 3000</td>
<td>Sociological Theory</td>
<td>3</td>
</tr>
<tr>
<td>SOCI 3050</td>
<td>Methods of Social Research</td>
<td>3</td>
</tr>
</tbody>
</table>

**Elective Courses: Choose three SOCI courses**

9 credit hours

**Total Credit Hours**

18 credit hours
Courses

SOCI 1001. Principles of Sociology. 3 cr. hrs.
An introductory survey of the discipline including social structures, social institutions, social differentiation and stratification, social power, the processes of human interactions, and methods of sociological investigation.

SOCI 2060. Social Statistics. 3 cr. hrs.
Logic and application of statistical reasoning in social research. Topics may include: descriptive statistics, elements of probability theory, estimation, hypothesis testing, contingency tables, correlation, regression, sampling, questionnaire construction, and measurement. Introduction to the use of the computer in statistical analysis. Credit will not be granted if student receives credit for another elementary statistics course. Prereq: SOCI 1001, SOWJ 1001 or CRLS 1001; or cons. of instr.

SOCI 2200. The Family. 3 cr. hrs.
The structure and function of family types including analysis of marital and parent-child relationships. The relation of the family to other social institutions. Changing patterns of relationships and structure in the family.

SOCI 2480. Sport and Society. 3 cr. hrs.
The symbiotic relationship between sport and society. Topics that will be examined include the connections between sports and social mobility; sports and race; sports and gender; and sports and community identification. The course will show how sports are a pervasive feature of everyday urban life. SOCI 1001 recommended.

SOCI 2500. Self, Language and Social Interaction. 3 cr. hrs.
Perspectives on the individual self in society. The role language and social interaction in the construction of personal identity. The self as process and social object.

SOCI 3000. Sociological Theory. 3 cr. hrs.
Currents of thought about society, social structures and processes. Background and development of key concepts and theories in sociology. Techniques of theory construction and unification. May be taken concurrently or sequentially with SOCI 3050. Prereq: SOCI 1001 or cons. of instr.

SOCI 3050. Methods of Social Research. 3 cr. hrs.
Comparison and critique of the predominant methods of social research. Theoretical foundations, logic and language of science, ethical problems of collecting and reporting research data. Application of methods in research projects. Contribution of alternative methods to theory building, program evaluation, policy formulation, and direction of subsequent research. May not be taken for credit by students who have received credit for CRLS 3050. Prereq: CRLS 1001, or SOWJ 1001, or SOCI 1001 and SOCI 2060 or equiv. or cons. of instr.

SOCI 3200. Social Problems in Urban Society. 3 cr. hrs.
Analysis of selected social problems within the framework of modern American society from the viewpoint of their nature, extent, contributing factors, and programs of prevention and treatment. Concepts and theories related to the analysis of social problems and deviant behavior. SOCI 1001 recommended.

SOCI 3250. Race and Ethnic Relations. 3 cr. hrs.
Social, economic, political, and legal aspects of minority relations. Consideration of several minorities and minority issues such as racial, cultural, ethnic, age and gender. SOCI 1001 recommended.

SOCI 3280. Race and Family. 3 cr. hrs.
Focuses on the family structures and dynamics of major racial and ethnic groups in the United States and/or other societies. Topics considered may include major perspectives on race and family, historical and contemporary family patterns and practices, the diversity of family forms and relationships, social policies affecting race and family, cultural factors affecting race and family, and multiracial families. Recommended: SOCI 1001, SOCI 2200, or ANTH 2101.

SOCI 3300. Sociology of the Life Course. 3 cr. hrs.
The study of socialization, the influence of family, peers, schooling, mass media, and other institutions on human development from infancy through late life. Various sociological perspectives, developmental theories and critiques. Recommended: SOCI 1001.

SOCI 3400. Behavior Patterns of Youth. 3 cr. hrs.
The position of youth in modern society. Origin and implications of the generation gap, status ambiguity and its consequences, dependency and independence, the pursuit of identity, conformity and rebellion, the youth culture. SOCI 1001 recommended.

SOCI 3500. Culture, Health and Illness. 3 cr. hrs.
Social and cultural factors in the disease process, the distribution of disease, the meaning of health, the response to illness, and approaches to healing. Structure and operation of health-related professions and facilities. Current trends in medicine. Value conflicts. Recommended: SOCI 1001, ANTH 1001, or ANTH 2101.

SOCI 3520. Health Care Systems. 3 cr. hrs.
SOCI 3550. Race, Gender and Medicine. 3 cr. hrs.
Historical overview of medical ideas regarding race and gender. Examination of medical and scientific models of mind, body, race, and gender, and their implications for health assessment, medical treatment, and health care policy. Consideration of social, cultural, and political dimensions of medicine in relation to race and gender. SOCI 1001, ANTH 1001, or ANTH 2101 recommended.

SOCI 3570. Men, Masculinities and Health. 3 cr. hrs.
Explores the social and psychological constructions of men's gender identities at various stages during the lifecourse and how those identity constructions are intertwined with health outcomes. SOCI 1001 recommended.

SOCI 3600. Deviance and Social Control. 3 cr. hrs.
Sociological analysis of deviance and society's response to it. Issues in defining and identifying deviance, the emergence of deviant behavior and identity, informal and formal reactions to deviance, and organizational and institutional efforts to remedy and control it. Topics may include crime, delinquency, and mental illness. SOCI 1001 recommended.

SOCI 3700. Social Movements. 3 cr. hrs.
Examines collective action and social movements, explores the interactions between individuals and social and cultural changes, the strategies, tactics and goals of collective action and social movements, and how institutional, governmental and cultural resources are used. Social movements covered may include: civil rights, women's rights, lesbian/gay rights, labor movements and AIDS movement. Prereq: SOCI 1001 recommended.

SOCI 3720. Environment and Society. 3 cr. hrs.
Examines environmental challenges to modern civilizations: overuse of natural resources to support and absorb the consequences of human activities. Focuses on human abilities to cope with these challenges by exploring features of human action, culture, economic structure, organizational forms, and values, such as sustainability. Prereq: SOCI 1001 recommended.

SOCI 3750. Food, Water and Society. 3 cr. hrs.
Explores individual and sociocultural meanings of, and relationships to, food and water. Examines national and international inequalities and policies regarding access to food and water from multiple perspectives. Topics may include: social movements, food taboos, food insecurity, food aid, potable water shortages, and cooperation and conflict over water. Prereq: SOCI 1001 recommended.

SOCI 3791. Topics in Sociological Theory. 3 cr. hrs.
Late 20th century intellectual issues, efforts and achievements which have contributed substantially to current sociological theory. May be taken twice, provided the topics differ. The specific topic of each offering will be designated in the Schedule of Classes. SOCI 1001 recommended.

SOCI 3966. Internship and Seminar in Sociology. 3 cr. hrs.
Field experience in a community social service agency for the purpose of furthering the student's integration of theory and practice in a professional setting. Placement is for a minimum of 140 hours per semester under the supervision of agency personnel and includes a weekly seminar with the internship coordinator. S/U grade assessment. Prereq: Sr. stdg., SOCI major, cons. of internship coordinator. Limited enrollment.

SOCI 4050. Urban Ethnography: The City as Laboratory. 3 cr. hrs.
Explores urban processes and institutions "from the inside." Initially focuses on the study of various ethnographies. Next, requires "hands-on" research, involving: observing human interaction, preparing field notes, conducting focused interviews, analyzing the collected data, and preparing a data-based research paper. SOCI 1001 recommended.

SOCI 4100. Urban Life. 3 cr. hrs.
Social psychological aspects of urban life and experience. Implications of urbanization for individuals and groups. Ecological, cultural, and institutional influences. Interpersonal and intergroup relations in urban settings. Topics may include conflict, alienation, diversity. SOCI 1001 recommended.

SOCI 4130. Sociology of Human Values. 3 cr. hrs.
Definitions of values in economics, linguistics, communication and sociology. The value system of selected sociologists. Values and sociocultural pluralism. SOCI 1001 recommended.

SOCI 4200. Personal Troubles and Public Issues. 3 cr. hrs.
Deals with the social realities of troubles, which range from circumstances that we treat as irksome to major traumas in our lives that become social problems. Focuses on the commonalities shared by these various social constructions. Draws from a variety of disciplines, notably sociology, social work, anthropology, history, psychology, linguistics and rhetorical studies. SOCI 1001 recommended.

SOCI 4250. African-American Social Thought. 3 cr. hrs.
Examination of historical and contemporary writings of Black social theorists. The impact of historical, social, economic, and cultural factors on Blacks in the United States and alternative strategies for change. SOCI 1001 recommended.

SOCI 4270. Urban Sociology. 3 cr. hrs.
Urban society with special consideration of the problems of dealing with the structures, institutions, agencies and decision-making units in a metropolitan area. SOCI 1001 recommended.

SOCI 4300. Sociology of Aging. 3 cr. hrs.
The place of the aged in contemporary society. Disengagement and the social integration of older persons. Roles linking older persons to society and roles in hospitals, nursing homes and homes for the aged. SOCI 1001 recommended.

SOCI 4400. Social Inequality. 3 cr. hrs.
Theories and systems of social class in modern society. Societal structures and processes resulting from stratification phenomena. SOCI 1001 recommended.
SOCI 4420. Sociology of Religion. 3 cr. hrs.
The sociological study of religious groups, institutions and behavior, including relationships between religion and other areas of social life. Recommended: SOCI 1001.

SOCI 4440. Sociology of Education. 3 cr. hrs.
Sociological analysis of educational institutions with primary emphasis on contemporary U.S. urban education, student subcultures, school-community relations and innovations. Recommended: SOCI 1001.

SOCI 4450. Sociology of Sex and Gender. 3 cr. hrs.
Biological and cultural bases of sex and gender patterns. Impact of major social institutions and processes on maintenance of gender patterns, with questions of power and dominance central to discussion. Benefits and costs of stereotypic gender patterns. Mechanisms and alternative directions for change. Historical and cross-cultural research included. SOCI 1001 recommended.

SOCI 4460. Sociology of Work and Occupations. 3 cr. hrs.
The diverse ways in which human beings make their livings in both industrialized and nonindustrialized societies. Career patterns and work problems. Theories about work and workers. Proposals for improving the quality of modern work. SOCI 1001 recommended.

SOCI 4480. Complex Organizations. 3 cr. hrs.
Theories and research on the sociology of organization. The social functions, structures and processes of formal and informal organizational systems in modern society and their relationships to social behavior. The nature and place of bureaucracies in complex societies. SOCI 1001 recommended.

SOCI 4600. The Social Reality of Crime and Justice. 3 cr. hrs.
A critical examination of the ways in which crime is defined, how crime control policies are established, and how the criminal justice system responds to the problem of crime. Specific attention will be given to the social and political context in which crime is talked about and responded to. Alternative approaches to crime control, such as peacemaking criminology and restorative justice, will be examined. Recommended: SOCI 1001.

SOCI 4660. Law and Society. 3 cr. hrs.
The social components of legal organizations and procedural systems. The role of law as an instrument of social control and social change. SOCI 1001 recommended.

SOCI 4680. Sociology of Mental Illness. 3 cr. hrs.
Review of major sociological and social psychological models of madness. Analysis of definitions and responses to mental illness. Study of the social processing involved in the production, recognition and treatment of mental illness. SOCI 1001 recommended.

SOCI 4700. Political Sociology. 3 cr. hrs.
The interrelationship of politics and society. Special consideration of leadership analysis, party systems, public opinion, electoral behavior and conflict situations. SOCI 1001 recommended.

SOCI 4720. Sociology of Community. 3 cr. hrs.
Discussion of contemporary problems of rural, urban and suburban communities including ecological and communication patterns, problems of identity, organization and motivation. SOCI 1001 recommended.

SOCI 4730. Capitalism and Society. 3 cr. hrs.
Explores the relationship between capitalism and society. Examines the ways in which capitalism is an engine for freedom, prosperity and efficiency and a source of exploitation and inequality. Topics may include: the role of capitalism in the environment, the health care system, economic inequality and government. Prereq: SOCI 1001 recommended.

SOCI 4740. Social Change. 3 cr. hrs.
Selected topics dealing with models and theories of innovation, diffusion, resistance to change and associated conflict in and between social systems. Contents vary; subtitles indicate precise contents. SOCI 1001 recommended.

SOCI 4931. Topics in Sociology. 3 cr. hrs.
Lectures and discussions in an area which, because of its topicality, is not the subject of a regular course. Specific topics will be designated in the Schedule of Classes.

SOCI 4951. MU Led Travel/Study Abroad. 3 cr. hrs.
Course taught in an international setting by Marquette professors and where students earn Marquette credit. Study Abroad expenses apply. Prereq: cons. of the Office of International Education.

SOCI 4966. Advanced Internship and Seminar in Sociology. 3 cr. hrs.
Continuation of the internship experience (SOCI 3986). Placement is for a minimum of 140 hours per semester of supervised practice at the same agency as the previous semester and includes a weekly seminar with the internship coordinator. Credits earned cannot be counted toward the major. S/U grade assessment. Prereq: Sr. stndg., SOCI 3986 and cons. of internship coordinator. Limited enrollment.

SOCI 4995. Independent Study in Sociology. 1-3 cr. hrs.
Supervised study in a specific area of Sociology. Prereq: Cons. of dept. ch. and twelve hours of Sociology courses with a GPA of 2.500.

SOCI 4997. Capstone Seminar in Sociology. 3 cr. hrs.
An in-depth consideration of sociological perspectives and concepts and how they may be used to analyze contemporary society and social relationships. Basic sociological theories, methods, and concepts are discussed and used to evaluate contemporary sociological concerns and issues. Supervised and individualized research-writing projects involving a sociological area of each student's choice. Prereq: SOCI major and 21 hours of sociology; or cons. of dept. ch.
SOCI 4999. Senior Thesis. 1-3 cr. hrs.
Sociology majors with a GPA of 3.000 or higher may write a thesis under direction of an adviser. Prereq: Sr. stndg., SOCI 3000, SOCI 3050, and cons. of dept. ch.
# Social Welfare and Justice

The Social Welfare and Justice major is designed to provide students with the knowledge and experience needed to pursue successful careers in social service, social policy analysis, mediation and intervention, and social justice advocacy. Through course work, service learning, and internships, students gain understanding of the complexities of a range of social welfare and justice issues and learn the analytic and practical skills needed to develop, evaluate, and transform social welfare and justice policies and services. Students gain competency in the roles, ethics, and values of the social work profession and in the core issue of global human needs and social development. Graduates have the knowledge base to work with culturally diverse groups and understand how social justice issues affect particular communities in specific ways.

The major is flexible, allowing students to pursue their specific interests as they develop skills in service, advocacy, and social change that form them as potential leaders in generating positive social justice outcomes. The major also prepares students well for graduate study in social work, law, education, health care, public policy analysis, nonprofit management, social service administration, student affairs and conflict resolution.

Students may be able to apply some SOWJ course credits toward a Master's in Social Work degree.

**Note:**

- SOWJ 4986 Advanced Internship in Social Welfare and Justice may be counted toward the SOWJ major but not the SOWJ minor.

## Major in Social Welfare and Justice

The major in social welfare and justice consists of a total of 30 credit hours: six required courses (18 credit hours) and four elective courses (12 credit hours) in SOWJ or from the list of approved elective courses listed below in ANTH, CRLS and SOCI. The major also requires 6 credits of social science from one or more of the following programs: Anthropology, Criminology and Law Studies, Economics, Political Science, Psychology, Sociology. Students majoring in SOWJ must also pass a course in statistics as noted below.

### Required Courses:

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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>SOWJ 1001</td>
<td>Introduction to Social Welfare and Justice</td>
<td>3</td>
</tr>
<tr>
<td>SOWJ 2200</td>
<td>Human Behavior in the Social Environment</td>
<td>3</td>
</tr>
<tr>
<td>SOWJ 3001</td>
<td>Social Welfare Policy and Programs</td>
<td>3</td>
</tr>
<tr>
<td>SOWJ 3300</td>
<td>Practice Skills with Individuals, Families and Groups</td>
<td>3</td>
</tr>
<tr>
<td>SOWJ 3986</td>
<td>Internship in Social Welfare and Justice</td>
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### Methods Course:

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<tr>
<td>SOCI 3050</td>
<td>Methods of Social Research</td>
<td>3</td>
</tr>
<tr>
<td>or CRLS 3050</td>
<td>Methods of Criminological Research</td>
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* Elective Courses - Choose four courses from the following: 12

### Social Welfare and Justice - All SOWJ courses - OR

#### Anthropology Courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tr>
<td>ANTH 3330</td>
<td>Women and Men in Cross-Cultural Perspective</td>
</tr>
<tr>
<td>ANTH 4316</td>
<td>Culture Change and Development</td>
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<tr>
<td>ANTH 4320</td>
<td>Culture, Law and Violence</td>
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#### Criminology and Law Studies Courses:

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<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>CRLS 2100</td>
<td>Juvenile Delinquency and Juvenile Justice</td>
</tr>
<tr>
<td>CRLS 3100</td>
<td>Corrections: Prisons, Probation and Parole</td>
</tr>
<tr>
<td>CRLS 3600</td>
<td>Victimology</td>
</tr>
<tr>
<td>CRLS 3640</td>
<td>Domestic Violence in the United States</td>
</tr>
<tr>
<td>CRLS 4130</td>
<td>Women, Crime, and Criminal Justice</td>
</tr>
<tr>
<td>CRLS 4140</td>
<td>Race, Crime and Punishment</td>
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<tr>
<td>CRLS 4640</td>
<td>Family Violence and Public Intervention</td>
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<tr>
<td>CRLS 4660</td>
<td>Criminal Violence in America</td>
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#### Sociology Courses:

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<tr>
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<tbody>
<tr>
<td>SOCI 2200</td>
<td>The Family</td>
</tr>
<tr>
<td>SOCI 2500</td>
<td>Self, Language and Social Interaction</td>
</tr>
<tr>
<td>SOCI 3200</td>
<td>Social Problems in Urban Society</td>
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<tr>
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<td>SOCI 3280</td>
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<td>Sociology of the Life Course</td>
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<tr>
<td>SOCI 3400</td>
<td>Behavior Patterns of Youth</td>
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</table>
SOCI 3500 Culture, Health and Illness
SOCI 3720 Environment and Society
SOCI 3750 Food, Water and Society
SOCI 4050 Urban Ethnography: The City as Laboratory
SOCI 4200 Personal Troubles and Public Issues
SOCI 4250 African-American Social Thought
SOCI 4300 Sociology of Aging
SOCI 4400 Social Inequality
SOCI 4450 Sociology of Sex and Gender
SOCI 4730 Capitalism and Society

Total Credit Hours 30

Additional Course Requirements:

Social Science Requirement: Two courses from one or more of the following programs: ANTH, CRLS, ECON, POSC, PSYC, SOCI 6
Statistics Requirement: SOCI 2060 (or equivalent with consent of Department Chair) Students double majoring in SOWJ and PSYC should take PSYC 2001. 3-4

Total Credit Hours 9-10

*Elective Courses: All courses designated as SOWJ classes, courses listed above under ANTH, CRLS and SOCI, as well as any departmental topics course approved by the department chair.

Notes:

• Students also majoring in psychology may complete PSYC 2050 Research Methods and Designs in Psychology in place of SOCI 3050 Methods of Social Research or CRLS 3050 Methods of Criminological Research.
• SOCI 2060 Social Statistics may be used simultaneously to satisfy the University Core of Common Studies requirement in Mathematical Reasoning.
• Students wishing to complete double majors in SOWJ and ANTH, CRLS or SOCI must complete the requirements for both majors. Two courses that are accepted by both majors (see the list of approved courses within each major’s bulletin entry) may double count for both majors, for a total of 54 credit hours.

Minor in Social Welfare and Justice

The minor in social welfare and justice consists of six courses (18 credit hours), including three required courses (9 credit hours) and three elective courses (9 credit hours), as listed below.

Required Courses:
SOWJ 1001 Introduction to Social Welfare and Justice 3
SOWJ 3001 Social Welfare Policy and Programs 3
SOWJ 3300 Practice Skills with Individuals, Families and Groups 3

Elective Courses: Choose three courses from SOWJ or from those listed below: 9

Anthropology Courses:
ANTH 3330 Women and Men in Cross-Cultural Perspective
ANTH 4316 Culture Change and Development
ANTH 4320 Culture, Law and Violence

Criminology and Law Studies Courses:
CRLS 2100 Juvenile Delinquency and Juvenile Justice
CRLS 3100 Corrections: Prisons, Probation and Parole
CRLS 3600 Victimology
CRLS 3640 Domestic Violence in the United States
CRLS 4130 Women, Crime, and Criminal Justice
CRLS 4140 Race, Crime and Punishment
CRLS 4640 Family Violence and Public Intervention
CRLS 4660 Criminal Violence in America

Sociology Courses:
SOCI 2200 The Family
SOCI 2500 Self, Language and Social Interaction
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<tbody>
<tr>
<td>SOCI 3200</td>
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<td>Sociology of Aging</td>
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<td>SOCI 4450</td>
<td>Sociology of Sex and Gender</td>
</tr>
<tr>
<td>SOCI 4730</td>
<td>Capitalism and Society</td>
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</tbody>
</table>

**Total Credit Hours**: 18

**Notes:**

- Elective courses may be chosen from among all courses designated as SOWJ, plus any course from the above list of Anthropology (ANTH), Criminology and Law Studies (CRLS) and Sociology (SOCI) courses.
- Any departmental topics course may be used as an elective with the prior approval of the department chair.

**Courses**

**SOWJ 1001. Introduction to Social Welfare and Justice. 3 cr. hrs.**
Introduction to social work, social welfare and social justice; explores the ethics, values and goals of social welfare and justice. Examines historic, contemporary and global social issues and social change practices. Service Learning links the experiential to the theoretical.

**SOWJ 2150. Immigrants and their Communities. 3 cr. hrs.**
An in-depth examination of historic and contemporary immigration to the U.S., especially in relationship to the American economy, ideas about race and cultural pluralism. The effects of immigration law and social policies on the socio-economic mobility and well being of immigrant families are examined. The oral history method is used to capture immigrant experience.

**SOWJ 2200. Human Behavior in the Social Environment. 3 cr. hrs.**
Provides foundation in the study of human behavior based on content and concepts used by social workers as helping professionals, theories and research from social science and life experience. Includes biological, psychological and social changes of individuals across the life span, and how each life course is also shaped by diversity of time, gender, race, ethnicity, social class and other dimensions. Social justice challenges to healthy development, such as the impact of poverty, discrimination and violence, are also examined.

**SOWJ 2300. Conflict Resolution and Restorative Justice. 3 cr. hrs.**
Introduction to conflict resolution and restorative justice, the two major approaches used in Alternative Dispute Resolution. Begins with theory and practice of facilitative mediation for resolving interpersonal and intergroup conflicts. Continues with a focus on restorative justice as a way to heal and restore personal and community relationships rather than through punishment. Students learn primarily through reading key works in the field, lecture with discussion, invited speakers and active learning exercises.

**SOWJ 2600. Community Organizing. 3 cr. hrs.**
Teaches basic leadership and organizing skills. Designed to be interactive and experiential, with role-plays, case studies and self-evaluations. Service Learning is required and implemented through Common Ground, an alliance of organizations seeking to make social change in Greater Milwaukee.

**SOWJ 3001. Social Welfare Policy and Programs. 3 cr. hrs.**
Examination of social welfare policies, the policy making process and appropriate professional roles for human service workers. Discussion how social values and societal priorities affect the formulation, implementation and evaluation of social welfare policies and services through public, private and voluntary sectors. Prereq: SOWJ 1001 or cons. of instr.

**SOWJ 3300. Practice Skills with Individuals, Families and Groups. 3 cr. hrs.**
Introduction to practice skills with individuals, families, groups and communities. Students develop skills in supportive listening, interviewing and establishing and maintaining professional relationships. Specific strategies for working with groups and families are developed. Classroom labs are linked to service learning. Prereq: SOWJ 1001.

**SOWJ 3320. Victim Services and Policies. 3 cr. hrs.**
Explores the history of victim services, the effects of victimization on individuals, families, and communities, the development of policies and the services available to victims within and external to the criminal justice system. Specialized topics may include family violence, workplace violence, public tragedy, violent crime, and white collar crime.
SOWJ 3370. Family Practice. 3 cr. hrs.
Introduction to family practice, primarily examining communication and structural models. Various theories of family intervention. Exploration of the process from initial problem assessment through intervention planning, implementation, evaluation, and termination. Simulations, role play and other classroom exercises help students understand how theories and techniques are applied in practice.

SOWJ 3400. Advocacy and Social Change Theory and Practice. 3 cr. hrs.
Review various theoretical and historical perspectives on injustice and oppression, within the context of social change strategies. Examination of traditional and nontraditional social action strategies, including community organizing/development. Learn agency and legislative advocacy skills with a specific focus on victim advocacy and at-risk populations. Analyze values and ethical perspectives related to social change.

SOWJ 3450. Arabs and Muslims in Global Context. 3 cr. hrs.
Examines the social, economic and political conditions of Arabs and Muslims living in diaspora through four analytic lenses: race, gender, national security and Islamophobia. Subject matter is grounded within globalization trends.

Provides an overview of issues lying at the intersection of the social work and the legal professions. Principles of collaboration between these professions and selected concepts and principles related to the establishment and enforcement of legal and social provisions for the protection of children, adults and the family are emphasized. Presents theoretical knowledge and background material, with opportunities to critically analyze social welfare and legal issues.

SOWJ 3986. Internship in Social Welfare and Justice. 3 cr. hrs.
Field experience in a community social service agency for the purpose of furthering the student's integration of theory and practice in a professional setting. Placement is for a minimum of 140 hours per semester under the supervision of agency personnel, and includes a weekly seminar with the internship coordinator. S/U grade assessment. Limited enrollment. Prereq: Sr. stndg., SOWJ major, and cons. of internship coordinator.

SOWJ 4300. Advanced Practice. 3 cr. hrs.
Students strengthen their skills in interviewing, data collection, problem appraisal, and the development of contracts for planned change. Competence is developed in carrying out contract plans, evaluating results, renegotiating contracts and terminating contracts. Working with families and groups is further examined. Prereq: SOWJ 1001.

SOWJ 4500. Challenges in Social Welfare and Justice. 3 cr. hrs.
An in-depth examination of ethical issues and special challenges that characterize the fields of social work, social welfare and social justice. Explores value dilemmas, stresses and frustrations that may confront professionals in these fields.

SOWJ 4600. Faith-based Activism. 3 cr. hrs.
Analyzes sociologically a range of historic and contemporary faith-based movements through the lens of social movement theory. Examines variations in goals, framing, strategies, mobilization, engagement of symbols and movement cultures as they are recorded in movement literature, oral histories, archives, films and scholarly studies.

SOWJ 4700. Global Aid and Humanitarianism. 3 cr. hrs.
Examines debate over what brings success and failure to global aid and humanitarian work. Begins with a focus on global poverty and debate between macro- and micro-economic solutions. Students then examine the development of the aid industry and international frameworks for humanitarian work, followed by exploration of various successful and failed attempts to deal with global issues, such as natural disasters, war, child welfare and human trafficking.

SOWJ 4931. Topics in Social Welfare and Justice. 3 cr. hrs.
A lecture course on special areas and themes. Specific topics will be designated in the Schedule of Classes.

SOWJ 4951. MU Led Travel/Study Abroad. 3 cr. hrs.
Course taught in an international setting by Marquette professors and where students earn Marquette credit. Study Abroad expenses apply. Prereq: Cons. of the Office of International Education.

SOWJ 4986. Advanced Internship in Social Welfare and Justice. 3 cr. hrs.
Continuation of the internship experience (SOWJ 3986). Placement is for a minimum of 140 hours per semester of supervised practice at the same agency as the previous semester and includes a weekly seminar. S/U grade assessment. Limited enrollment. Prereq: SOWJ 3986 and cons. of internship coordinator.

Supervised study in a specific area of SOWJ, such as in-depth library of field research, or a focused community project. Prereq: Cons. of dept. ch., minimum of 9 hours with a GPA of 2.500 in SOWJ courses.

SOWJ 4999. Senior Thesis. 1-3 cr. hrs.
SOWJ majors with a quality point average of 3.000 or higher may write a thesis under the direction of an adviser. Prereq: Sr. stndg., 3.000 GPA, and cons. of dept. ch.
Theology

Chairperson: Robert L. Masson, Ph.D.
Department of Theology website (http://www.marquette.edu/theology)

Mission

The Department of Theology concentrates on theological studies as distinguished from a purely empirical study of religion and from professional training for the ministry. Theology at Marquette explores faith and what it has to say about the fundamental purpose and meaning of all things, including our own existence. It seeks the deeper unity underlying all reality, its common origin and ultimate purpose.

The Department of Theology aims to help educate undergraduates by bringing them to an understanding of their respective faith commitments and traditions in harmony with their overall intellectual, critical and cultural development. The department also incorporates into Catholic theology an ecumenical dimension which was made normative by the Second Vatican Council, and which is regarded by the department as an essential service to the Church and the world. Theological questions evoke distinctive responses from the various religious perspectives represented in contemporary society. The department respects the various faith traditions of its students and works for mutual understanding among different faiths.

Program Goals

Students are able to take courses in Scripture, the history of Christian thought, Christian doctrine and world religions. They explore the relationship between faith and justice in accordance with the recent General Congregations of the Society of Jesus.

In the undergraduate program students will:

- Demonstrate knowledge of the basic categories of theological reflection: Biblical, historical, systematic and ethical.
- Analyze texts for their theological content according to their particular literary genres and historical contexts.
- Use effective theological methods of research and argumentation.

Theology Curriculum

The University Core of Common Studies (p. 77) (UCCS) theology requirement for graduation is the six-hour sequence of two courses: THEO 1001 Introduction to Theology and any second- or third-level course (THEO 2000 level or THEO 3000 level) approved for inclusion in the UCCS (approved courses are listed in this bulletin). Students may choose as electives additional courses, beyond the requirements of their college, from both the second- and third-level offerings, if they have the proper prerequisites.

The comprehensive educational goal of the theology curriculum is theological literacy at the level legitimately expected of graduates of a Catholic university. Through investigation of various theological sources, this intellectual formation habituates students to approaches, responses and critiques appropriate to the academic discipline of theology, which is “faith seeking understanding.” Three specific objectives guide the theology curriculum. Every course is designed, first, to increase the student’s awareness of the mystery and religious dimensions of human life, particularly as conveyed in the basic narrative outline of salvation history — which characterizes the Christian worldview — from creation to fulfillment in Jesus Christ. This objective takes precedence in the first course, THEO 1001 Introduction to Theology; this first-level course introduces key sources and questions of theology, at the same time that it provides the student with a necessary knowledge base.

While cultivating the student’s growing base of factual knowledge, courses go on to provide the student with training in theological understanding, primarily through the reading and interpreting of significant texts. Second-level courses, with their objective of “Exploring Theological Texts and Interconnections” — especially regarding representations of God, religious community and the human person — are designed to develop the skills required for such understanding. The knowledge and skills garnered in second-level courses are essential background for enabling students to achieve the objectives of the third-level courses.

Third-level courses, by investigating particular theological topics with discipline-specific methods, develop in students the critical habit of seeing into the depth-dimension of reality in light of religious faith and its historical effects on human societies. A wide variety of third-level classes, all building on the first-level and the second-level courses, develop this critical habit in the student. Third-level offerings include interdisciplinary courses to investigate theological questions; courses that focus on a particular person, time period or topic; courses that examine the impact of religion on our daily lives and courses that explore non-Christian religious traditions. As the culmination of the three-course sequence, these courses aim to produce Jesuit university graduates who are able to discern the perennially significant in the complexity and conflicting values of modern life, “men and women for others,” intellectually prepared to “find God in all things.” Building on the achievements of the first-level and second-level courses, third-level courses aim in a special way to encourage students to become responsible citizens, drawn to the intellectual life, knowledgeable about their own religious traditions and appreciative of the religious beliefs and practices of others in the human community.

In all courses, theological issues are introduced and discussed with respect for others in keeping with the Declaration on Religious Liberty of the Second Vatican Council.

Note:
• First Level (lower-division): *Introductory Course* - THEO 1001 Introduction to Theology


• Third Level (upper-division): *Exploring Theological Questions* – THEO 3986; 3000-4999.

**Major in Theology and Religion**

The major in theology and religion consists of 33 credit hours, which includes a required introductory theology course (3 credit hours), one two-course sequence (6 credit hours) in Scripture, one course in each of the four theology areas (12 credit hours), three upper-division theology electives (9 credit hours) and the capstone seminar in theology (3 credit hours), as listed below. All upper division 3000-level courses can be counted towards fulfilling major requirements.

**Required Courses:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>THEO 1001</td>
<td>Introduction to Theology</td>
<td>3</td>
</tr>
</tbody>
</table>

**Scripture Course Sequence - Choose one of the following sequences:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>THEO 2000</td>
<td>Hebrew Scriptures: Old Testament Overview</td>
</tr>
<tr>
<td>&amp; THEO 3110</td>
<td>New Testament Selected Books:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>THEO 2100</td>
<td>New Testament Overview</td>
</tr>
<tr>
<td>&amp; THEO 3010</td>
<td>Hebrew Scriptures/Old Testament Selected Books:</td>
</tr>
</tbody>
</table>

**Historical Theology - Choose one of the following courses:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>THEO 3230</td>
<td>Theology in the Writings of C. S. Lewis</td>
</tr>
<tr>
<td>THEO 3320</td>
<td>The Event and Meaning of Vatican II</td>
</tr>
<tr>
<td>THEO 4130</td>
<td>Religion and American Life</td>
</tr>
<tr>
<td>THEO 4200</td>
<td>Theology in the Early Church</td>
</tr>
<tr>
<td>THEO 4210</td>
<td>History and Theology of the Christian East</td>
</tr>
<tr>
<td>THEO 4220</td>
<td>St. Augustine: The Man and the Theologian</td>
</tr>
<tr>
<td>THEO 4230</td>
<td>Theology in the Middle Ages</td>
</tr>
<tr>
<td>THEO 4240</td>
<td>Theology in the Reformation Era</td>
</tr>
<tr>
<td>THEO 4250</td>
<td>Martin Luther</td>
</tr>
<tr>
<td>THEO 4260</td>
<td>Theology in America</td>
</tr>
<tr>
<td>THEO 4270</td>
<td>American Catholic Life and Thought</td>
</tr>
<tr>
<td>THEO 4290</td>
<td>Studies in Historical Theology</td>
</tr>
</tbody>
</table>

**Systematic Theology - Choose one of the following courses:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>THEO 3320</td>
<td>The Event and Meaning of Vatican II</td>
</tr>
<tr>
<td>THEO 3420</td>
<td>Bridging the Racial Divide</td>
</tr>
<tr>
<td>THEO 3530</td>
<td>Theology and Economics</td>
</tr>
<tr>
<td>THEO 4300</td>
<td>Contemporary Atheism and Theism</td>
</tr>
<tr>
<td>THEO 4310</td>
<td>Theology of the Holy Spirit</td>
</tr>
<tr>
<td>THEO 4320</td>
<td>Jesus the Christ</td>
</tr>
<tr>
<td>THEO 4330</td>
<td>Theology of the Church</td>
</tr>
<tr>
<td>THEO 4340</td>
<td>Sacraments and Christian Life</td>
</tr>
<tr>
<td>THEO 4350</td>
<td>The Eucharist</td>
</tr>
<tr>
<td>THEO 4370</td>
<td>Protestant Thought and Practice</td>
</tr>
<tr>
<td>THEO 4390</td>
<td>Studies in Systematic Theology</td>
</tr>
<tr>
<td>THEO 4430</td>
<td>Religion and Science</td>
</tr>
</tbody>
</table>

**Ethics - Choose one of the following courses:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>THEO 2500</td>
<td>Theology, Violence, and Nonviolence</td>
</tr>
<tr>
<td>THEO 3530</td>
<td>Theology and Economics</td>
</tr>
<tr>
<td>THEO 4400</td>
<td>Christian Faith and Justice</td>
</tr>
<tr>
<td>THEO 4405</td>
<td>Christian Theology in Global Contexts</td>
</tr>
<tr>
<td>THEO 4410</td>
<td>Family, Church, and Society</td>
</tr>
<tr>
<td>THEO 4440</td>
<td>Foundations of Ecological Ethics</td>
</tr>
<tr>
<td>THEO 4450</td>
<td>Medical Ethics</td>
</tr>
<tr>
<td>THEO 4490</td>
<td>Studies in Moral Theology</td>
</tr>
</tbody>
</table>


World Religions - Choose one of the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>THEO 4020</td>
<td>The Bible in the Jewish Community</td>
</tr>
<tr>
<td>THEO 4500</td>
<td>Christ and World Religions: Theology of Interreligious Dialogue</td>
</tr>
<tr>
<td>THEO 4510</td>
<td>Survey of World Religions</td>
</tr>
<tr>
<td>THEO 4520</td>
<td>Jewish Thought and Practice</td>
</tr>
<tr>
<td>THEO 4530</td>
<td>Islam: Faith and Practice</td>
</tr>
<tr>
<td>THEO 4540</td>
<td>Hinduism, Yoga, and Buddhism</td>
</tr>
</tbody>
</table>

Elective Courses - Choose three upper-division theology courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>THEO 4997</td>
<td>Capstone Seminar</td>
</tr>
</tbody>
</table>

Total Credit Hours: 33

Notes:

- Depending on a student’s preparation and educational needs, other courses may be substituted by approval of the departmental adviser, who may also suggest cognate courses in other departments.
- Students preparing for graduate studies in theology are encouraged to begin courses in a necessary classical (Greek/Hebrew/Latin) or modern (French/German) language.

Minor in Theology and Religion

The minor in theology and religion consists of six theology courses (18 credit hours); two of these courses may be lower-division, four courses must be upper-division.

Courses

THEO 1001. Introduction to Theology. 3 cr. hrs.
Key sources and questions of theology as reflection upon the worldview and core narrative found in Christian tradition and scriptures. Includes orientation to the academic study of religion. Background in theology is not presupposed. Prerequisite to all other courses in theology. Thematic focus may vary.

THEO 1001H. Honors Introduction to Theology. 3 cr. hrs.
Key sources and questions of theology as reflection upon the worldview and core narrative found in Christian tradition and scriptures. Includes orientation to the academic study of religion. Background in theology is not presupposed. Prerequisite to all other courses in theology. Thematic focus may vary. Prereq: Admission to Marquette University Honors Program.

Survey of the contents of the Hebrew Bible, its historical contexts and religious ideas. Includes analysis of selected texts from representative sections of the Old Testament and discussion of their various theological visions of God, the human person and the people of God in interrelationship. Prereq: THEO 1001.

Survey of the contents of the Hebrew Bible, its historical contexts and religious ideas. Includes analysis of selected texts from representative sections of the Old Testament and discussion of their various theological visions of God, the human person and the people of God in interrelationship. Prereq: THEO 1001 or THEO 1001H and admission to Marquette University Honors Program.

THEO 2100. New Testament Overview. 3 cr. hrs.

THEO 2100H. Honors New Testament Overview. 3 cr. hrs.
Survey of the contents of the New Testament, its historical contexts and religious ideas. Includes analysis of selected texts from representative sections of the New Testament and discussion of their various theological visions of God, the human person and the people of God in interrelationship. Prereq: THEO 1001 or THEO 1001H and admission to Marquette University Honors Program.

THEO 2200. The Bible Through the Ages. 3 cr. hrs.

THEO 2200H. Honors The Bible Through the Ages. 3 cr. hrs.
Understandings and uses of the Bible in the history of Christianity. Revelation, Faith, Tradition, Scripture. Prereq: THEO 1001 or THEO 1001H and admission to Marquette University Honors Program.

THEO 2210. Great Moments in Christian Theology. 3 cr. hrs.
Trinity, Incarnation and Salvation in the history of Christian thought over a substantial portion of its range. Prereq: THEO 1001.
THEO 2210H. Honors Great Moments in Christian Theology. 3 cr. hrs.
Trinity, Incarnation and Salvation in the history of Christian thought over a substantial portion of its range. Prereq: THEO 1001 or THEO 1001H and admission to Marquette University Honors Program.

THEO 2240. Prayer and Mystical Experience. 3 cr. hrs.
The study of prayer and mystical experience across a variety of historical and cultural contexts. Particular attention paid to the foundational writings of the patristic period, the later Byzantine period, and the medieval West, concluding with a study of selected writings from the post-Reformation period reflecting Protestant, Catholic, and Orthodox approaches to prayer and mystical experience. Addresses questions concerning the definition and character of mystical experience, the interrelation of mystical and dogmatic theology, and the relative character and significance of mystical experience in the principal Christian traditions. Prereq: THEO 1001.

THEO 2250. Spiritual Exercises of St. Ignatius. 3 cr. hrs.
A study of the Spiritual Exercises of St. Ignatius with an eye to discovering the spirituality found therein. Begins with the life of St. Ignatius of Loyola and ends with the famous Jesuit prayer, the Suscipe. Focuses on the introductory notes and the four weeks of the Spiritual Exercises and the special graces of each week. Topics found in the Spiritual Exercises include: the examen, finding God in all things, various methods of prayer and the discernment of spirits. Prereq: THEO 1001.

THEO 2250H. Honors Spiritual Exercises of St. Ignatius. 3 cr. hrs.
A study of the Spiritual Exercises of St. Ignatius with an eye to discovering the spirituality found therein. Begins with the life of St. Ignatius of Loyola and ends with the famous Jesuit prayer, the Suscipe. Focuses on the introductory notes and the four weeks of the Spiritual Exercises and the special graces of each week. Topics found in the Spiritual Exercises include: the examen, finding God in all things, various methods of prayer and the discernment of spirits. Prereq: THEO 1001 or THEO 1001H and admission to Marquette University Honors Program.

THEO 2300. Quests for God, Paths of Revelation. 3 cr. hrs.
The quest for God in human and specifically religious experiences with a focus on Christian belief in God. Grounds for belief; revelation; the nature of God's relationship to the world including issues relevant to modern culture and science. The historical precedents and context for these issues. The dialogue with other religious and atheistic conceptions of ultimate reality. Implications of a community's understanding of God for its way of life. Prereq: THEO 1001.

THEO 2300H. Honors Quests for God, Paths of Revelation. 3 cr. hrs.
The quest for God in human and specifically religious experiences with a focus on Christian belief in God. Grounds for belief; revelation; the nature of God's relationship to the world including issues relevant to modern culture and science. The historical precedents and context for these issues. The dialogue with other religious and atheistic conceptions of ultimate reality. Implications of a community's understanding of God for its way of life. Prereq: THEO 1001 or THEO 1001H and admission to Marquette University Honors Program.

THEO 2310. Explorations in Christian Theology. 3 cr. hrs.
Examination of the meaning and interconnections of some of the central themes in Christian theology (e.g. Jesus Christ, Trinity, Church, Sacraments, Sin and Grace, Revelation). The historical and communal context for understanding these. Implications of these for understanding what it means to be human. Specific topics to be included in the Schedule of Classes. Prereq: THEO 1001.

THEO 2310H. Honors Explorations in Christian Theology. 3 cr. hrs.
Examination of the meaning and interconnections of some of the central themes in Christian theology (e.g. Jesus Christ, Trinity, Church, Sacraments, Sin and Grace, Revelation). The historical and communal context for understanding these. Implications of these for understanding what it means to be human. Specific topics to be included in the Schedule of Classes. Prereq: THEO 1001 or THEO 1001H and admission to Marquette University Honors Program.

THEO 2400. Christian Discipleship. 3 cr. hrs.
The Christian identity of God as a God of Love and Justice. The divine and personal call to the human person to a life of holiness, faith, the virtues, especially justice; the preferential option for the poor; the role of community in the moral and spiritual life of individuals and Christian communities as agents for social change. Prereq: THEO 1001.

THEO 2400H. Honors Christian Discipleship. 3 cr. hrs.
The Christian identity of God as a God of Love and Justice. The divine and personal call to the human person to a life of holiness, faith, the virtues, especially justice; the preferential option for the poor; the role of community in the moral and spiritual life of individuals and Christian communities as agents for social change. Prereq: THEO 1001 or THEO 1001H and admission to Marquette University Honors Program.

THEO 2410. Christian Faith in Cultural Contexts. 3 cr. hrs.
Religious experience and beliefs concerning God, human beings, and faith community as apprehended within a particular historically and culturally situated community or communities (e.g. African-American, Hispanic, Asian, or European). Specific topics to be included in the Schedule of Classes. Prereq: THEO 1001.

THEO 2410H. Honors Christian Faith in Cultural Contexts. 3 cr. hrs.
Religious experience and beliefs concerning God, human beings, and faith community as apprehended within a particular historically and culturally situated community or communities (e.g. African-American, Hispanic, Asian, or European). Specific topics to be included in the Schedule of Classes. Prereq: THEO 1001 or THEO 1001H and admission to Marquette University Honors Program.
THEO 2500. Theology, Violence, and Nonviolence. 3 cr. hrs.
Explores the concepts of peace and nonviolence in the history of Catholicism, other Christian churches, and world religions. Examines the ideas and practices found in the Hebrew scriptures, the New Testament, Gandhi and Hinduism, and Buddhism. Covers topics such as just war, pacifism, nonviolent resistance and their spiritual foundations. Prereq: THEO 1001.

THEO 2500H. Honors Theology, Violence and Nonviolence. 3 cr. hrs.
Explores the concepts of peace and nonviolence in the history of Catholicism, other Christian churches, and world religions. Examines the ideas and practices found in the Hebrew scriptures, the New Testament, Gandhi and Hinduism, and Buddhism. Covers topics such as just war, pacifism, nonviolent resistance and their spiritual foundations. Prereq: THEO 1001 or THEO 1001H and admission to Marquette University Honors Program.

Study of a portion of the Old Testament in depth and with a focus on critical reading skills, as well as central theological questions (God, individual, community). Specific textual content varies by term, with possible focus on the Pentateuch, Prophets, and the other Writings. Prereq: THEO 1001 and Soph. stdnd.

THEO 3010H. Honors Hebrew Scriptures/Old Testament Selected Books. 3 cr. hrs.
Study of a portion of the Old Testament in depth and with a focus on critical reading skills, as well as central theological questions (God, individual, community). Specific textual content varies by term, with possible focus on the Pentateuch, Prophets, and the other Writings. Prereq: THEO 1001 or THEO 1001H; Soph. stdndg. and admission to Marquette University Honors Program.

THEO 3100. A Faith Worth Dying For? Martyrs, Saints and Theology. 3 cr. hrs.
Introduces the world of martyrs and saints and their specific theological context. Raises the questions of religion and violence, religious tolerance and of personal commitment/identity. More than one time period or geographic area will be covered. Taught either from a Jewish, Christian or World Religions-Perspective. Prereq: THEO 1001 and Soph. stdndg.

THEO 3100H. Honors A Faith Worth Dying For? Martyrs, Saints, and Theology. 3 cr. hrs.
Introduces the world of martyrs and saints and their specific theological context. Raises the questions of religion and violence, religious tolerance and of personal commitment/identity. More than one time period or geographic area will be covered. Taught either from a Jewish, Christian or World Religions-Perspective. Prereq: THEO 1001 or THEO 1001H; Soph. stdnd. and admission to Marquette University Honors Program.

Study of a portion of the New Testament in depth and with a focus on critical reading skills, as well as central theological questions (God, individual, church). Specific textual content varies by term, with possible focus on the synoptic gospels, the Johannine literature, or the Pauline letters. Prereq: THEO 1001 and Soph. stdndg.

Study of a portion of the New Testament in depth and with a focus on critical reading skills, as well as central theological questions (God, individual, church). Specific textual content varies by term, with possible focus on the synoptic gospels, the Johannine literature, or the Pauline letters. Prereq: THEO 1001 or THEO 1001H; Soph. stdndg. and admission to Marquette University Honors Program.

THEO 3230. Theology in the Writings of C. S. Lewis. 3 cr. hrs.
A study of the life and work of C. S. Lewis which focuses on theological themes in select writings of C. S. Lewis, including his understanding of God, the human person, and the life of faith as a moral challenge. The readings also bring to light Lewis's notion of "the Tao," by which he brought Christianity into dialogue with other religions and with emerging western secularism. Prereq: THEO 1001 and Soph. stdndg.

THEO 3230H. Honors Theology in the Writings of C.S. Lewis. 3 cr. hrs.
A study of the life and work of C. S. Lewis which focuses on theological themes in select writings of C. S. Lewis, including his understanding of God, the human person, and the life of faith as a moral challenge. The readings also bring to light Lewis's notion of "the Tao," by which he brought Christianity into dialogue with other religions and with emerging western secularism. Prereq: THEO 1001 or THEO 1001H; Soph. stdndg. and admission to Marquette University Honors Program.

THEO 3320. The Event and Meaning of Vatican II. 3 cr. hrs.
Studies the reasons for which this ecumenical council was called, the historical context in which it was celebrated from 1962 until 1965 and the meaning of this council's documents for Christian conceptions of God, the human community, the Church, the world, and the interaction of all of these. Prereq: THEO 1001 and Soph. stdndg.

THEO 3320H. Honors The Event and the Meaning of Vatican II. 3 cr. hrs.
Studies the reasons for which this ecumenical council was called, the historical context in which it was celebrated from 1962 until 1965 and the meaning of this council's documents for Christian conceptions of God, the human community, the Church, the world, and the interaction of all of these. Prereq: THEO 1001 or THEO 1001H; Soph. stdndg. and admission to Marquette University Honors Program.

THEO 3420. Bridging the Racial Divide. 3 cr. hrs.
Examination of racism, ethnic tension, and theology from the perspective of "white privilege" and African American experience in American Christianity. Reflects on the intersection of these areas to discover, on the other hand, to discern how specific theological notions contribute positively or negatively to our understanding of race, ethnic tension and social justice. Prereq: THEO 1001 and Soph. stdndg.
THEO 3420H. Honors Bridging the Racial Divide. 3 cr. hrs.
Examination of racism, ethnic tension, and theology from the perspective of "white privilege" and African American experience in American Christianity. Reflects on the intersection of these areas to discover, on the other hand, to discern how specific theological notions contribute positively or negatively to our understanding of race, ethnic tension and social justice. Prereq: THEO 1001 or THEO 1001H; Soph. stndg. and admission to Marquette University Honors Program.

THEO 3530. Theology and Economics. 3 cr. hrs.
Provides skills for theological evaluation of economic theories and practices, particularly as they bear on the rise and ascendency of the global market. Divided into three sections: 1) A history of economic thought traced from Adam Smith to John Maynard Keynes, with particular attention to their moral theory, underlying philosophy and its relationship to theology; 2) The tradition of economic thought within Christian theology, as a traced drawing on Scripture, tradition and Catholic social teaching; and 3) Contemporary theologians will be examined, who relate the Christian tradition to various economic theories and practices. Prereq: THEO 1001 and Soph. stndg.

THEO 3530H. Honors Theology and Economics. 3 cr. hrs.
Provides skills for theological evaluation of economic theories and practices, particularly as they bear on the rise and ascendency of the global market. Divided into three sections: 1) A history of economic thought traced from Adam Smith to John Maynard Keynes, with particular attention to their moral theory, underlying philosophy and its relationship to theology; 2) The tradition of economic thought within Christian theology, as a traced drawing on Scripture, tradition and Catholic social teaching; and 3) Contemporary theologians will be examined, who relate the Christian tradition to various economic theories and practices. Prereq: THEO 1001 or THEO 1001H; Soph. stndg. and admission to Marquette University Honors Program.

THEO 3986. Internship in Theology. 3 cr. hrs.
Practical learning to provide an intentional experience of pastoral service and leadership in a ministry-related setting. Students will apply the theology, concepts, and skills learned in the classroom by integrating study with pastoral praxis at an approved site and developing competencies in the areas of pastoral theology and ministry. Requires a commitment of a minimum of 10 hours per week at an approved site during the academic term and attendance at a group seminar. Students must have declared a major or a minor in Theology, completed at least 3 courses (9 cr. hrs.) in Theology and have a minimum 3.000 cum. GPA to be eligible. The student must complete an application for the internship. Selection is based on academic credentials, extracurricular experience, and a written essay. May be taken only once. Grade is determined by seminar participation, written work, evaluation of work performance at the student's site, and a final assignment. S/U grade assessment. Limited enrollment. Prereq: Jr. stndg., and consent of instructor.

THEO 4000. Digging the Bible: Archeology and Biblical Studies. 3 cr. hrs.
An exploration of the uses and abuses of archeology relative to the field of biblical studies. Case studies in a historical approach to the intersection of archeology and biblical theology. Prereq: Jr. stndg., THEO 1001, and one second-level theology course.

THEO 4020. The Bible in the Jewish Community. 3 cr. hrs.
The uses of the Bible in Jewish life and practice, in synagogue and in private use. Haggadah and Halakah. Prereq: Jr. stndg., THEO 1001, and one second-level theology course.

THEO 4030. Women in the Bible. 3 cr. hrs.
Status and roles of women in selected biblical texts. Social and historical background with emphasis on narrative technique and theological themes. Prereq: Jr. stndg., THEO 1001, and one second-level theology course.

THEO 4130. Religion and American Life. 3 cr. hrs.
Survey the historical impact of religious belief and institutions on the intellectual, cultural, and public life of the United States. Prereq: Jr. stndg., THEO 1001 and one second-level theology course.

THEO 4190. Studies in Biblical Theology. 3 cr. hrs.

THEO 4200. Theology in the Early Church. 3 cr. hrs.
Basic theological questions and developments during the era of the Church Fathers. Prereq: Jr. stndg., THEO 1001, and one second-level theology course.

THEO 4210. History and Theology of the Christian East. 3 cr. hrs.
The Christian East from its origins, through the conversion of Constantine, to the present-day Eastern Orthodox and Oriental Orthodox Churches. Particular attention to the distinctive theological emphases of the East, as well as to the developments leading to the break in communion between Catholic (and Protestant) West and Orthodox East. Prereq: Jr. stndg., THEO 1001, and one second-level theology course.

THEO 4220. St. Augustine: The Man and the Theologian. 3 cr. hrs.
A study of Augustine's life, writings and thought, with special attention to the Confessions, to his theology of the church and the sacraments, and to his teaching on grace and predestination, against the background of his early philosophical writings. Prereq: Jr. stndg., THEO 1001, and one second-level theology course.

THEO 4230. Theology in the Middle Ages. 3 cr. hrs.
Basic theological questions and developments during the Middle Ages, from the Carolingians to the fourteenth century. Prereq: Jr. stndg., THEO 1001, and one second-level theology course.
THEO 4240. Theology in the Reformation Era. 3 cr. hrs.
Basic theological questions and developments during the late Middle Ages and early Reformation. Current ecumenical issues also addressed. Prereq: Jr. stdng., THEO 1001, and one second-level theology course.

THEO 4250. Martin Luther. 3 cr. hrs.
The thought and world of Luther, with emphasis on Luther in his Catholic context; Luther and the Bible, Augustine, the Radicals, the Pope; Luther's theology of faith and freedom; contextual, theological and ethical. Prereq: Jr. stdng., THEO 1001, and one second-level theology course.

THEO 4260. Theology in America. 3 cr. hrs.
Basic theological questions and developments from Puritanism to the present. Prereq: Jr. stdng., THEO 1001, and one second-level theology course.

THEO 4270. American Catholic Life and Thought. 3 cr. hrs.
Analyzes the development of American Catholic life and thought from the colonial establishment to the present. Investigates in particular how clergymen, theologians, and laypersons came to terms with the difficulties and benefits of being Catholic in the United States. Prereq: Jr. stdng., THEO 1001, and one second-level theology course.

THEO 4290. Studies in Historical Theology. 3 cr. hrs.
Significant figures and themes in the history of religious thought, examined in their historical context and contemporary significance. Topics and periods vary. Prereq: Jr. stdng., THEO 1001, and one second-level theology course.

THEO 4300. Contemporary Atheism and Theism. 3 cr. hrs.
Origins and varieties of contemporary atheism. The existence of God and Christian theistic interpretations. Prereq: Jr. stdng., THEO 1001, and one second-level theology course.

THEO 4310. Theology of the Holy Spirit. 3 cr. hrs.

THEO 4320. Jesus the Christ. 3 cr. hrs.

THEO 4330. Theology of the Church. 3 cr. hrs.
The Church in light of the documents, events, and charism of Vatican II. Contemporary understandings of the Church and its mission in the modern world. Special attention to post-conciliar "communion ecclesiology" and the relation of the local to the universal Church. Prereq: Jr. stdng., THEO 1001, and one second-level theology course.

THEO 4340. Sacraments and Christian Life. 3 cr. hrs.
Theological overview of the major sacramental enactments of the church's life in Christ. The witness of Scripture and Tradition, including the liturgy itself. Ethical and ecumenical dimensions. Prereq: Jr. stdng., THEO 1001, and one second-level theology course.

THEO 4350. The Eucharist. 3 cr. hrs.
Biblical origins and historical evolution of the Eucharist in light of contemporary theology and ritual theory, with special focus on the Roman Rite Catholic post-Vatican II celebration. Prereq: Jr. stdng., THEO 1001, and one second-level theology course.

THEO 4370. Protestant Thought and Practice. 3 cr. hrs.
Major perspectives within the broad spectrum of Protestantism. Examination of the thought of several Protestant theologians. A survey of the unity and diversity of several Protestant denominations and their respective forms of worship. Prereq: Jr. stdng., THEO 1001, and one second-level theology course.

THEO 4390. Studies in Systematic Theology. 3 cr. hrs.
Significant movements and/or major figures in contemporary systematic theology. Their historical antecedents and cultural context. Specific topics to be specified in the Schedule of Classes. Prereq: Jr. stdng., THEO 1001, and one second-level theology course.

THEO 4400. Christian Faith and Justice. 3 cr. hrs.
Classic and recent Christian understandings of justice as interpersonal and societal right-relations. Justice as constitutive aspect of the Gospel; love and justice; Christian responsibility in the face of injustice. Further issues, e.g. sexual and gender ethics, political and economic issues. Prereq: Jr. stdng., THEO 1001, and one second-level theology course.

THEO 4405. Christian Theology in Global Contexts. 3 cr. hrs.
The reception of the Christian gospel in diverse cultures throughout the world. The challenge of inculturation and the requirements of the unity of Christian faith. The meaning of mission and evangelization outside the West. The encounter with indigenous religions. Prereq: Jr. stdng., THEO 1001, and one second-level theology course.

THEO 4410. Family, Church, and Society. 3 cr. hrs.
The interaction of family, church, and society. Contemporary family patterns, their strengths and stresses; the teachings, reflection, and pastoral responses of the Church concerning marriage and family. Ecclesial and societal implications of family as "domestic church." Prereq: Jr. stdng., THEO 1001, and one second-level theology course.
THEO 4430. Religion and Science. 3 cr. hrs.
Theological analysis of the historical relationship between religion and the natural sciences; exploration of models for relating the two disciplines today; reflection on the theological implications of contemporary scientific discoveries and theories. Prereq: Jr. stndg., THEO 1001, and one second-level theology course.

THEO 4440. Foundations of Ecological Ethics. 3 cr. hrs.
Exploration of religious foundations for ecological ethics, with a focus on the Catholic tradition and social teachings; application to contemporary ecological problems. Prereq: Jr. stndg., THEO 1001, and one second-level theology course.

THEO 4450. Medical Ethics. 3 cr. hrs.
Health care practices under moral assessment from within the Christian tradition. Controversial topics facing medicine (issues of the beginning and end of life, assisted reproduction, etc.) as related to Christian moral principles. Prereq: Jr. stndg., THEO 1001, and one second-level theology course.

THEO 4490. Studies in Moral Theology. 3 cr. hrs.
Selected issues in contemporary moral life; selected themes from classical and contemporary writings in moral theology and Christian ethics. Topics vary, as specified in the Schedule of Classes. Prereq: Jr. stndg., THEO 1001, and one second-level theology course.

THEO 4500. Christ and World Religions: Theology of Interreligious Dialogue. 3 cr. hrs.

THEO 4510. Survey of World Religions. 3 cr. hrs.
An overview of the major religious traditions of the world: Hinduism, Buddhism, religions of China and Japan, Judaism, Christianity, and Islam. Prereq: Jr. stndg., THEO 1001, and one second-level theology course.

THEO 4520. Jewish Thought and Practice. 3 cr. hrs.
Meaning of Jewish history. Philosophical and social understanding of the Jewish experience. Ruling ideas, myths, symbols, and rites. Partially funded by the Jewish Chautauqua Society. Prereq: Jr. stndg., THEO 1001, and one second-level theology course.

THEO 4530. Islam: Faith and Practice. 3 cr. hrs.

THEO 4540. Hinduism, Yoga, and Buddhism. 3 cr. hrs.
Religious experience, cultic act, religious organization, theological formulation, as illustrated by two religions of India, Hinduism and Buddhism. Yoga as spiritual discipline. Historical approach. Readings from sacred writings. Prereq: Jr. stndg., THEO 1001, and one second-level theology course.

THEO 4951. MU Led Travel/Study Abroad. 3 cr. hrs.
Course taught in an international setting by Marquette professors and where students earn Marquette credit. Study Abroad expenses apply.

THEO 4995. Independent Study in Theology. 1-3 cr. hrs.
Prereq: Jr. stndg., THEO 1001, one second-level theology course, and cons. of dept. ch.

THEO 4997. Capstone Seminar. 3 cr. hrs.
Exploration of a theological topic involving issues of theological method and interrelatedness of the subdisciplines of biblical, historical, systematic and moral theology. Colloquium paper demonstrating critical analysis in a specific field. Prereq: Sr. stndg., THEO 1001, one second-level theology course, and cons. of dept. ch.
Other Arts and Sciences Courses

Courses

ARSC 1020. Major Concepts in Modern Science 1. 4 cr. hrs.
An interdisciplinary, integrated study of processes and principles of physics and their application to astronomy and earth science. Topics will include: describing motion, energy and momentum, electricity and magnetism, waves, sound and light, reflection and refraction, heat, rocks and minerals, the earth (plate tectonics, land, and water cycles), weather, the solar system, and stellar life cycles. Scientific inquiry as a means of knowledge: major technological contributions to modern societies, stability, information transfer, and emphasizing relevant physical processes in specific environments. The course consists of 3 hrs. of lecture and 2 hrs. of laboratory work. May be counted as Natural Science toward the Arts and Sciences College Curriculum requirements, and for elementary/middle school and middle/secondary teaching certification. Does not count toward major requirements for biological sciences, chemistry, physics, and broad field science for early adolescence/adolescence teacher preparation.

ARSC 1021. Major Concepts in Modern Science 2. 4 cr. hrs.
An interdisciplinary, integrated study of processes and principles of chemistry and biology. Topics will include: describing matter, chemical bonds, chemical reactions, the cell, genetics, evolution and diversity, human biology, and ecosystems. Scientific inquiry as a means of knowledge: major technological contributions to modern societies, stability, information transfer, and evolution of biological systems, emphasizing relevant chemical processes in specific environments. The course consists of 3 hrs. of lecture and 2 hrs. of laboratory work. May be counted as Natural Science toward the Arts and Sciences College Curriculum requirements, and for elementary/middle school and middle/secondary teaching certification. Does not count toward major requirements for biological sciences, chemistry, physics, and broad field science for early adolescence/adolescence teacher preparation.

ARSC 1953. First-Year Seminar: Introduction to Inquiry. 1 cr. hr.
An academic seminar in which students work with a faculty mentor to enhance their critical thinking, reading, and communication skills through weekly small group exploration of ideas, evidence, and argumentation. Course topics vary. Students will also explore college transitional issues. Twelve weeks. S/U grade assessment. Limited to first-year students in the Klingler College of Arts and Sciences.

ARSC 1963. First Year Seminar: Lawyers in American Society. 1 cr. hr.
Academic seminar that introduces students in the Pre-law Scholars program to the legal profession, legal thought and legal education. Primary objective is to provide students with an opportunity to learn about lawyers, the practice of law and to assist them in making decisions about a career in law. S/U grade assessment. Prereq: First year Pre-law Scholar.

Examines the manner, culture, values and identity that shape global and domestic politics in the West Africa region. Emphasis on public policy efforts to promote democracy and advance the overall welfare of the nation. Consists of two weeks of study and travel in West Africa. Travel fees.

ARSC 3370. Arts in a Democratic Society. 3 cr. hrs.
Seminar on the role of the arts in a democratic society. Topics include: government funding of the arts, cultural diversity and national arts policies, artists rights, community interests and public art. Readings of philosophers, culturally diverse writers and political-social scientists. Experiential learning involving site visits to museums, performing arts centers, and libraries in the Washington D.C. area is integrated with readings. Prereq: PHIL 1001 and cons. of prog. dir., Les Aspin Center for Government.

ARSC 3986. Internship. 1-4 cr. hrs.
Practical learning experiences. For example: An internship at the Center for the Study of Bioethics at the Medical College of Wisconsin. Interns are assigned projects in any of the several areas of the Bioethics Center. Areas may be in educational programs, research and investigation, medical ethics committees, publications and resources, and governmental relations. All internships require a commitment of 8-12 hours per week during the term. Selection is based on academic credentials, extra-curricular experience, and a written essay. May be taken only once. Grade is determined by evaluation of work performance and a final written assignment. S/U grade assessment. Prereq: Jr. stndg., 3.000 GPA, and cons. of instr.

ARSC 4931. Topic in Arts and Sciences. 1-3 cr. hrs.
Offered according to availability of faculty, student interest and resources. Prereq: cons. of prog. dir.

ARSC 4953. Seminar In Urban Social Issues. 3 cr. hrs.
The College of Business Administration is dedicated to building self-aware leaders with character. Leadership is the application of knowledge to inspire and influence and accomplish an objective. Knowledge is both curriculum based and non-curriculum based; our curriculum has four levels of learning where we teach our students to analyze, decide, integrate and lead. To solve complex dynamic problems we need to have the quantitative analysis skills to analyze problems and provide data-driven solutions. Those data-driven solutions need to be steeped in critical thinking to provide decisions that are thoughtful and consider all stakeholders. Integration is critical. How decisions become integrated into the fabric of the organization and communicated to all members of the team determines whether the decision is adopted and implemented. The final step is building individuals to lead with humility, fairness and a sense of humor.

“Leadership begins with self-leadership, and self-leadership begins with knowing oneself.” (Chris Lowney, Heroic Leadership, 2003, Chicago: Loyola Press, 2003, p.98.) While the curriculum-based learning provides a conceptual understanding of multifaceted issues, business leaders must be self-aware to lead; self-awareness is cultivated in the many non-curriculum-based student opportunities. To become self-aware it is critically important to seek out opportunities that take you out of your role as a student: be a volunteer to build compassion; spend time abroad to get world perspective; engage a mentor to recognize another’s point of view; enter a case competition to understand team dynamics; among many, many others. Self-aware, experience-based problem solvers require us all to understand how we as individuals impact a decision and how that decision impacts others.

Character is the combination of qualities that distinguishes one individual from another. A Jesuit-based business education is distinctive in how we convey the intellectual and moral qualities of honesty, courage and integrity. Business decisions must not be solely based in the financial viability of an investment – informed decision-makers provide solutions that are socially just and environmentally sustainable as well.

Again, I welcome you to the College of Business Administration and challenge you to take advantage of the many curriculum-based and non-curriculum-based opportunities to become self-aware leaders with character. I look forward to the journey ahead!

Brian D. Till, Ph.D.
Keyes Dean of Business Administration

College Mission Statement

To provide a world class business education defined by our distinctive Jesuit identity shaped through applied learning, collaboration, and leadership development.

Undergraduate Program Description

Undergraduate business education at Marquette University provides students with a world-class business expertise, a variety of personal and professional experiences to raise self-awareness and encourages the development of the highest degree of character and integrity. Those who combine business expertise, self-awareness and character are more insightful and able to solve the complex and ill-defined problems that are evident in today’s economic world. We strive to prepare individuals who understand how a global concern works, can drive results, collaborate with and inspire others, in short who are leaders, not just contributors, in their organizations and communities.

The College of Business Administration emphasizes all three of the aspects of fostering leaders: character, perspective and self-awareness and the knowledge and skills that are fundamental to business expertise. The first is grounded in the liberal and Jesuit traditions of Marquette University and has as its foundation the University Core of Common Studies completed by all of our students. It is built on the premise that an effective business leader needs to have a deep understanding of the religious, cultural, social, political, economic, global, scientific and technical environments in which individuals and organizations exist. This foundation helps our students in two important ways: in developing a sense of character based on their own internal value system and in enabling them to place business decisions in a larger context by understanding the impact of those decisions more broadly on society. It is our firm belief that a liberal education is a necessary part of professional education and our curriculum is structured on this premise.

The College of Business Administration builds on the foundation provided by the University Core of Common Studies. It does this through a college core curriculum that broadens and strengthens the values, knowledge and skills acquired as part of the nine areas of the University Core.

The College of Business Administration extends core experiences and focuses on increasing business expertise and the opportunity to develop specialized skills and knowledge as part of a variety of undergraduate majors and minors. Initially, this portion of the curriculum concentrates on business knowledge required of all College of Business Administration graduates to augment the knowledge and skills acquired in the college core. This part of the curriculum provides each student with an introduction to the various aspects germane to all organizations such as finance, marketing, information technology and supply chain management. It also stresses development of a clear understanding of the dynamics of the firm, the economy, basic managerial and organizational concepts and relationships, the interaction between a firm and its environment and an overall view of strategy and
policy-making within an organization. As students complete this portion of the curriculum they are offered the opportunity to develop specialized skills and knowledge in a variety of undergraduate majors and minors, such as accounting, economics, innovation and entrepreneurship, human resources or international business. We feel this will prepare graduates for entry-level positions where they can provide immediate impact to businesses and other organizations.

Finally, the College of Business Administration provides experiences to help students grow personally and professionally as they discover an awareness of self and others. The curriculum stresses teamwork, communication, collaboration and global and cultural awareness as part of personal and professional skill building that also include quantitative analysis, critical thinking and ethical reasoning. Other opportunities to enhance self-awareness can be found as part of the International Business Program, the Business Career Center workshops and Mentor Program and through various student organization and networking events. The development of the skills and awareness of self helps prepare graduates to understand to be leaders they need to be lifelong learners and to continue to develop in the current era of a rapidly changing business and work environment.

**Student Financial Aid**

While most financial aid is awarded by the Office of Student Financial Aid, very limited scholarship funds are available through the College of Business Administration. Interested students should contact the executive associate dean of the college. A limited number of scholarships may be available to incoming freshmen who attend the College's Open House/Scholarship Exam events in late January or early February. These awards are based on the results of the exam and other academic credentials. Scholarships are also available to prospective sophomores, juniors and seniors with a cumulative GPA of 3.00 or better. Prospective students must complete and submit an application for scholarships in the main office during the latter half of the spring semester to be considered for scholarship funds for the subsequent academic year.
Degrees Offered

Marquette University confers the degree bachelor of science in business administration on those students who have satisfactorily completed one of the regularly prescribed curricula of the College of Business Administration. Students who successfully complete the Comprehensive Honors (p. 47) curriculum may earn a degree of honors bachelor of science in business administration.

The master of business administration, master of science in accounting, master of science in applied economics and master of science in human resources are offered through the Marquette University Graduate School of Management. Details on these programs are contained in the Graduate School of Management Bulletin.
Majors and Minors Overview

Majors

Majors in the College of Business Administration are offered in accounting, business economics, innovation and entrepreneurship, finance, human resource management, marketing, information technology, international business, operations and supply chain management, and real estate; students also may earn a major in general business. Students majoring in any of the majors offered by the College of Business Administration must be resident in that college to complete the major(s) and earn the corresponding degree.

Minors

The college also offers minors to non-business students in business administration, innovation and entrepreneurship, human resources, information technology, marketing and operations and supply chain management.

All undergraduate majors and minors in the college are open to part-time degree students taking day classes. Courses also are available for credit or audit to non-degree students with the proper prerequisites. Part-time students are assigned to academic advisers in the college.
Academic Regulations

Students in the College of Business Administration are expected to comply with the academic requirements and regulations listed in the university section of this bulletin. Amplifications and additions to the university requirements are detailed herein and govern only those students enrolled in the College of Business Administration. Procedures developed to enforce university and college regulations are available for review in the college office.

Academic Load

The academic load of a student is measured by credit hours assigned to each course. The normal business administration program varies from 15 to 19 credit hours per term.

Request for permission to exceed 19 credit hours must be submitted in writing to the assistant dean prior to registration.

Academic Dismissal/Probation/Academic Alert

Academic Dismissal

The College of Business Administration adheres to the University Academic Censure Policy (p. 55).

Academic Probation

In addition, students in academic difficulty are placed on academic probation by the College of Business Administration. Students in the college are expected to maintain a C (2.000) academic average overall and in all College of Business Administration courses. Students who fail to maintain progress necessary to meet university and college graduation requirements are subject to academic censure. A student on academic probation is directed as to what academic outcome she/he is expected to attain in the subsequent semester in order to continue enrollment. Note: Students can also be placed on probation and subject to academic censure for accumulating 15 percent of hours attempted with a grade of F.

College Academic Alert (CAA)

Students admitted to the College of Business Administration are expected to meet college academic standards and maintain good academic standing. Academic performance is monitored carefully by the Committee on Scholastic Actions, and students either not maintaining steady progress or not demonstrating adequate achievement will be barred from future registration by a College Academic Alert (CAA) registration hold.

The bases for committee review are:

- grade point average (GPA) deficiency
- inadequate progress
- grades of CD, D, F, I, W, WA, UW or ADW
- the number of semesters on college probation
- the violation of special conditions

Special conditions may be prescribed in writing at the time of the student’s admission, readmission or transfer into the college. Conditions may also be prescribed in writing in the case of a student whose course performance or failure to follow academic advice warrants such action. All students to whom conditions have been specified will be subject to committee review and possible CAA restriction should they fail to fulfill the specified terms. It is possible that a student be barred from registration for academic reasons even though the student’s cumulative GPA exceeds 2.000. Students concerned about their academic progress should consult the college office.

Students placed on CAA status will be notified by letter or email of the committee’s decision and of the appeal process. If a student’s appeal is denied, the student may request to enroll in another college as outlined in the University Academic Censure Policy (p. 55) in this bulletin, and if accepted, the CAA hold will be removed after admission into the new college.

Unless the CAA is removed via the individual colleges’ appeal process, the student may not register for courses at Marquette and may be dropped from any classes for future terms in which he/she is registered.

Attendance

A student is expected to attend every exercise of the courses in which he or she is registered. Any absence, regardless of the reason, will prevent the student from getting the full benefit of the course and renders a student liable to university censure. Since it is assumed that no college student will be absent from class without reason, this college will not differentiate officially between excused and unexcused absences.

When a student has absences in hours greater than two weeks of class periods, he or she may be dropped without warning, earning a grade of WA, at the request of the instructor or the dean of the college. After the WA grade has been issued, the student may not apply for a grade of W.

All students enrolled in courses taught by the College of Business Administration must conform to the attendance policy in effect in the College of Business Administration even though they are registered through another college or division of the university.
For more information on attendance, refer to the University Attendance Policy (p. 58).

**Background Checks, Drug Testing**

Some degrees, majors and/or courses may require a student to submit to a criminal background check and/or drug testing. The results of those checks and/or tests may affect the student’s eligibility to continue in that degree, major and/or course.

**CD and D Grades**

Courses completed with a grade CD or D are not counted toward the total hour requirement for the major (in the College of Business Administration) but do fulfill the subject matter requirement and do count toward the total hours required for graduation.

Credit is never given twice for the same course, with the exception of different sections of variable topic courses. (Refer to the University Repeat Policy (p. 72).) Students who received the grade of CD or D in a course specific to their major or minor may need to repeat the course.

Accounting students must earn a C or better in ACCO 1030 Principles of Financial Accounting and ACCO 1031 Principles of Managerial Accounting prior to enrolling in ACCO 3001 Intermediate Accounting.

**CR/NC Option**

For enrichment purposes, junior and senior students are given an option to elect one course per term (to a maximum of four courses) for which only a CR or NC grade is assigned. Quality of C or higher achievement must be maintained if a grade of CR is to be assigned.

Eligible courses include only non-business electives, which are not used to satisfy non-business core requirements. Courses for a minor or major cannot be taken under the CR/NC option. No business course may be taken under the CR/NC Option by a business administration student if the student wishes that course to fulfill a graduation requirement for either number of hours or as a required course for the core or major. LEAD, BUAD and internship grading courses are graded using the S and U grades and do not fall within the CR/NC Option.

**Declaration of Major**

Each business student is encouraged to declare a major prior to registration for the junior year. All students should declare their major(s) prior to advising and registration for the senior year. All students must file applications for graduation in the main office one term prior to the term of intended graduation.

**Grade Appeals and Policy Procedures**

The college adheres to University Grade Appeals Policy (p. 65). Any appeal must begin with the instructor who assigned the grade. If a resolution cannot be reached, the department chairperson must be contacted with a written appeal. Information concerning subsequent steps can be obtained from the assistant dean of undergraduate programs or the executive associate dean. To appeal a WA grade, contact the executive associate dean of the College of Business Administration in writing within 5 business days of this notification.

**Graduation**

All graduates are expected to complete the Senior Exit Survey prior to their graduation. All May graduates are required to attend the university and college Commencement ceremonies.

**Independent Study Courses**

The purpose of an independent study business course (4995) is to provide an independent, directed-study experience for the qualified student. To qualify, a student must have attained senior standing, have a minimum 2.500 grade point average overall and a 3.000 grade point average in the major area or topic of which the independent study will be in. Independent study courses are not available for those courses in the same term when the course is being offered. The appropriate use of an independent study course is to allow the further pursuit of topics and issues presented in a course and/or a legitimate course of study for which no regularly scheduled course is presently offered. Obtaining permission and approval for a 4995 is contingent on the approval of the research proposal, the willingness of a specific faculty member to accept the student’s proposal, and that faculty member’s willingness to work with the student for the duration of the course. All 4995 courses must have written approval from the instructor and the department chair. The Independent Study Course approval form is found on the Marquette Central academic forms website. (http://www.marquette.edu/mucentral/registrar/policy_forms.shtml)

**Summer Sessions Study Approval**

Students who plan to study in summer school at another institution must obtain written approval for each course before the summer session actually begins. If prior approval is not obtained, there is no guarantee that credits earned will be accepted by Marquette University. Course approval forms may be obtained from the College of Business Administration website. Students must earn a C grade or better in the course in order to be eligible for transfer credit; only credits transfer, not the grade. It is required that once a student matriculates at Marquette, business courses, finite math and calculus are to be taken at Marquette. Business students studying overseas, upon approval of the international director may allow some business courses to transfer.
Transfer Students (Advanced Standing)

The College of Business Administration accepts credit from both two- and four-year educational institutions based on the University Transfer Policy (p. 20) and an individual evaluation of credits earned using the following criteria:

a. Educational objectives and nature of the institution from which the student transfers credit.

b. Comparability of the nature, content, and level of credit earned to that offered by the college. Courses offered on the lower division at other institutions, but at the upper division at Marquette University, are normally not acceptable. Occasionally, such courses may be validated.

c. Appropriateness and applicability of the credit earned to the programs offered by the college, in the light of the student’s goals and the nature of Marquette’s education. The college will normally not accept highly technical, career oriented courses, physical education courses or courses earned in fulfillment of requirements for a professional license or certification.

d. A C grade or better must be earned in order to be considered for transfer; only credits transfer, not the grade.

e. Upper division business course credits are only accepted from AACSB accredited schools.

Such validation is usually based on the successful completion of advanced courses in a given area and may include written examinations and/or CLEP tests. Discuss validation with the assistant dean of undergraduate programs.
Graduation Requirements

Amount and Quality of Work

1. A minimum total credit hours of 129.

2. A minimum GPA of 2.000 must be earned in all courses taken at Marquette University.

3. A minimum GPA of 2.000 must be earned in all College of Business Administration courses taken at Marquette University (2.500 for accounting majors). A grade of C or higher must be earned in each of a student's major courses including the core courses introducing the major. For international business majors, a grade of C or better must be earned in required language courses beyond either 2002 or 2003.

4. At least one International Business elective must be completed.

5. At least 60 percent of the business credit hours required for the business degree must be taken at Marquette University.

6. On occasion, seniors are required to take a comprehensive examination testing their grasp of the concepts, principles, and relations covered in the core business courses. A similar test might be given in any one of the majors.

7. If a student has 129 or more credits, has an overall GPA of 2.000 or higher, has an overall college GPA of 2.000 or higher (2.500 for accounting majors), but does not achieve a C or better in each of their major courses including the core course introducing the major, the student is conferred a B.S. in Business Administration degree with a major in general business. If the student meets the overall and college minimum GPA and completes enough credits, but while attempting two or more majors, achieves a C or better in all courses for one major but not in another major, the student is conferred a B.S. in Business Administration degree with a major in the former but not the latter.

8. It is the candidate's responsibility to meet all university academic, financial and administrative requirements and procedures as outlined elsewhere in this bulletin, including the University Graduation Policy (p. 68) and the University Commencement Policy (p. 60).
Degree Requirements

University Core of Common Studies and College Curriculum Requirements

Rhetoric (R) 8
- ENGL 1001 Rhetoric and Composition 1 (*)
- ENGL 1002 Rhetoric and Composition 2 (*)
- CMST 2300 Business Communication

Mathematical Reasoning (MR) 7
- MATH 1400 Elements of Calculus
- BUAD 1560 Introduction to Statistics and Business Analytics

All new business students must complete the ALEKS placement exam by a specified date before the start of the term. Based on the exam score, students are recommended to enroll for one of three math courses at Marquette during the fall term. MATH 1390, which will be counted as a non-business elective; MATH 1400, which is the minimum math requirement for all College of Business students, or MATH 1450, which will also meet the math requirement for College of Business students.

Individual and Social Behavior (ISB) 6
- ECON 1103 Principles of Microeconomics
- ECON 1104 Principles of Macroeconomics

Diverse Cultures (DC) 3
- Any approved UCCS DC course

Literature and Performing Arts (LPA) 3
- Any approved English or Foreign Language Literature UCCS LPA course only

Histories of Cultures and Societies (HCS) 3
- Any approved UCCS HCS course

Science and Nature (SN) 3
- Any approved UCCS SN course

Human Nature and Ethics (HNE) 6
- PHIL 1001 Philosophy of Human Nature
- PHIL 2310 Theory of Ethics

Theology (T) 6
- THEO 1001 Introduction to Theology
- One additional approved second-level UCCS T course

Non-Business Electives (NBE) 12-18
- Accounting majors must complete 12 elective credits; all other majors, 18 elective credits.

Students in the Military Science program (AROTC) and Naval Science program (NROTC) may use military and naval science courses to fulfill the NBE electives.

Total Credit Hours 57-63

Note: Business students may NOT double count University Core of Common Studies (UCCS) courses.

Business Curriculum Courses

BUAD 1001 Business Day 1 3
BUAD 1060 Business Applications: Basic Business Analytic Tools 1
LEAD 1050 Business Leadership Professional Development 0
LEAD 2000 Applying Business Leadership Skills 1
LEAD 3000 Strategies for the Future and Dealing in the Business Community 1
ACCO 1030 Principles of Financial Accounting 3
ACCO 1031 Principles of Managerial Accounting 3
ECON 3001 Applied Business Economics (ECON majors must take 3003) 3
or ECON 3003 Intermediate Microeconomic Analysis 3
FINA 3001 Introduction to Financial Management 3
MANA 3001 Behavior and Organization 3
OSCM 3001 Operations and Supply Chain Management 3
MARK 3001 Introduction to Marketing 3
INTE 3001 Introduction to Information Technology (or) 3
ACCO 4050 Accounting Information Systems (ACCO Majors) 3
Select one from the following Ethical and Societal Issues courses: 3
MANA 3002 Business and Its Environment
PHIL 4330 Business Ethics
FINA 4370 Advanced Investment Management, Ethics and Society (AIM and IAIM students only)
FINA 4371 Private Equity, Ethics and Society (AIM and IAIM students only)
MANA 4101 Strategic Management 3
Select one from the following Legal and Regulatory Environment courses: 3
BULA 3001 Legal Environment of Business (ACCO Majors)
BULA 3040 The Legal and Regulatory Environment of International Business
FINA 4310 Introduction to Applied Investment Management (AIM and IAIM students only)
HURE 3001 Management of Human Resources (HURE majors)
REAL 3001 Introduction to Commercial Real Estate (REAL majors)
Total Credit Hours 39

Major Courses
Business degree students also must complete the requirements for one of the following majors: accounting, business economics, entrepreneurship, finance, human resources, information technology, marketing, operations and supply chain management, real estate, or general business. The major in international business is a second major. Double counting of courses for two or more majors is not permitted, e.g. students cannot double count FINA 4001 Advanced Financial Management for both real estate and finance majors.

At least one International Business course within or outside the major field(s) in the College of Business is required.

Typical Four-year Schedule - Non-Accounting

Freshman

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
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<tbody>
<tr>
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<td>MATH 1400</td>
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<td>ECON 1103</td>
<td>3</td>
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<tr>
<td>BUAD 1001 (or UCCS/NBE)</td>
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<td>BUAD 1001 (or UCCS/NBE)</td>
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15 17

Sophomore

<table>
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<tr>
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<th>Hours</th>
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<td>Business Core</td>
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16 16
### Degree Requirements

#### Junior

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<thead>
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<th>Hours</th>
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<th>Hours</th>
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<tbody>
<tr>
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<td>Business Core</td>
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#### Senior

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
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<th>Hours</th>
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<tbody>
<tr>
<td>MANA 4101&lt;sup&gt;a&lt;/sup&gt;</td>
<td>3</td>
<td>MAJOR COURSE/Business Elective</td>
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<td>MAJOR COURSE/Business Elective</td>
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<td>MAJOR COURSE/Business Elective</td>
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<td><strong>Total</strong></td>
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</table>

Total credit hours: 129

### University Core/Non-Business Electives (UCCS/NBE)

- **Literature elective**<sup>b, c</sup> 3
- **Diverse Culture elective**<sup>c</sup> 3
- **History elective**<sup>c</sup> 3
- **Science elective**<sup>c</sup> 3
- PHIL 1001 Philosophy of Human Nature 3
- PHIL 2310 Theory of Ethics<sup>b</sup> 3
- THEO 1001 Introduction to Theology 3
- THEO elective<sup>b, c</sup> 3
- **Non-Business electives (NBE)** 18

### Business Core

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
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<td>Operations and Supply Chain Management&lt;sup&gt;d&lt;/sup&gt;</td>
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<tr>
<td>MARK 3001</td>
<td>Introduction to Marketing&lt;sup&gt;d&lt;/sup&gt;</td>
<td>3</td>
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<tr>
<td>FINA 3001</td>
<td>Introduction to Financial Management&lt;sup&gt;d&lt;/sup&gt;</td>
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</tr>
<tr>
<td>INTE 3001</td>
<td>Introduction to Information Technology&lt;sup&gt;d&lt;/sup&gt;</td>
<td>3</td>
</tr>
<tr>
<td>ECON 3001</td>
<td>Applied Business Economics (non-Econ majors)&lt;sup&gt;d&lt;/sup&gt;</td>
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<tr>
<td>or</td>
<td>ECON 3003 Intermediate Microeconomic Analysis (Econ Majors)&lt;sup&gt;d&lt;/sup&gt;</td>
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<tr>
<td>MANA 3001</td>
<td>Behavior and Organization</td>
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<tr>
<td>Legal Core (select one):</td>
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<tr>
<td>BULA 3040</td>
<td>The Legal and Regulatory Environment of International Business</td>
<td>3</td>
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<tr>
<td>HURE 3001</td>
<td>Management of Human Resources&lt;sup&gt;d&lt;/sup&gt;</td>
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<tr>
<td>REAL 3001</td>
<td>Introduction to Commercial Real Estate&lt;sup&gt;d&lt;/sup&gt;</td>
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<td>FINA 4310</td>
<td>Introduction to Applied Investment Management</td>
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</table>

### Ethical Core (select one):

- 3
### Typical Four-year Schedule - Accounting

#### Freshman

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
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<tbody>
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<td>ACCO 1030</td>
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**Total:** 15 Hours in First Term, 17 Hours in Second Term

#### Sophomore

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<th>Second Term</th>
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<td>ECON 1104</td>
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<tr>
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**Total:** 15 Hours in First Term, 16 Hours in Second Term

#### Junior

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
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<tbody>
<tr>
<td>LEAD 3000(^a)</td>
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<td>LEAD 3000(^a)</td>
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</tbody>
</table>

**Total:** 15 Hours in First Term, 18 Hours in Second Term

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\(^a\) Course may be taken either semester of respective year.

\(^b\) Course has prerequisites

\(^c\) Must select from the Core of Common Studies (http://www.marquette.edu/core-of-common-studies)

\(^d\) Intro course to major; need to check course prerequisites.
## Degree Requirements

### Senior

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MANA 4101(^a)</td>
<td>3</td>
<td>ACCO Elective</td>
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<tr>
<td>ACCO CORE</td>
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<tr>
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<td><strong>Total</strong></td>
<td><strong>18</strong></td>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

Total credit hours: 129

### University Core/Non-Business Electives (UCCS/NBE)

- **Literature elective\(^b,\(^c\)** 3
- **Diverse Culture elective\(^c\)** 3
- **History elective\(^c\)** 3
- **Science elective\(^c\)** 3
- PHIL 1001 Philosophy of Human Nature 3
- PHIL 2310 Theory of Ethics\(^b\) 3
- THEO 1001 Introduction to Theology 3
- **THEO elective\(^b,\(^c\)** 3
- Non-Business electives (NBE) 12

### Business Core

- OSCM 3001 Operations and Supply Chain Management\(^d\) 3
- MARK 3001 Introduction to Marketing\(^d\) 3
- FINA 3001 Introduction to Financial Management (non Econ-majors)\(^d\) 3
- MANA 3001 Behavior and Organization 3
- ECON 3001 Applied Business Economics\(^d\) 3

**Ethical Core (select one):** 3

- MANA 3002 Business and Its Environment
- PHIL 4330 Business Ethics
- FINA 4370 Advanced Investment Management, Ethics and Society
- FINA 4371 Private Equity, Ethics and Society

### Accounting Core

- ACCO 4000 Accounting Communications 3
- ACCO 4010 Individual Income Taxation 3
- ACCO 4030 Cost Accounting 3
- ACCO 4050 Accounting Information Systems 3
- BULA 3001 Legal Environment of Business 3
- BULA 4001 Business Law 3

\(^a\) Course may be taken either semester of respective year.
\(^b\) Course has prerequisites
\(^c\) Must select from the Core of Common Studies (http://www.marquette.edu/core-of-common-studies)
\(^d\) Intro course to major; need to check course prerequisites.
Special Academic Programs

Business Internship Program

The College of Business Administration offers qualified students the opportunity to participate in an applied experiential internship program, which combines practical experience with the core curriculum. The program, offered in cooperation with public, private and professional organizations includes actual experience in a carefully supervised program of productive work with a clearly defined educational objective.

Full-time degree students in the college, who have achieved junior standing and an overall grade point average of 2.500 (For ACCO 3.000 overall GPA plus other requirements; for FINA and REAL 2.500 overall GPA plus 3.000 in major course work), are eligible to participate in the internship program. Credit is granted based on hours worked and the educational content of a particular offering.

Interns are full-time students whether at school or at work. When at work the intern is subject to the rules of the company and is under its direct supervision. Wages, if any, are paid directly to the student. The university does not employ the student but cooperates with business and industry in arranging such employment. Registration for each work period is required of all interns, and credit is established and graded through enrollment in the appropriate course in a subsequent school period. For specific criteria to earn internship credit, contact the college director of the business career center. Two 3-credit internships, a maximum of one in any discipline, may be applied to the bachelor of science in business administration degree requirements. Any 1-credit internship will not fulfill any degree requirements. Contact the Career Development Director of the Business Career Center for information.

Pre-Law Scholars

The College of Business Administration participates in the the Pre-law Scholars program. More detailed information can be found in the university Special Programs (p. 37) section of this bulletin.

ROTC Programs

Students in the Army Military Science program (AROTC) and the Naval Science program (NROTC) may enroll in any of the curricula offered by the College of Business Administration. In doing so, more than the 129 credit hours normally required for graduation are necessary. Also, military and naval science courses will fulfill the 12–18 credit requirement of non-business electives. More detailed information can be found in the university ROTC Programs (p. 40) section of this bulletin.
Student Organizations

The College of Business Administration supports student organizations intended to cultivate academic, professional, career and social interests of business students and related majors. The presidents of each business student organization serve as an advisory council to the dean, meeting several times each term. To inquire about business student organizations activities and membership, ask your adviser or the dean’s office.

Honor Societies

Beta Gamma Sigma
Beta Gamma Sigma is the international honor society for students enrolled in business schools accredited by the AACSB—International (Association for the Advancement of Collegiate Schools of Business).

The Marquette chapter was founded in 1929 "to encourage and reward scholarship and accomplishment among students of business and administration, to promote the advancement of education in the art and science of business, and to foster integrity in the conduct of business operations." Induction to Beta Gamma Sigma is the highest honor that may be conferred by the College of Business Administration.

Omicron Delta Epsilon

Omicron Delta Epsilon is the international honor society in economics serving to recognize scholastic attainment and honoring outstanding achievement in economics. The society is one of the world’s largest academic honor societies. The Marquette chapter was founded in 1981.

Professional Fraternities

Students in the College of Business Administration are eligible to join the following professional fraternities on campus: Psi Chapter of Beta Alpha Psi, national accounting fraternity, and Delta Sigma Pi, the international professional commerce fraternity and Alpha Kappi Psi, a business fraternity.

Professional Societies

Marquette-ing Club - Student Marketing Organization (MC)
The Marquette-ing Club provides opportunities to students to interact with their fellow students, academicians and the business community and to develop a career-oriented objective.

Information Technology Student Organization (ITSO)
The Information Technology Student Organization has a mission to heighten the awareness of information systems business applications and careers available for business systems analysts.

Collegiate Entrepreneurs of Marquette (CEM)
Collegiate Entrepreneurs of Marquette is an organization of college students who promote entrepreneurship among the students, faculty, alumni and within the local community. CEM is an affiliate of Collegiate Entrepreneurs of America.

Marquette Economics Association (MEA)
The Economics Association student group was established to promote the academic, professional and leadership development of its members. The organization provides a forum for the professional and social interaction of students, faculty, alumni and professionals interested in economic issues and careers in economics.

Financial Management Association (FMA)
The Financial Management Association is a national association of finance specialists dedicated to developing interactions between students, the faculty, and the business community. Through a series of guest speakers, field trips, and simulation games, the organization exposes the students to as many career opportunities in finance as possible.

Go-Getters (GG)
The vision of the Go-Getters is to maximize business students’ career potential by bringing in speakers, sponsoring seminars and workshops, touring companies, and one-on-one counseling sessions dealing with various aspects of career management. The members are eager to identify, pursue and earn a career opportunity with their number one choice of an employer.

Human Resources Management Association (HRMO)
The Human Resources Management Organization's primary aim is to assist students in improving their personal and professional managerial skills and understanding of the realities of the business environment.
International Business Student Association (IBSA)

The International Business Student Association (IBSA) provides a forum for all Marquette University students to learn about international business (IB) events, developments and activities on campus and in the business community. IBSA holds information meetings, IB-leader guest-speaker series, and provides other IB related academic and professional career development and networking opportunities.

Multicultural Business Organization (MBO)

The Multicultural Business Organization was established to support business students from diverse backgrounds in their pursuit of a successful academic career by raising awareness of and accessibility to resources within the university for developing and reaching their professional goals. Additionally, the MBO offers programming to enhance cross-cultural understanding of all Marquette students.

Operations and Supply Chain Management Association (OSCM)

The Operations and Supply Chain Management Association is a professional organization made up of individuals who practice and preach the art and science of Operations and Supply Chain Management. Students interact with local professionals by attending dinner meetings, plant tours, technical sessions, and other related activities.

Real Estate Club of Marquette (RE)

The Real Estate Club at Marquette provides the commercial real estate community with innovative effective, ethically committed applied real estate decision makers through superior learning, research and on site education. The club strives to provide each of their members with the highest level of applied experience. The organization arranges site visits to regionally developments and they create opportunities for members to network with industry leaders through mentoring and shadowing programs. Also, through the Center of Real Estate, they provide a wide range of internships to allow their members to gain firsthand experience. Club participants stay informed and connected to current industry trends and have the opportunity to become student members in organizations in the local area.

Women in Business (WIB)

Women in Business (WIB) is an organization at Marquette University founded in 2007 to aid female students in building their resume, gaining leadership skills, increasing networking opportunities and taking a look into and gaining insight from the lives of professional women. Members of the organization are undergraduate female students interested in having a professional career upon graduation. Members from all majors are welcome, typically we see students from the College of Business Administration and the College of Communication. WIB typically holds monthly meetings that bring professional working women from across the Midwest to campus to discuss a variety of topics. In addition, the organization holds socials and how-to sessions regarding different aspects of attaining a job.
The curriculum in accounting is designed to accomplish many specific objectives, the most important of which are: critical thinking, oral communication, business writing ability, technical knowledge and skills needed for an entry level accounting position and technical knowledge needed for the Certified Public Accounting Examination.

The individual course descriptions below focus primarily on content, as opposed to process. The accounting curriculum reflects the faculty’s commitment to excellence and breadth. The faculty use a wide variety of methods to enhance the learning process. Accounting courses include computer assignments, team projects, oral reports and term papers and they cover ethical and international accounting issues. The department offers a group of electives in tax research, international accounting, financial statement analysis, accounting theory and government accounting. Some of the electives are seminars in which students are regularly involved in class discussions and report writing and presentation. Several courses also call for class presentations by the students.

Credit Transfer Policy for Accounting Majors (to reach the 150 cr. hr. requirement)

In order to be eligible for the CPA exam in most states, students must complete 150 credit hours. One way to reach 150 credit hours could be completing credits at another university. Credits taken at another university after the start of a student’s final 30 credits do not transfer back to Marquette University as these additional credits are not needed to earn the Marquette degree; keep in mind, the university policy is that the last 30 credits must be taken at Marquette University. Remember that the current university policy is that all transfer credits must be approved in advance.

- **Transfer credits completed prior to the final 30 credits needed for graduation:**
  - Taken at a Two Year/Community College – in person courses that are approved in advance by the College of Business Administration Dean’s Office and for which you earn a C or better are accepted for transfer and the credit total recorded on the MU transcript.
  - Taken at a Four Year Accredited Institution – in person courses that are approved in advance by the College of Business Administration Dean’s Office and for which you earn a C or better are accepted for transfer and the credit total recorded on the MU transcript.
  - Once a student graduates from Marquette, the university does not transfer any credits even if completed prior to their last 30 hours; so they will not be reflected on your transcript.

- Any credits completed at another university after fulfilling graduation requirements do not transfer back to be recorded on your Marquette University transcript.
  - If you are completing credits after you graduate, be sure to check with your state’s respective CPA Board in advance to see if they will accept the credits toward the 150 credit requirement.
  - It is your responsibility to check with your state’s CPA Board.

### Accounting Major

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCO 3001</td>
<td>Intermediate Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ACCO 4000</td>
<td>Accounting Communications</td>
<td>3</td>
</tr>
<tr>
<td>ACCO 4010</td>
<td>Individual Income Taxation</td>
<td>3</td>
</tr>
<tr>
<td>ACCO 4020</td>
<td>Advanced Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ACCO 4030</td>
<td>Cost Accounting</td>
<td>3</td>
</tr>
<tr>
<td>BULA 4001</td>
<td>Business Law</td>
<td>3</td>
</tr>
<tr>
<td>Three of the following electives:</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>ACCO 4040</td>
<td>International Accounting</td>
<td></td>
</tr>
<tr>
<td>ACCO 4045</td>
<td>International Taxation</td>
<td></td>
</tr>
<tr>
<td>ACCO 4080</td>
<td>Analysis of Corporate Financial Statements</td>
<td></td>
</tr>
<tr>
<td>ACCO 4119</td>
<td>Tax Research</td>
<td></td>
</tr>
<tr>
<td>ACCO 4170</td>
<td>Auditing</td>
<td></td>
</tr>
<tr>
<td>ACCO 4986</td>
<td>Accounting Internship - Grading Period</td>
<td></td>
</tr>
</tbody>
</table>

And selected graduate ACCO courses, if approved.

| Two Business electives | |
|------------------------| 6     |

Total Credit Hours: 33

Wisconsin and Illinois, as well as most states, require students to complete 150 semester hours, including a bachelor's degree in accounting, to qualify for the CPA exam. Many students may prefer to meet this requirement by earning a graduate degree in addition to their undergraduate degree.
Marquette’s accounting program offers a master of science in accounting degree which meets the 150-hour requirement. For information, consult the Graduate School of Management section of the Graduate Bulletin or contact the Department of Accounting at (414) 288-7340.

Courses

Accounting concepts and principles applied in the preparation of financial statements, asset valuation, and the accounting for debt and equity issues of business corporations.

ACCO 1031. Principles of Managerial Accounting. 3 cr. hrs.
Structuring data to aid management decisions. Internal control, budgeting, break-even analysis, standard costing, variable costing, ratio analysis, inventory control, capital budgeting and transfer pricing. Prereq: ACCO 1030; BUAD 1060 or concurrent enrollment.

ACCO 3001. Intermediate Accounting. 3 cr. hrs.
Discussion of the development of accounting standards and the conceptual framework underlying financial accounting. An in-depth review of the income statement and the balance sheet. Recognition, measurement and reporting of cash, receivables, inventories, property, plant and equipment, intangible assets, liabilities and investments. Prereq: ACCO 1031; BUAD 1060, which may be taken concurrently.

ACCO 3986. Internship Work Period. 0 cr. hrs.

ACCO 3987. Internship Work Period. 0 cr. hrs.
For students completing a full-time Accounting internship, with no other enrollment, during the fall or spring semester. Allows students to remain in full-time status for deferment purposes, while completing the internship; however, there is no financial aid provided for this class. SNC/UNC grade assessment. Prereq: Jr. stndg., cons. of prog. dir. and cons. of Business Career Center.

ACCO 4000. Accounting Communications. 3 cr. hrs.
A comprehensive examination of the major forms of communication used in the accounting profession. Instruction in business writing and speaking. Prereq: ACCO major and ACCO 3001.

ACCO 4010. Individual Income Taxation. 3 cr. hrs.

ACCO 4020. Advanced Accounting. 3 cr. hrs.
Recognition, measurement and reporting of stockholders’ equity, retained earnings and dilutive securities. An examination of financial reporting issues; earnings per share, income taxes, pensions, leases, accounting changes and errors. A further elaboration of financial statement preparation: statement of cash flows, interim reporting, segment reporting and reporting for inflation. Also, accounting for partnerships. Prereq: ACCO 3001.

ACCO 4030. Cost Accounting. 3 cr. hrs.

ACCO 4040. International Accounting. 3 cr. hrs.
An overview of accounting issues faced by multinational corporations or firms involved in international business. Issues include the diversity of worldwide accounting principles and the prospects for uniform international accounting standards, foreign currency transactions and translation, inflation, various technical accounting methods and the implications of their application, financial disclosures, analysis of financial statements, auditing, investment analysis, risk management, management information systems, performance evaluation, methods of financing, transfer pricing and taxation. Prereq: ACCO 4020.

ACCO 4045. International Taxation. 3 cr. hrs.
U.S. Taxation of international transactions and foreign taxpayers. A study of the U.S. and foreign taxation of international commercial transactions involving U.S. and foreign taxpayers, including the taxation of income of U.S. taxpayers operating abroad through branches and subsidiaries; the U.S. foreign tax credit provisions; cross-border asset transfers and related intercompany pricing issues; the U.S. taxation of non-resident individuals, partnerships, associations and foreign corporations; and bilateral and multilateral income tax treaties. Prereq: ACCO 4010.

ACCO 4050. Accounting Information Systems. 3 cr. hrs.
Substantial hands-on involvement with technology which enables accountants to be more productive and to provide better service to clients and management. Examination of various approaches to the processing of accounting information with technology, with special emphasis on the problems of internal control. Systems auditing and the accountant’s role in the systems development cycle. Prereq: ACCO 3001.

ACCO 4080. Analysis of Corporate Financial Statements. 3 cr. hrs.
Provides experience in reading, interpreting, and analyzing corporate financial statements. Specific attention is given to the evaluation methods necessary to assess a firm’s short-term liquidity, long-term solvency funds flows, capital structure, return on investment, operating performance, and asset utilization. Effects of alternative accounting methods and footnote disclosures. Prereq: Sr. stndg. and ACCO major; or admittance into the AIM program.
ACCO 4119. Tax Research. 3 cr. hrs.
The objective of this course is to assist in the development of essential tax research skills and their application in the prevailing federal tax environment. The student will learn how to find tax authority, evaluate the efficacy of that authority, and apply the results of the research to a specific situation. Prereq: Sr. stndg. and ACCO 4010.

ACCO 4170. Auditing. 3 cr. hrs.
Focuses on major issues in auditing and the recent pronouncements of authoritative bodies. Specific attention is given to the profession code of conduct, legal liability, study and evaluation of the internal control structure, EDP systems, statistical sampling and reporting responsibilities for attest and non attest engagements. Prereq: ACCO 4050.

ACCO 4931. Topics in Accounting. 3 cr. hrs.
Prereq: ACCO 3001.

ACCO 4953. Seminar in Accounting. 3 cr. hrs.
Prereq: ACCO 3001.

ACCO 4986. Accounting Internship - Grading Period. 3 cr. hrs.

ACCO 4987. Accounting Internship - Grading Period. 3 cr. hrs.

ACCO 4995. Independent Study in Accounting. 1-4 cr. hrs.
Prereq: Cons. of dept. ch.
Business Administration

Business Administration Major

Students may earn a General Business major (27 credits) by completing nine upper division business electives.
Business Economics

Chairperson: Joseph P. Daniels, Ph.D.
Department of Economics website (http://business.marquette.edu/departments/economics)

Economics at its core represents reasoning skills that are critical to effective decision-making. Economics students learn both the theory and the application of economics which prepares them for a wide range of careers in business, government and the non-profit sector.

Business Economics Major

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 3004</td>
<td>Intermediate Macroeconomic Analysis</td>
<td>3</td>
</tr>
<tr>
<td>ECON 4060</td>
<td>Introduction to Econometrics</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Three upper-division ECON electives (excluding ECON 4986)</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Four Business and/or Economics electives</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td><strong>Total Credit Hours</strong></td>
<td><strong>27</strong></td>
</tr>
</tbody>
</table>

In addition to the bachelor's degree program outlined above, the Department of Economics offers a special five-year program enabling students to earn an undergraduate degree and a master of science in applied economics (MSAE) degree. For information, consult the Graduate School of Management bulletin or contact the Department of Economics at (414) 288-7377.

Courses

**ECON 1001. Introduction to Economics. 3 cr. hrs.**
An introductory survey of economic issues for non-majors with an emphasis on using economic concepts as elements of critical reasoning. Microeconomic topics include markets and the role of government in a market economy. Macroeconomic topics include the banking system, inflation and unemployment. International issues include the balance of trade and foreign exchange. Will not be counted towards the Economics major. Not available for students enrolled in the College of Business Administration.

**ECON 1103. Principles of Microeconomics. 3 cr. hrs.**
Institutions and processes of market specialization and exchange. Supply and demand and their determinants. Pricing and production decisions of the firm under varying competitive conditions. The role of government in a modern mixed economy. Microeconomic analysis applied to selected economic problems.

**ECON 1104. Principles of Macroeconomics. 3 cr. hrs.**

**ECON 1104H. Honors Principles of Macroeconomics. 3 cr. hrs.**

**ECON 3001. Applied Business Economics. 3 cr. hrs.**
The focus of this course is to explain and develop key economic principles, models, and data that are relevant to business analysis and managerial decision-making. It expands on important economic principles including demand and supply, production and cost, market structures, profit maximization and pricing strategies under varying competitive conditions. Students are expected to develop skills in the practice of using economic models, data and statistical techniques in the process of business decision-making, as well as an understanding of both the usefulness and limitations of such models, data, and techniques. Students may not take both ECON 3001 and ECON 3003 for credit. Prereq: ECON 1103, ECON 1104 and BUAD 1560 or MANA 2028 or equiv.

**ECON 3003. Intermediate Microeconomic Analysis. 3 cr. hrs.**
Reviews the tools of supply and demand analysis. Studies the market behavior of consumers and business firms and the way they interact with each other and with public policy. Applies market theory to questions of resource allocation efficiency, changing market conditions, optimal pricing and output strategies and to important social issues of the day. Students may not take both ECON 3001 and ECON 3003 for credit. Prereq: ECON 1103; ECON 1104; MATH 1400 or equiv.

**ECON 3004. Intermediate Macroeconomic Analysis. 3 cr. hrs.**
Determines levels of aggregate output, employment and prices. Describes available policy variables and their impacts upon the money, bond, goods and labor markets. Looks at inflation and unemployment, international macroeconomic interrelationships and fundamentals of the economic growth process. Prereq: ECON 1103; ECON 1104; MATH 1400 or equiv.
Applied Global Business Learning is a short-term applied global business service learning experience. Under the direction of the instructor, students work with a foreign business venture to solve business problems. In the classroom setting, students learn about the history and culture of the country, as well as the experiences of individuals who have completed a global service project in the region. Students also have the opportunity to learn the realities of developing country business problems. Students help develop a business case solution for the selected project and travel to the location for implementation. Upon completion of the in-country experience, students prepare a post trip report for both the instructor and the entrepreneur and participate in a reflection retreat. Prereq: All application materials completed and cons. of instr.; Jr. stndg.

ECON 3986. Internship Work Period. 0 cr. hrs.
SNC/UNC grade assessment. Prereq: Jr. standing, cons. of prog. dir. and cons. of Business Career Center.

ECON 4006. Public Policies Toward American Industry. 3 cr. hrs.
Role of competition as an economic regulator. Bases and consequences of monopoly power. Development of statutory and administrative law affecting market processes in the U.S. Antitrust policies applied to monopoly, oligopoly, mergers and restrictive trade policies. Alternatives to anti-trust, including utility regulation and social regulation. Prereq: ECON 1103 and ECON 1104.

ECON 4008. Economics and Law. 3 cr. hrs.
Relationship between the rights and obligations which the legal system confers on individuals and the allocation of resources which results from alternative assignments of legal rights. Uses and limitations of economic analysis in explaining the process by which legal rights are conferred. Prereq: ECON 1103 and ECON 1104.

ECON 4010. Public Finance. 3 cr. hrs.

ECON 4012. Urban and Regional Economics. 3 cr. hrs.

ECON 4016. Environmental and Natural Resource Economics. 3 cr. hrs.
Economic analysis of environmental and natural resources including land, air, and water. Special emphasis on the role of human values and economic institutions in resource exploitation. Topics covered include air and water pollution, energy, ocean resources, forestry practices, mineral resources, the population problem, and agriculture. Prereq: ECON 1103 and ECON 1104.

ECON 4020. Economics of Labor Markets. 3 cr. hrs.
Supply and demand conditions unique to markets for services of human beings. The economics of investment and disinvestment of human capital. Topics include: determination of labor force size, geographic distribution and qualitative aspects; economic effects of institutional arrangements and labor laws; current issues. Prereq: ECON 1103 and ECON 1104.

ECON 4022. Economics of Healthcare and Health Policy. 3 cr. hrs.
An introduction to healthcare and health policy from an economics perspective. Covers the demand for and supply of healthcare, moral hazard, adverse selection, and health insurance markets (public and private) using economic evaluation techniques. Also covers the ongoing federal healthcare reform as the Patient Protection and Affordable Care Act of 2010 is the largest piece of health legislation in decades and is dramatically changing the underlying structure and operation of the healthcare sector. Discuss the value of health, externalities and public health, cost containment and managed care in addition to several other health topics. The main goal is to better understand the issues and debates in the vast and rapidly growing field of health economics. Prereq: ECON 1103 and ECON 1104.

ECON 4040. International Economic Issues. 3 cr. hrs.
Survey of international economics. Basis for and welfare effects of international trade, commercial policies, and economic growth. International organizations, trading regions, and trade accords. Balance of payments concepts and exchange rate theories. History and theory of international monetary systems including fixed versus flexible exchange rates. Prereq: ECON 1103 and ECON 1104. Credit not given if ECON 4044 or ECON 4046 has already been completed for credit.

ECON 4042. International Antitrust and Competition Policy. 3 cr. hrs.
Examines the economics of Antitrust or Competition Policy in an international context. Through readings, lectures, and class discussions it explores the economic rationale for Antitrust Policy, and examines the major topical areas that receive policy attention. Coverage includes a comparative survey of the policy approaches pursued by several major countries/economies, along with discussion of the conflicts and coordination issues that arise in a world characterized by extensive global trade. Prereq: ECON 1103 and ECON 1104.

ECON 4044. International Currency Markets. 3 cr. hrs.
Examination of various foreign exchange markets, including the spot, forward, futures and options markets. Risk, pricing and arbitrage procedures for cash and portfolio managers. Exchange rate management, structure of the international financial architecture, and the determination of exchange rates and the balance of payments. The role and practice of global financial intermediaries. Prereq: ECON 1103 and ECON 1104.
ECON 4045. Comparative Economic Systems. 3 cr. hrs.
An analysis and description of institutional differences among national economies. A theoretical framework for analyzing the effects of alternative systems on social and economic behavior is developed. Theoretical models are applied to specific cases, with special emphasis on issues of growth and development in advanced variants of capitalist, post-communist and less-developed economies. Prereq: ECON 1103 and ECON 1104.

ECON 4046. International Trade. 3 cr. hrs.
Sources, patterns, and welfare implications of international trade. Empirical investigations of traditional trade theories. Arguments for and impact of commercial policies. Trade effects of economic growth. Imperfect competition and intra-industry trade as alternatives to traditional theories and views. Prereq: ECON 1103 and ECON 1104.

ECON 4047. Development Economics. 3 cr. hrs.
Traditional economics is concerned with the allocation of scarce resources and emphasizes rationality and self-interest in decision-making. Political economy combines economics and politics to examine how social and institutional processes and power influence the allocation of scarce resources. Development economics deals with the economic, social, political and institutional mechanisms necessary to bring about rapid, large scale improvements in the lives of people in developing economies. Its ultimate goal is to understand the overall process of social and economic change in less developed countries in order to improve the lives of the majority of the world’s population. Prereq: ECON 1103 and ECON 1104.

ECON 4060. Introduction to Econometrics. 3 cr. hrs.
Designed to teach how to build an econometric model and to make forecasts using it. Models are constructed to explain phenomena that are observed frequently in business, economics and the social sciences. Linear regression analysis is employed and both single-equation and multi-equation models are investigated. Of practical value to economists, businessmen, engineers, statisticians, and other professionals for whom applied quantitative techniques are important. Prereq: ECON 1103, ECON 1104, and MATH 1700 or equiv.; or ECON 1103, ECON 1104, and BUAD 1560 or MANA 2028 or equiv.

ECON 4065. Introduction to Mathematical Economics. 3 cr. hrs.
Designed to give students the quantitative background required to appreciate the use of mathematics in economic analysis. Emphasis is on developing important techniques. However, many economic applications are incorporated in order to demonstrate how standard economic models can be developed in mathematical terms. Topics include matrix algebra, differential calculus, both constrained and unconstrained optimization and comparative statistics. Prereq: ECON 1103, ECON 1104 and one of the following three options: MATH 1390 and MATH 1400; or MATH 1450 and MATH 1451; or MATH 1390 and MATH 1450.

ECON 4070. Economics and Ethics. 3 cr. hrs.
Examines the relationship between economics and ethics, or how moral values and ethical reasoning underlie both the science of economics and the operation of the economy. Aim of the course is to introduce students to the role of ethical reasoning in economics and economic life, and thereby help create a capacity on their part for ethical reflection and action in connection with economic policy and individual economic experience. Prereq: ECON 1103 and ECON 1104.

ECON 4080. Money, Banking and Monetary Policy. 3 cr. hrs.

ECON 4931. Topics in Economics. 3 cr. hrs.
Lectures and discussions in an area which, because of its topicality, is not the subject of a regular course. The topics will be designated in the Schedule of Classes. Prereq: Jr. stndg.; ECON 1103 and ECON 1104.

ECON 4951. Marquette Led Travel and Study Abroad in Economics. 3 cr. hrs.
Course taught in an international setting by Marquette professors and where students earn Marquette credit. Study Abroad expenses apply. Prereq: Cons. of dept. ch.; Sr. stndg.

ECON 4953. Seminar in Economics. 3 cr. hrs.
same as previous one Prereq: Jr. stndg. and ECON 1103 and ECON 1104.

ECON 4986. Economics Internship - Grading Period. 3 cr. hrs.

ECON 4995. Independent Study in Economics. 1-4 cr. hrs.
Prereq: Cons. of dept. ch.

ECON 4999. Senior Thesis. 2 cr. hrs.
With department approval. Seniors may write a thesis under direction of an adviser. Prereq: Cons. of dept. ch.
Finance

Chairperson: Anthony Pennington-Cross, Ph.D.
Department of Finance website (http://business.marquette.edu/departments/finance)

We train you to become a financial professional. Financial professionals analyze and maximize the value of investments for individual families, as well as multinational firms. Marquette finance majors typically go on to work for mutual funds, brokerage firms, banks, insurance companies and finance departments of Fortune 500 companies.

Finance Major

Specific Finance Course Requirements:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FINA 4001</td>
<td>Advanced Financial Management</td>
<td>3</td>
</tr>
<tr>
<td>FINA 4011</td>
<td>Investment Analysis</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Three of the following courses:</td>
<td></td>
</tr>
<tr>
<td>FINA 4002</td>
<td>Commercial Real Estate Finance</td>
<td>3</td>
</tr>
<tr>
<td>FINA 4020</td>
<td>Financial Planning</td>
<td>3</td>
</tr>
<tr>
<td>FINA 4030</td>
<td>Bank Management</td>
<td>3</td>
</tr>
<tr>
<td>FINA 4040</td>
<td>International Finance</td>
<td>3</td>
</tr>
<tr>
<td>FINA 4060</td>
<td>Introduction to Financial Derivatives</td>
<td>3</td>
</tr>
<tr>
<td>FINA 4065</td>
<td>Fixed Income Securities</td>
<td>3</td>
</tr>
<tr>
<td>FINA 4070</td>
<td>Investment Management, Ethics and Society</td>
<td>3</td>
</tr>
<tr>
<td>FINA 4080</td>
<td>Entrepreneurial Finance</td>
<td>3</td>
</tr>
<tr>
<td>FINA 4081</td>
<td>Investment Banking</td>
<td>3</td>
</tr>
<tr>
<td>FINA 4082</td>
<td>Alternative Investments</td>
<td>3</td>
</tr>
<tr>
<td>FINA 4112</td>
<td>Investment Management</td>
<td>3</td>
</tr>
<tr>
<td>FINA 4360</td>
<td>Applied Financial Modeling</td>
<td>3</td>
</tr>
<tr>
<td>FINA 4931</td>
<td>Topics in Finance</td>
<td>3</td>
</tr>
<tr>
<td>FINA 4953</td>
<td>Seminar in Finance</td>
<td>3</td>
</tr>
<tr>
<td>FINA 4986</td>
<td>Finance Internship - Grading Period</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Four Business electives</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Total Credit Hours</td>
<td>27</td>
</tr>
</tbody>
</table>

Applied Investment Management (AIM) Program

Marquette is home to one of the nation’s top undergraduate programs in applied investment management. The AIM program allows a select group of finance majors to get hands-on academic and security analysis experience, including summer internships and an opportunity to actively manage an equity and fixed-income portfolio throughout their senior year. Students will study the core body of knowledge covered in the Chartered Financial Analyst (CFA®) Level I exam — preparing them to take the test upon graduation — and begin a career in the investment management industry. AIM Program has two concentrations: (a) Investment and (b) Private Equity and Banking. The Investment concentration focuses on asset management while the Private Equity and Banking concentration focuses on private or transactional finance.

The International Applied Investment Management (IAIM) program combines an International Business major with the AIM program with a goal of producing proficient and ethical research analysts with a global focus. The IAIM program provides the opportunity for a select number of double majors in international business and finance or accounting to receive the academic and practical experience in financial analysis with an international concentration. Students will participate in a summer internship and actively manage a portfolio of global-fixed income and equity securities during their senior year. These select international business students will study the core body of knowledge covered in the CFA® Level I exam that will prepare them to take the test upon graduation.

Students apply to the AIM and IAIM program during the fall term of their junior year and notification of acceptance occurs prior to the end of the term. Acceptance into these programs is limited and based on:

- Grades earned to date of application (GPA > 3.000)
- Resume and references
- Essay
- Interview

Interviews for the summer internships will begin after acceptance into the program.
### Academic Expectations for AIM Students

a. Students accepted into the AIM program must earn a BC or better in the following required courses:

#### INVESTMENT CONCENTRATION

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCO 3001</td>
<td>Intermediate Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ACCO 4080</td>
<td>Analysis of Corporate Financial Statements</td>
<td>3</td>
</tr>
<tr>
<td>FINA 3001</td>
<td>Introduction to Financial Management</td>
<td>3</td>
</tr>
<tr>
<td>FINA 4001</td>
<td>Advanced Financial Management</td>
<td>3</td>
</tr>
<tr>
<td>FINA 4011</td>
<td>Investment Analysis</td>
<td>3</td>
</tr>
<tr>
<td>FINA 4065</td>
<td>Fixed Income Securities</td>
<td>3</td>
</tr>
<tr>
<td>FINA 4310</td>
<td>Introduction to Applied Investment Management</td>
<td>3</td>
</tr>
<tr>
<td>FINA 4320</td>
<td>Research and Financial Analysis</td>
<td>3</td>
</tr>
<tr>
<td>FINA 4330</td>
<td>Valuation and Portfolio Management</td>
<td>3</td>
</tr>
<tr>
<td>FINA 4370</td>
<td>Advanced Investment Management, Ethics and Society</td>
<td>3</td>
</tr>
<tr>
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<td>One of the following:</td>
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<tr>
<td>FINA 4060</td>
<td>Introduction to Financial Derivatives</td>
<td>3</td>
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<tr>
<td>FINA 4081</td>
<td>Investment Banking</td>
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<tr>
<td>FINA 4112</td>
<td>Investment Management</td>
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<tr>
<td>FINA 4082</td>
<td>Alternative Investments</td>
<td></td>
</tr>
<tr>
<td>ECON 4060</td>
<td>Introduction to Econometrics</td>
<td></td>
</tr>
<tr>
<td>ACCO 4020</td>
<td>Advanced Accounting</td>
<td></td>
</tr>
<tr>
<td></td>
<td>One of the following:</td>
<td></td>
</tr>
<tr>
<td>ACCO 4040</td>
<td>International Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ECON 4044</td>
<td>International Currency Markets</td>
<td></td>
</tr>
<tr>
<td>FINA 4040</td>
<td>International Finance</td>
<td></td>
</tr>
<tr>
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<td>Total Credit Hours:</td>
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</table>

#### PRIVATE EQUITY AND BANKING CONCENTRATION

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCO 3001</td>
<td>Intermediate Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ACCO 4080</td>
<td>Analysis of Corporate Financial Statements</td>
<td>3</td>
</tr>
<tr>
<td>FINA 3001</td>
<td>Introduction to Financial Management</td>
<td>3</td>
</tr>
<tr>
<td>FINA 4001</td>
<td>Advanced Financial Management</td>
<td>3</td>
</tr>
<tr>
<td>FINA 4011</td>
<td>Investment Analysis</td>
<td>3</td>
</tr>
<tr>
<td>FINA 4310</td>
<td>Introduction to Applied Investment Management</td>
<td>3</td>
</tr>
<tr>
<td>FINA 4360</td>
<td>Applied Financial Modeling</td>
<td>3</td>
</tr>
<tr>
<td>FINA 4371</td>
<td>Private Equity, Ethics and Society</td>
<td>3</td>
</tr>
<tr>
<td>FINA 4081</td>
<td>Investment Banking</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Two of the following:</td>
<td>6</td>
</tr>
<tr>
<td>FINA 4060</td>
<td>Introduction to Financial Derivatives</td>
<td></td>
</tr>
<tr>
<td>FINA 4112</td>
<td>Investment Management</td>
<td></td>
</tr>
<tr>
<td>FINA 4082</td>
<td>Alternative Investments</td>
<td></td>
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<tr>
<td>FINA 4065</td>
<td>Fixed Income Securities</td>
<td></td>
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<tr>
<td>FINA 4080</td>
<td>Entrepreneurial Finance</td>
<td></td>
</tr>
<tr>
<td>ECON 4060</td>
<td>Introduction to Econometrics</td>
<td></td>
</tr>
<tr>
<td>ACCO 4020</td>
<td>Advanced Accounting</td>
<td></td>
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<tr>
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<td>One of the following:</td>
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<tr>
<td>ACCO 4040</td>
<td>International Accounting</td>
<td>3</td>
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<tr>
<td>ECON 4044</td>
<td>International Currency Markets</td>
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<tr>
<td>FINA 4040</td>
<td>International Finance</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total Credit Hours:</td>
<td>36</td>
</tr>
</tbody>
</table>

**Note:** Any waivers/transfers of course requirements must be approved by both the AIM director and the assistant dean for undergraduate programs.
b. Students in the IAIM program must earn a BC or better in the following courses beyond those listed in (a):

- ECON 4044 International Currency Markets (may also count for elective above)
- Three International Business electives

c. All students in the AIM and IAIM program who participate in an internship must do so satisfactorily in accordance with the Student Summer Internship Form. The internship must be completed in the summer between the junior and senior years. Each student must enroll in the appropriate 0 credit course FINA 3986 Internship Work Period or INBU 3986 Internship Work Period prior to the commencement of the summer internship. Given the satisfactory completion of the summer internship experience, students may register for the appropriate internship course (FINA 4986 Finance Internship - Grading Period for AIM or INBU 4986 International Business Internship - Grading Period for IAIM) in a semester subsequent to the internship for the 3 credits to be applied to their academic transcript. Students in the IAIM program must also meet the language proficiency and study abroad components of international business majors.

d. Maintain a minimum cumulative GPA of 3.0 during the entire program.

e. Carry a typical course load of 15-19 credit hours per term.

f. Failure to meet academic standards in any term may result in the student being dropped from AIM or IAIM programs. A review panel consisting of the AIM director, Finance chair and assistant dean for undergraduate programs will review records of students that fail to meet the academic criteria described above. Following the review, the decision to drop a student from the AIM or IAIM programs is at the discretion of the AIM director.

g. AIM students are required to sign and adhere to the Applied Investment Management Program Student Agreement. Failure to meet the Student Agreement or the Marquette University Student Conduct Code may result in the student being dropped from the AIM or IAIM program. A review panel consisting of the AIM director, Finance chair, and the assistant dean for undergraduate programs will review records of the students that fail to meet the criteria described in the AIM Student Agreement and/or Conduct Code. Following the review, the decision to drop a student from the AIM or IAIM programs is at the discretion of the AIM director.

h. Any appeal of the decision to be dropped from the program must begin with the AIM director. The decision of the AIM director can be appealed in writing to the executive associate dean of the College of Business Administration. Finally, the student may appeal in writing the decision to the dean of the College of Business Administration. The dean’s decision will be final.

i. If at any time a student leaves or is dropped from AIM or IAIM programs, all credits earned at that point will be counted toward the finance and/or International Business majors.

For more information, including the specific curriculum and expectations for accounting majors in the AIM and IAIM programs, contact the AIM director, Dr. David Krause at (414) 288-1457 or david.krause@marquette.edu or the AIM website (AIM@marquette.edu).

Courses

FINA 3001. Introduction to Financial Management. 3 cr. hrs.
Principles and methods of corporate finance, valuation, analysis and management. Evaluation of business projects (capital budgeting) using financial criteria and different financing choices (capital structure) for these projects will be reviewed. Introduction to the financial markets and both investment and financing instruments available to corporations and individuals. Emphasis placed on the framework and methodology involved in financial decision making. Prereq: ECON 1103; BUAD 1560 or MANA 2028; ACCO 1031 which may be taken concurrently.

FINA 3986. Internship Work Period. 0 cr. hrs.

FINA 4001. Advanced Financial Management. 3 cr. hrs.
Extension of the development of the theory of financial management, including an examination of the relevant literature. Concentration will be on applications of financial management theory. Topics include working capital, capital budgeting, dividend policy issues, cost of capital, and principles of valuation. Required for finance specialization. Prereq: ACCO 1031, FINA 3001, BUAD 1060.

FINA 4002. Commercial Real Estate Finance. 3 cr. hrs.
Provide the student with an in-depth knowledge of real estate finance, real estate investment, and the operation of the real estate capital markets. The objective of the course is to understand the many sources and uses of capital in commercial real estate industry. The course begins with the mechanics of mortgage finance, followed by a detailed presentation of mortgage underwriting, lender ratios and discounted cash flow analysis. Prereq: FINA 3001.

FINA 4011. Investment Analysis. 3 cr. hrs.
A study of financial instruments such as stocks, bonds, convertibles, and options, and the markets in which they are traded. The primary concern of the course is with the decision process that evaluates the various investment opportunities. Prereq: ACCO 1031 and FINA 3001 and BUAD 1060.

FINA 4020. Financial Planning. 3 cr. hrs.
Introduction to the framework and tools for preparing personal financial plans as a career path in the financial services industry. Topics covered include major asset purchases, managing liabilities, determining insurance needs, developing investment portfolios, tax strategies, retirement plans, and estate planning. Course also covers professional ethical standards. Prereq: FINA 3001.
FINA 4030. Bank Management. 3 cr. hrs.
Study of banking on both an institutional and operating unit level. History, regulation and competitive environment of banking covered at institutional level. Development and application of specific tools and techniques dealing with the management of banks' deposit base and loan and securities portfolios, international banking and trust operations. Prereq: FINA 3001.

FINA 4040. International Finance. 3 cr. hrs.
This course looks at financial decision making in an international context. Global financial markets and foreign currency issues will be studied along with the international financing and capital investments. Prereq: FINA 3001.

FINA 4060. Introduction to Financial Derivatives. 3 cr. hrs.
This course will focus on the mechanics, pricing and use of financial derivatives, including futures contracts, options, swaps, collateralized securities, Treasury Bond, Eurodollar, and S&P 500 Index futures contracts will be discussed in detail. Stock options and index options also will be discussed. Important pricing models including Black-Scholes and the Binomial Option Pricing Model also will be discussed. Risk management using these instruments will be emphasized. Prereq: FINA 3001.

FINA 4065. Fixed Income Securities. 3 cr. hrs.
Focuses on the use of fixed income securities to fulfill investment requirements or accommodate corporate financing strategies. Coverage includes fixed income markets and the securities traded in those markets, techniques used to value fixed income securities, and derivative strategies using fixed income securities. Prereq: FINA 3001.

FINA 4070. Investment Management, Ethics and Society. 3 cr. hrs.
Examines the ethical and social responsible dilemmas that managers encounter in the investment management industry. Includes the professional standards for ethical behavior, corporate governance, accounting manipulation, and socially responsible investing. Prereq: FINA 3001.

FINA 4080. Entrepreneurial Finance. 3 cr. hrs.
Focuses on the financial aspects of entrepreneurship, from the first decision as to whether or not to undertake an activity, to projecting financial needs, reviewing the trade-offs between alternative financing choices, to harvesting. Topics will include but are not limited to: bootstrapping, the role of angel investors, private placements, venture capital, banking options, commercial financing, public offers (IPOs, PIPEs), factoring, franchising, and joint ventures. Prereq: FINA 3001.

FINA 4081. Investment Banking. 3 cr. hrs.
Review of the common types of transactions that investment bankers work on and the different methods used to value those transactions. Some of these include IPOs, seasoned equity offerings, exchange offers, mergers, hostile tender offers, leverage buyouts, and going private transactions. Also exposes students to different methods used to value those transactions via applied projects, model building, cases, etc. Course may contain online teaching elements to supplement the in-class time. Prereq: FINA 3001 and FINA 4001.

FINA 4082. Alternative Investments. 3 cr. hrs.
Designed to help students understand the growing field of alternative investments. This course offers an in-depth study of the management of hedge funds and covers various alternative investments including commodities and managed futures, private equity, exchange traded funds (ETFs), real estate, and credit derivatives. Prereq: FINA 3001.

FINA 4112. Investment Management. 3 cr. hrs.
Extends the concepts introduced in FINA 4011. Topical coverage includes modern portfolio theory, options, futures and hedging techniques. Emphasis of course is on application of the concepts to investment strategies. Prereq: FINA 4011.

FINA 4310. Introduction to Applied Investment Management. 3 cr. hrs.
In this introductory course, the first of four required Applied Investment Management program classes, students will study securities law, regulatory issues, and the basic mechanics of investment research analysis. Students will learn how to access and utilize a variety of sources of corporate and securities information, including the Securities and Exchange Commission's database (EDGAR) of disclosure documents that public companies are required to file. The course is also intended to prepare students for their full time summer investment internship. Class laboratory required. Prereq: FINA 3001; FINA 4011, ACCO 3001, and ACCO 4080, which may be taken concurrently. Only open to students accepted into the AIM program.

FINA 4320. Research and Financial Analysis. 3 cr. hrs.
This course provides students an understanding of various portfolio objectives and policies, as well as an appreciation of different investment strategies and styles. Building on the concepts learned in FINA 4011, students will apply their understanding of key investment tools-quantitative research methods, economic relationships, and financial statement analysis. During this course students will analyze and manage an equity and fixed income portfolio. Class laboratory required. Prereq: FINA 4310; and FINA 4001, which may be taken concurrently. Only open to students accepted into the AIM program.

FINA 4330. Valuation and Portfolio Management. 3 cr. hrs.
This third required course in the AIM program includes the common approaches to valuing assets, the basic measurements of risk and return, and the key elements of the portfolio management process. Students will continue to manage an investment portfolio, evaluate performance, and prepare reports on the results at the end of the semester. The course will also include a professional lecture series, where investment practitioners discuss their own investment philosophies, strategies, and experiences. Class laboratory required. Prereq: FINA 4320 and FINA 4112, which may be taken concurrently. Only open to students accepted into the AIM program.
FINA 4360. Applied Financial Modeling. 3 cr. hrs.
Provides the Excel modeling skills to apply the theories, concepts, and tools for effective financial analysis and decision-making. Students learn how to build their own interactive financial model "from scratch" to practice blending finance, accounting, and spreadsheet skills. Applications include in financial statement analysis, forecasting, stock and bond valuation, target capital structure estimation and capital budgeting. Emphasis is placed on the discounted cash-flow analysis as well as sensitivity analysis. Prereq: FINA 3001.

FINA 4370. Advanced Investment Management, Ethics and Society. 3 cr. hrs.
As the final course in the AIM program, students learn how to manage investments in a manner that is both ethical and socially responsible. Students acquire a thorough understanding of the Chartered Financial Analyst® professional standards of conduct in the application of ethics to the moral dimensions of money management. Students are also exposed to the strategies and performance of investment funds that are socially responsible. In doing so, students consider such issues as discrimination and affirmative action in the workplace, economic justice, and environmental impact, among others, in the evaluation of companies for inclusion in a socially responsible fund. Course may contain online teaching elements to supplement the in-class time. Prereq: FINA 4065 and FINA 4330, both of which maybe be taken concurrently; only open to students accepted into the AIM program.

FINA 4371. Private Equity, Ethics and Society. 3 cr. hrs.
Connects basic financial concepts with analytical skills in the evaluation of private equity opportunities. Valuation, capital structure and deal construction are evaluated through rigorous case study within the context of the moral and societal implications. Examines topics such as the United Nations-supported Principles for Responsible Investment, the potential implications on society of the leveraged buyout model, fairness of management compensation and the future of private equity in the domestic and international economy. Prereq: FINA 4310 and FINA 4081; enrollment in AIM program.

FINA 4931. Topics in Finance. 2-3 cr. hrs.
Topics will vary.

FINA 4953. Seminar in Finance. 3 cr. hrs.
Prereq: FINA 3001.

FINA 4986. Finance Internship - Grading Period. 3 cr. hrs.

FINA 4995. Independent Study in Finance. 1-4 cr. hrs.
Prereq: Cons. of dept. ch.
Human Resources

Department of Management Chairperson: Cheryl L. Maranto, Ph.D.
Department of Management website (http://business.marquette.edu/departments/management)

The Human Resources major prepares graduates to lead organizations to be competitive in global as well as domestic markets. Graduates are prepared to be a strategic partner, to leverage the human talent required to achieve organizational goals, and to address many challenges facing today's managers - including skill shortages, legal risk and requirements, workforce diversity and work-life balance.

Human Resources Major

Human Resources Course Requirements:

Three of the following:

- HURE 4003 Employment Law
- HURE 4005 Employee Benefit Systems
- HURE 4010 Strategic Compensation and Rewards
- HURE 4030 Staffing Organizations
- HURE 4080 Training and Development

Two of the following:

- HURE 4003 Employment Law
- HURE 4005 Employee Benefit Systems
- HURE 4010 Strategic Compensation and Rewards
- HURE 4020 Labor Relations and Collective Bargaining
- HURE 4030 Staffing Organizations
- HURE 4080 Training and Development
- HURE 4140 International Human Resources Management
- HURE 4931 Topics in Human Resources
- HURE 4953 Seminar in Human Resources
- HURE 4986 Human Resources Internship - Grading Period
- MANA 3035 Diversity in Organizations
- MANA 4010 Motivation and Leadership

Four Business electives

- Total Credit Hours

In addition to the human resources major described above, a special five-year program is offered which enables students to earn an undergraduate degree with a major in human resources and a master of science degree in human resources (MSHR). For information, consult the Graduate School of Management section of the Graduate Bulletin or the director of the Master's in Human Resources program at (414) 288-3643.

Courses

HURE 3001. Management of Human Resources. 3 cr. hrs.
Issues concerning the effective use and equitable treatment of employees. How human resource management activities are influenced by the economy, laws, unions, organizational strategies, and human behavior. The analysis of management activities such as recruitment and selection, training and development, pay and benefits, labor relations, performance assessment, discipline and due process. How these activities affect the attraction, retention, performance, and satisfaction of employees. Prereq: Jr. stndg.

HURE 3986. Internship Work Period. 0 cr. hrs.

HURE 3990. Human Resources Internship for Minors - Work Period. 0 cr. hrs.
SNC/UNC grade assessment. Not available to students enrolled in the College of Business Administration. Prereq: HURE 3001 or concurrent enrollment, declared Human Resources minor, cons. of prog. dir., cons. of Business Career Center.

HURE 4003. Employment Law. 3 cr. hrs.
Provides an overview of the major federal laws which regulate human resources management, as well as common law. Topics include: wrongful discharge, privacy, defamation, negligent hiring, Title VII, affirmative action, the Americans with Disabilities Act, ERISA, Workers' Compensation, and the Occupational Safety and Health Act. Provides human resource managers and line supervisors with a sufficient working knowledge of these laws to reduce the risk of imposing legal liability on their employers by their own actions and to minimize liability for questionable or unlawful acts of company agents through prompt and effective action. Prereq: Cons. of M.B.A. prog. dir.
HURE 4005. Employee Benefit Systems. 3 cr. hrs.
The course addresses the design and administration of employee benefit systems. Among the programs studied are: health and wellness programs, pension and retirement programs, and cafeteria plans. Legally mandated benefit systems are also studied. Prereq: HURE 3001.

HURE 4010. Strategic Compensation. 3 cr. hrs.
Focuses on theory and practice relevant to the development of compensation systems which are internally consistent, externally competitive, and individually rewarding. Applies these concepts via job descriptions and job evaluations, market surveys and pay structures, and performance or seniority based pay. Also through administering employee benefits such as insurance and pensions. The government's impact on pay and benefits is also studied. Prereq: HURE 3001 and either BUAD 1560 or MATH 1700 or PSYC 2001 or SOCI 2060.

HURE 4010. Labor Relations and Collective Bargaining. 3 cr. hrs.
Examines the development, structure and process of collective bargaining as well as negotiation processes and strategies in a variety of settings. Central topics include labor law, union organization, general principles of negotiation, and labor contract negotiation in particular. The course is taught from a neutral perspective, emphasizing the rights and responsibilities of labor, management and government. Makes extensive use of bargaining exercises.

HURE 4020. Staffing Organizations. 3 cr. hrs.
Issues relevant to staffing work organizations are addressed. Topics include: validation of selection procedures; criterion development; forecasting employee requirements and supply; alternative selection procedures; and equal employment opportunity regulations. Prereq: BUAD 1560 or MANA 2028 and HURE 3001.

HURE 4080. Training and Development. 3 cr. hrs.
Principles and factors that contribute to the personal growth and development of employees and the welfare of the company. Focus on training and employee development within organizations. Topics include training development and evaluation, employee development, career management, and career pathing within organizations. Prereq: HURE 3001. May be taken for graduate credit by students enrolled in Master of Science in Human Resources with appropriate additional assignments.

HURE 4140. International Human Resources Management. 3 cr. hrs.
Explores human resources issues that are addressed by organizations engaged in international business. Among the issues addressed are: the link between stages of international business and recommended human resources systems; determining the appropriate mix of host-country, third country and expatriate employees; managing expatriate assignments; and developing human resource management policies and procedures in a global context. In addition, employment law and protective social legislation as well as alternative labor union models found in different regions of the world will be studied. Prereq: HURE 3001.

HURE 4931. Topics in Human Resources. 3 cr. hrs.
Prereq: HURE 3001.

HURE 4953. Seminar in Human Resources. 3 cr. hrs.
Prereq: HURE 3001.

HURE 4986. Human Resources Internship - Grading Period. 3 cr. hrs.

HURE 4990. Human Resources Internship for Minors - Grading Period. 3 cr. hrs.
S/U grade assessment. Not available to students enrolled in the College of Business Administration. Prereq: HURE 3001 or concurrent enrollment, declared Human Resources minor, cons. of prog. dir., cons. of Business Career Center.

HURE 4995. Independent Study in Human Resources. 1-4 cr. hrs.
Prereq: Consent of department chair.
Information Technology

Department of Management Chairperson: Cheryl L. Maranto, Ph.D.
Department of Management website (http://business.marquette.edu/departments/management)

The Information Technology major provides students with an understanding of the important interactions between technology, organizations and people. Students learn and apply technical, analytical and communication skills and knowledge to solve problems and help organizations create value, manage business processes and enhance productivity.

Information Technology Major

Specific Information Technology Course Requirements:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTE 4051</td>
<td>Business Applications Development</td>
<td>3</td>
</tr>
<tr>
<td>INTE 4052</td>
<td>Data Base Management Systems</td>
<td>3</td>
</tr>
<tr>
<td>INTE 4158</td>
<td>Systems Analysis and Design</td>
<td>3</td>
</tr>
<tr>
<td>Two of the following:</td>
<td>6</td>
<td></td>
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<tr>
<td>INTE 4053</td>
<td>Project Management</td>
<td></td>
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<tr>
<td>INTE 4054</td>
<td>Emerging Technologies</td>
<td></td>
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<tr>
<td>INTE 4055</td>
<td>Web-based Applications</td>
<td></td>
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<tr>
<td>INTE 4056</td>
<td>Information Technology Governance</td>
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<td>INTE 4540</td>
<td>Global Technology Experience</td>
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<td>INTE 4931</td>
<td>Topics in Information Technologies</td>
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<tr>
<td>INTE 4953</td>
<td>Seminar in Information Technology</td>
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</tr>
<tr>
<td>Four Business electives</td>
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<td></td>
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<tr>
<td>Total Credit Hours</td>
<td>27</td>
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</tr>
</tbody>
</table>

Courses

INTE 3001. Introduction to Information Technology. 3 cr. hrs.
Provides future information systems users with a broad overview of information systems and applications used in organizations. Topics include: the impact of technology on business, the software development life cycle, introduction to databases, business intelligence and analytics, introduction to enterprise architecture, innovation, infrastructure (Cloud), networking, security, ethical use of information systems, and other business software applications. Students are involved in designing and creating a database system. Prereq: Jr. stndg.

INTE 3986. Internship Work Period. 0 cr. hrs.

INTE 3990. Information Technology Internship for Minors-Work Period. 0 cr. hrs.
SNC/UNC grade assessment. Prereq: Enrollment Requirement: INTE 3001 completed or concurrently, declared Minor in Information Technology, Consent of Program Director, Consent of Business Career Center, not available to students enrolled in the College of Business Administration.

INTE 4051. Business Applications Development. 3 cr. hrs.
An introduction to business applications design and development. Introductory topics include: software product development, the Software Development Lifecycle, Agile (SCRUM), user experience design tools for wire-framing and mockup development, user story development, software architecture and technical design, object-oriented programming, data structures and programming logic design, database and external API integration, mobile and web applications development. Students work in groups and also participate in semester-long projects to design and build an innovative software application prototype. Prereq: INTE 3001.

INTE 4052. Data Base Management Systems. 3 cr. hrs.
Introduces a number of fundamental concepts of database management systems used in enterprise-level organizations. Topics covered may include: data modeling (conceptual, logical); SQL programming language; management and administration of databases including index tuning, concurrency control, data security, backup and recovery; and emerging topics such as distributed and NoSQL databases. Students work on semester-long projects to design and implement a relational database. Prereq: INTE 3001.

INTE 4053. Project Management. 3 cr. hrs.
Addresses organizational, team and technical aspects of successful project management. Through class projects, students learn to align project objectives with organizational strategies, plan, execute, allocate material and people resources to project components, design and develop project documentation, estimate and control project and organizational risks, and manage cross functional and virtual teams as well as inter-organizational relationships. Prereq: INTE 3001.
INTE 4054. Emerging Technologies. 3 cr. hrs.
Advances in technological and market forces have changed the way applications are used have dramatically increased the demand for mobility and bandwidth. Business professionals must understand these emerging technologies to creatively leverage them for business solutions and integrate them with existing systems. This course will familiarize students with an array of leading edge technologies; help them understand their business feasibilities in financial, marketing, operations and other business functions; and examine social, economic, and ethical impact of these technologies. Topics include changes in voice and data communication infrastructures, emerging trends in database environments, storage trends, integration, and information privacy and security among others. Prereq: INTE 3001.

INTE 4055. Web-based Applications. 3 cr. hrs.
Focuses on designing and developing Web-based applications using a variety of programming languages and tools. Students are exposed to Internet application development architecture. Class projects include developing business-to-consumer (B2C) and business-to-business (B2B) applications, among others. Upon completion, students understand the challenges, technologies, and issues in developing and deploying Web-based applications. Prereq: INTE 4051 or COSC 1010 or cons. of instr.

INTE 4056. Information Technology Governance. 3 cr. hrs.
Focuses on the major processes, frameworks and relational mechanisms within the corporate structure that ensure the effective, efficient and protected use of IT technologies, IT investments, assets, systems, processes and human capital resources. Reviews structures around how organizations align IT strategy with business strategy to ensure that companies stay on track to achieve their strategies and goals and implement solid and repeatable methods to deliver, support and measure an IT organization’s performance. Generally viewed as a Board of Director’s or executive level responsibility, IT governance is best deployed as part of the IT practice and culture. Prereq: INTE 3001.

INTE 4158. Systems Analysis and Design. 3 cr. hrs.
Prepares future information technology (IT) professionals to apply established and evolving methodologies for the analysis and design of an information systems solution. Students learn how to gather and analyze user requirements for new systems and design appropriate solutions. Students work with live projects from small and non-profit organizations to gain real-world experience while enhancing teamwork, communication and project management skills. Prereq: Two courses from: INTE 4051, INTE 4052, INTE 4053, INTE 4054, or INTE 4055.

INTE 4540. Global Technology Experience. 3 cr. hrs.
Facilitates an immersive experience in the global business of technology development and management. Tied with a travel component to key technology provider countries in Asia or Europe. Students experience how economic, legal, and political factors influence the global technology business and how such business, in turn, impacts social and cultural environments of client and provider nations. Designed around corporate visits, extensive engagement with practitioners and cultural immersion. Prereq: INTE 3001 and cons. of instr.

INTE 4931. Topics in Information Technologies. 3 cr. hrs.
Topic varies. Prereq: Jr. stndg.

INTE 4953. Seminar in Information Technology. 3 cr. hrs.
Prereq: Jr. stndg.

INTE 4986. Information Technology Internship - Grading Period. 3 cr. hrs.

INTE 4990. Information Technology Internship for Minors-Grading Period. 3 cr. hrs.
S/U grade assessment. Prereq: Enrollment Requirement: INTE 3001 and INTE 3990 completed or concurrently, declared Minor in Information Technology, Consent of Program Director, Consent of Business Career Center, not available to students enrolled in the College of Business Administration.

INTE 4995. Independent Study in Information Technology. 1-4 cr. hrs.
Prereq: Consent of department chair.
Innovation and Entrepreneurship

Innovation and Entrepreneurship

Department Chairperson: Cheryl L. Maranto, Ph.D.
Department of Management website (http://business.marquette.edu/departments/management)

The Innovation and Entrepreneurship program guides students along their individual paths to launching ventures, engaging with all the dimensions of business. Graduates are therefore prepared for better understanding the big picture of corporations that employ them, for professional services and investments with new firms and of course for venture starts.

Innovation and Entrepreneurship Major

Specific Entrepreneurship Course Requirements:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENTP 3001</td>
<td>Understanding Entrepreneurship</td>
<td>3 cr. hrs.</td>
</tr>
<tr>
<td>ENTP 4010</td>
<td>New Venture Creation</td>
<td>3 cr. hrs.</td>
</tr>
<tr>
<td>ENTP 4020</td>
<td>Consulting to Entrepreneurs</td>
<td>3 cr. hrs.</td>
</tr>
<tr>
<td>or ENTP 4986</td>
<td>Entrepreneurship Internship - Grading Period</td>
<td></td>
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<tr>
<td>Two electives from the following:*</td>
<td></td>
<td>6 cr. hrs.</td>
</tr>
<tr>
<td>ENTP 4080</td>
<td>Entrepreneurial Finance</td>
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<tr>
<td>ENTP 4041</td>
<td>International Entrepreneurial Sustainability</td>
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</tr>
<tr>
<td>ENTP 4931</td>
<td>Topics in Entrepreneurship</td>
<td></td>
</tr>
<tr>
<td>ENTP 4953</td>
<td>Seminar in Entrepreneurship</td>
<td></td>
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<tr>
<td>ACCO 4080</td>
<td>Analysis of Corporate Financial Statements</td>
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<tr>
<td>BULA 4001</td>
<td>Business Law</td>
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<tr>
<td>MANA 3034</td>
<td>Negotiations and New Ventures</td>
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<tr>
<td>MANA 4010</td>
<td>Motivation and Leadership</td>
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<tr>
<td>MARK 4060</td>
<td>Marketing Research</td>
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<td>MARK 4094</td>
<td>Professional Selling</td>
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<tr>
<td>REAL 3001</td>
<td>Introduction to Commercial Real Estate</td>
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</tr>
</tbody>
</table>

*Other business electives may be substituted; consult the Entrepreneurship adviser

Four Business electives: 12 cr. hrs.

Total Credit Hours: 27 cr. hrs.

Courses

**ENTP 3001. Understanding Entrepreneurship. 3 cr. hrs.**
Consistent with Marquette’s mission of concern for the whole person, course seeks to help each student begin to create a venture that enables a fulfilling life. Students individually craft business models for new ventures (for-profit or non-for-profit) that meet underserved needs. Students also learn to communicate their venture concepts to potential resources providers. Prereq: Jr. stndg.

**ENTP 3986. Internship Work Period. 0 cr. hrs.**

**ENTP 3990. Entrepreneurship Internship for Minors - Work Period. 0 cr. hrs.**
SNC/UNC grade assessment. Not available to students enrolled in the College of Business Administration. Prereq: ENTP 3001 or concurrent enrollment, declared Entrepreneurship Minor, cons. of prog. dir., cons. of Business Career Center.

**ENTP 4010. New Venture Creation. 3 cr. hrs.**
This course focuses on starting and developing a new business. Topics include evaluating opportunities and testing the feasibility of creative ideas, selecting and dealing with partners; alternative methods of financing, developing the initial competitive strategy, structuring and managing the business through the early survival months, and sources of outside help. Students will prepare a business plan that can be used to launch a new initiative. Prereq: ENTP 3001.

**ENTP 4020. Consulting to Entrepreneurs. 3 cr. hrs.**
Students conduct a consulting project for an entrepreneur and provide its findings and recommendations, orally and in writing, to the client. Students develop skills in project management, advisory and consulting services, and primary research. Students also learn applied business knowledge to the project. Prereq: ENTP 3001.
ENTP 4041. International Enterpreneurial Sustainability. 3 cr. hrs.
Focuses on the identification of entrepreneurial challenges in the context of great social challenges - environmental sustainability in a global context. Develops insight into opportunities for simultaneous economic and environmental sustainability (i.e. entrepreneurial sustainability) in the context of daunting global challenges, with particular reference to other countries. The challenges are not only those of the other country context itself, but also those that arise for ventures that cross national borders and provide environmental solutions. As a rule the other country covered is the People’s Republic of China. Prereq: ENTP 3001 or cons. of instr.

ENTP 4080. Entreprenuerial Finance. 3 cr. hrs.
Focuses on the financial aspects of entrepreneurship, from the first decision as to whether or not to undertake an activity, to projecting financial needs, reviewing the trade-offs between alternative financing choices, to harvesting. Topics will include but are not limited to: bootstrapping, the role of angel investors, private placements, venture capital, banking options, commercial financing, public offers (IPOs, PIPEs), factoring, franchising, and joint ventures. Prereq: ENTP 3001 and FINA 3001.

ENTP 4931. Topics in Entrepreneurship. 3 cr. hrs.
Topics may vary. Specific topics will be designated in the Schedule of Classes. Prereq: ENTP 3001.

ENTP 4953. Seminar in Entrepreneurship. 3 cr. hrs.
Prereq: ENTP 3001.

ENTP 4986. Entrepreneurship Internship - Grading Period. 3 cr. hrs.

ENTP 4990. Entrepreneurship Internship for Minors - Grading Period. 3 cr. hrs.
S/U grade assessment. Not available to students enrolled in the College of Business Administration Prereq: ENTP 3001 or concurrent enrollment, declared Entrepreneurship Minor, cons. of prog. dir., cons. of Business Career Center.

ENTP 4995. Independent Study in Entrepreneurship. 1-4 cr. hrs.
Prereq: ENTP 3001 and consent of dept. chair.
International Business

**Program Director: Jamshid C. Hosseini, Ph.D.**

Department of International Business website (http://business.marquette.edu/departments/international-business)

The curriculum for the International Business (IB) major is designed to educate students with a relatively broad knowledge of international commercial enterprises. IB majors can learn about international trade, financial, banking, monetary concepts and issues; import, export and international and regulatory practices; international accounting and taxation; global marketing; and/or management of global entities and human resources. Requiring a double major, students also obtain another major in a functional business field such as accounting, economics, entrepreneurship, finance, information technology, human resources management, marketing, real estate or supply chain management.

### International Business

Required: 12 credits plus an additional major in the college. Double counting of courses for two majors is not permitted.

Select four electives from:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCO 4040</td>
<td>International Accounting</td>
</tr>
<tr>
<td>ACCO 4045</td>
<td>International Taxation</td>
</tr>
<tr>
<td>ECON 4042</td>
<td>International Antitrust and Competition Policy</td>
</tr>
<tr>
<td>BULA 3040</td>
<td>The Legal and Regulatory Environment of IB</td>
</tr>
<tr>
<td>ECON 3040</td>
<td>Global Applied Learning Project: Applied GB</td>
</tr>
<tr>
<td>ECON 4044</td>
<td>International Currency Markets</td>
</tr>
<tr>
<td>ECON 4045</td>
<td>Comparative Economic Systems</td>
</tr>
<tr>
<td>ECON 4046</td>
<td>International Trade</td>
</tr>
<tr>
<td>ECON 4047</td>
<td>Development Economics</td>
</tr>
<tr>
<td>ECON 4951</td>
<td>Marquette Led Travel and Study Abroad in Economics</td>
</tr>
<tr>
<td>ENTP 4041</td>
<td>International Entrepreneurial Sustainability</td>
</tr>
<tr>
<td>FINA 4040</td>
<td>International Finance</td>
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<tr>
<td>HURE 4140</td>
<td>International Human Resources Management</td>
</tr>
<tr>
<td>INBU 4951</td>
<td>Marquette Led Travel and Study Abroad in IB</td>
</tr>
<tr>
<td>INBU 4953</td>
<td>Seminar in International Business</td>
</tr>
<tr>
<td>INBU 4986</td>
<td>International Business Internship - Grading Period</td>
</tr>
<tr>
<td>MANA 4040</td>
<td>International Management</td>
</tr>
<tr>
<td>MARK 4040</td>
<td>International Marketing</td>
</tr>
<tr>
<td>OSCM 4040</td>
<td>Global Logistics Management</td>
</tr>
<tr>
<td>OSCM 4045</td>
<td>Globalization and Global Operations</td>
</tr>
</tbody>
</table>

Total Credit Hours: 12

One of the four electives above must be either ECON 4044 International Currency Markets or ECON 4046 International Trade. A maximum of two international business electives can be economics.

**Note:** BULA 4030 may not double count as Legal elective and IB major elective

**Foreign Language** - Working competency in a least one approved foreign language is required, satisfied by either 1) completing foreign language courses (3001 and another upper division elective) in Arabic, Chinese, French, German, Italian or Spanish; or 2) if passing a reading, writing, speaking and listening working competency test in a foreign language taught at Marquette University as endorsed by the Department of Foreign Languages and Literatures. Permission to take this competency test is granted by the director of International Business Studies.

**Note:** Foreign students whose native language is not English may have the language competency requirement waived subject to the approval of the director of International Business Studies.

**Study or Work Abroad** - Completion of a work or study abroad summer or term program is required. **Note:** A term or academic year abroad may result in more than eight terms needed to complete the business degree.) Approval of the study/work abroad experience is subject to prior, written approval by the director of International Business Studies or IAIM programs.
Courses

INBU 2953. Seminar for International Exchange Students. 0 cr. hrs.
This course is required for all exchange students that are studying at Marquette University for the current semester. Students will be oriented to the college, the educational system and the business practices in the United States. Prereq: Approval of International Business Dir. SNC/UNC grade assessment.

INBU 3986. Internship Work Period. 0 cr. hrs.

INBU 4141. International Business Strategy. 3 cr. hrs.
In this course global business operations and global business decision making and strategy are integrated in a theoretically sound and practically useful manner. The focus of this discussion-based course is to explore various aspects of business entry and sustenance into the global marketplace using the "case method". In assessing their market position and strategic options, many companies face the decisions of a) going global, b) expanding globally, and/or c) competing globally. The course's cases, reading material, exercises, and projects are oriented towards addressing the critical issues surrounding the above options. Prereq: ECON 4044 or 4046, ECON 3001 or ECON 3003, MANA 3001, OSCM 3001, MARK 3001, FINA 3001.

INBU 4931. Topics in International Business. 3 cr. hrs.
Prereq: Jr. stndg.

INBU 4951. Marquette Led Travel and Study Abroad in International Business. 3 cr. hrs.
Course taught in an international setting by Marquette professors and where students earn Marquette credit. Prereq: Cons. of dept. ch.; cons. of International Business Director.

INBU 4953. Seminar in International Business. 3 cr. hrs.
Topic varies. Prereq: Jr. stndg.

INBU 4986. International Business Internship - Grading Period. 3 cr. hrs.

INBU 4995. Independent Study in International Business. 1-4 cr. hrs.
Prereq: Consent of Director of International Business Program.
Marketing

Chairperson: Steve Lysonski, Ph.D.
Department of Marketing website (http://business.marquette.edu/departments/marketing)

The curriculum in marketing is designed to teach students a set of processes for creating, communicating and delivering value to customers and for managing customer relationships in ways that benefit the organizations and its stakeholders. Students learn how to understand present and potential target markets and how to reach them (domestically or internationally) through a strategically designed marketing mix dealing with price, promotion, distribution and product or service development.

Marketing Major

Specific Marketing Course Requirements:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MARK 4060</td>
<td>Marketing Research</td>
<td>3</td>
</tr>
<tr>
<td>MARK 4110</td>
<td>Marketing Management</td>
<td>3</td>
</tr>
<tr>
<td>Three of the following:</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>MARK 4005</td>
<td>Sport Marketing</td>
<td></td>
</tr>
<tr>
<td>MARK 4010</td>
<td>Consumer Behavior</td>
<td></td>
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<tr>
<td>MARK 4020</td>
<td>Integrated Marketing Communications</td>
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<tr>
<td>MARK 4030</td>
<td>Customer Relationship Management</td>
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<tr>
<td>MARK 4040</td>
<td>International Marketing</td>
<td></td>
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<tr>
<td>MARK 4050</td>
<td>Digital Marketing</td>
<td></td>
</tr>
<tr>
<td>MARK 4065</td>
<td>Marketing Analytics</td>
<td></td>
</tr>
<tr>
<td>MARK 4070</td>
<td>Marketing and Society</td>
<td></td>
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<tr>
<td>MARK 4080</td>
<td>Product and Pricing Strategy</td>
<td></td>
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<tr>
<td>MARK 4085</td>
<td>Marketing Channel Strategy</td>
<td></td>
</tr>
<tr>
<td>MARK 4094</td>
<td>Professional Selling</td>
<td></td>
</tr>
<tr>
<td>MARK 4095</td>
<td>Retailing Management</td>
<td></td>
</tr>
<tr>
<td>MARK 4191</td>
<td>Sales Management, Leadership and Strategy</td>
<td></td>
</tr>
<tr>
<td>MARK 4931</td>
<td>Topics in Marketing</td>
<td></td>
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<tr>
<td>MARK 4953</td>
<td>Seminar in Marketing</td>
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<tr>
<td>Four Business electives</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td></td>
<td>27</td>
</tr>
</tbody>
</table>

Courses

MARK 3001. Introduction to Marketing. 3 cr. hrs.
Examines the marketing process in the operations of firms in profit and nonprofit sectors. Environmental forces including consumer characteristics, government regulation and social aspects are explored. Emphasis is given to how firms develop marketing strategies in terms of target market selection, segmentation and marketing mix variables such as product development, promotional methods, price determination and channels of distribution. Ethical aspects of marketing are also given consideration. Prereq: Jr. stndg. and ECON 1103.

MARK 3986. Internship Work Period. 0 cr. hrs.

MARK 4005. Sport Marketing. 3 cr. hrs.
This course examines marketing issues specific to the sports industry. The course considers the application of basic marketing principles to a range of sports organizations, including professional and collegiate, and commercial and public, sponsors and corporations. The course will examine, but not limited to, topics of sport facilities, hospitality management, special events, licensing, merchandising, branding, and sales strategies. Includes a combination of lectures, guest speakers, assigned readings, case studies, research assignments, and special projects. Prereq: MARK 3001.

MARK 4010. Consumer Behavior. 3 cr. hrs.
To learn about the factors that influence consumers' purchasing decisions of services and products. Behavioral science concepts will be examined including perception, motivation, learning, self-concept, personality, attitudes and attitude change, culture, social class, reference groups and the family unit. Application of behavioral concepts (from psychology, sociology, anthropology and economics) to marketing management and marketing research problems, including diffusion of innovations (new products), brand loyalty, consumer satisfaction and consumer decision-making models. Prereq: MARK 3001.
MARK 4020. Integrated Marketing Communications. 3 cr. hrs.
Study of the promotional mix (advertising, sponsorship marketing, point-of-purchase communication, sales promotion, publicity, and personal selling) and other elements of the marketing mix (product/brand, price, distribution) as they speak with one voice in communication between the firm and its customers. Also, application of behavioral sciences, branding, packaging and interactive marketing to marketing communications. Social, legal, ethical and international aspects of marketing communications. Prereq: MARK 3001.

MARK 4030. Customer Relationship Management. 3 cr. hrs.
This course examines different Customer Relationship Management (CRM) programs and shows how to identify strengths and weaknesses associated with these programs. The course will examine, but not limited to, issues of developing an understanding how CRM can be best implemented, developing skills in identifying customer satisfaction and loyalty, organizing an effective customer loyalty program and its implementation. The course includes a combination of lectures, video presentations, guest speakers, assigned readings, case studies, and research assignments. Prereq: MARK 3001.

MARK 4040. International Marketing. 3 cr. hrs.
Takes theoretical, strategic, and ethical approaches to evaluate and understand organizational behaviors; economic, political, cultural and technological developments at local, regional and global levels; country market selection, market entry strategies (exporting, licensing and foreign direct investments) and marketing mix strategies (product, price, supply chain, and integrated marketing communication). Issues related to global market segmentation, targeting and positioning are also examined. Prereq: MARK 3001.

MARK 4050. Digital Marketing. 3 cr. hrs.
Examines the social and technological forces behind modern marketing trends and evolving consumer behaviors. Topics include: social media management & monitoring, omnichannel strategy, search engine optimization, content management, online promotion, and eCommerce. Also explores the expanding role of data analytics and data based marketing strategy. Prereq: MARK 3001.

MARK 4060. Marketing Research. 3 cr. hrs.
To provide a scientific solution to marketing problems this course focuses on qualitative techniques (e.g., focus groups) and quantitative techniques (e.g., survey) for data collection, storing of data in data sets and databases, data analysis using statistical techniques, and interpretation of results. Topics covered include: research analysis, research design, sampling analysis, data collection methods, data storage methods, univariate and bivariate statistical analysis, report writing and the integration of research and marketing management. Prereq: MARK 3001 and BUAD 1560 or MANA 2028. Marketing minors may substitute PSYC 2001 or MATH 1700 for BUAD 1560.

MARK 4065. Marketing Analytics. 3 cr. hrs.
Consists of a combination of exercises, case studies, guest speakers and lectures that give students the analytical tools and the mindset to migrate from a qualitative to a more quantitative brand of marketing. Analytics adds an all-important quantitative edge to the marketing toolbox by helping companies transform data, information and insights into more effective decisions and higher profits. Differs from traditional marketing research courses by focusing on the marketing strategies underlying quantitative analysis. Prereq: MARK 3001, and one of the following: BUAD 1560 or MANA 2028 or MATH 1700 or MATH 4720 or PSYC 2001.

MARK 4070. Marketing and Society. 3 cr. hrs.
Focuses on environments external to the firm which have significant consequences on marketing practice. Evaluates how the marketing system contributes to or impedes the objectives of society. Topics discussed: Consumerism, Law, Marketing Ethics, Ecology, Marketing and Corporate Social Responsibility. Prereq: MARK 3001.

MARK 4080. Product and Pricing Strategy. 3 cr. hrs.
New Product development, competitive strategies and product life cycles as components of effective product management. The environment of pricing strategy and recent developments in pricing decision making as well as the psychological aspects of pricing. Prereq: MARK 3001.

MARK 4085. Marketing Channel Strategy. 3 cr. hrs.
Examines the design, structure, and ongoing management of marketing channels as inter-organizational systems involved in the flow of goods and services from creation to the consumer. Topics include: manufacturing, wholesaling, retailing, facilitating agencies, supply chain logistics, and B2B relationship management as they apply to the distribution of goods and services through marketing channels. Prereq: MARK 3001.

MARK 4094. Professional Selling. 3 cr. hrs.
Professional selling introduces students to the dynamic world of relationship selling. Organized around developing ethical sales skills that will lead to long-term relationships between buyers and sellers. Students learn and practice concepts on preparing for and completing a sales call, focusing on customer analysis, networking, question development, handling objections, negotiations and closing the sale. Classes are highly interactive and designed to develop selling concepts, skills and self-confidence through experiential exercises, role-plays and presentations Prereq: MARK 3001.

MARK 4095. Retailing Management. 3 cr. hrs.
Readings and cases in retail management. Types of retail organizations. Problems of location, buying, merchandise control, and retail promotion. The present state of retailing and a look into the future. Prereq: MARK 3001.

MARK 4110. Marketing Management. 3 cr. hrs.
The application of marketing variables are emphasized in terms of analyzing, planning, implementing and controlling marketing activities for a firm. A major component is understanding how to formulate marketing objectives, policies, programs and strategy for the firm. Experience is given in crafting marketing programs and developing marketing decisions through target market selection and formulation of marketing mix parameters of product, price, place and promotion. The case method is commonly used. Prereq: Sr. stndg., MARK 3001, MARK 4060, and one other MARK course; MARK major or cons. of instr.
MARK 4191. Sales Management, Leadership and Strategy. 3 cr. hrs.
Sales management builds on the framework of professional selling, providing students the opportunity to develop skills needed to be successful leaders in an organization. Using industry-leading cases, students learn and apply skills on designing, organizing, and training a sales force; selling to medium and large accounts; expanding business operations and coaching sales professionals to exceed forecasted goals. Classes are highly interactive and allow for discussion of concepts with fellow students and guest speakers who specialize in sales management Prereq: MARK 4094.

MARK 4931. Topics in Marketing. 3 cr. hrs.
Topic varies. Prereq: MARK 3001.

MARK 4953. Seminar in Marketing. 3 cr. hrs.
Prereq: MARK 3001.

MARK 4986. Marketing Internship - Grading Period. 3 cr. hrs.

MARK 4995. Independent Study in Marketing. 1-4 cr. hrs.
Prereq: Cons. of dept. ch.
Operations and Supply Chain Management

**Department of Management Chairperson: Cheryl L. Maranto, Ph.D.**

Department of Management website (http://business.marquette.edu/departments/management)

The curriculum is built around applied learning and a comprehensive understanding of OSCM processes and further supported by internships. This 'Top Twenty' program is designed to encourage: critical thinking, analytics, problem solving, communication, business writing, technical knowledge and skills needed for positions ranging from entry level positions to leadership development programs.

Operations and Supply Chain Management Major

Specific Operations and Supply Chain Management Requirements:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSCM 4010</td>
<td>Manufacturing Planning and Control</td>
<td>3</td>
</tr>
<tr>
<td>OSCM 4130</td>
<td>Supply Chain Strategy and Practice</td>
<td>3</td>
</tr>
<tr>
<td>Three electives (of which one must be OSCM 4020, OSCM 4025 or OSCM 4040):</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>OSCM 4015</td>
<td>Service Management</td>
<td></td>
</tr>
<tr>
<td>OSCM 4020</td>
<td>Quality and Process Management</td>
<td></td>
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<tr>
<td>OSCM 4025</td>
<td>Purchasing and Supply Management</td>
<td></td>
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<tr>
<td>OSCM 4040</td>
<td>Global Logistics Management</td>
<td></td>
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<tr>
<td>OSCM 4045</td>
<td>Globalization and Global Operations</td>
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</tr>
<tr>
<td>OSCM 4060</td>
<td>Supply Chain Analytics</td>
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<tr>
<td>OSCM 4080</td>
<td>Applied Procurement</td>
<td></td>
</tr>
<tr>
<td>OSCM 4085</td>
<td>Applied Logistics</td>
<td></td>
</tr>
<tr>
<td>OSCM 4931</td>
<td>Topics in Operations and Supply Chain Management</td>
<td></td>
</tr>
<tr>
<td>OSCM 4953</td>
<td>Seminar in Operations and Supply Chain Management</td>
<td></td>
</tr>
<tr>
<td>MANA 3034</td>
<td>Negotiations and New Ventures</td>
<td></td>
</tr>
<tr>
<td>Four Business electives</td>
<td>12</td>
<td></td>
</tr>
</tbody>
</table>

Total Credit Hours 27

Courses

**OSCM 3001. Operations and Supply Chain Management. 3 cr. hrs.**

Examination of the operations and supply chain function in manufacturing and service firms from a managerial perspective. Core concepts and issues include planning, designing and managing operations, and the flow of materials and information from suppliers to customers. Prereq: BUAD 1560 or MANA 2028; Non-business majors: PSYC 2001 or MATH 1700 or MATH 4710 or SOCI 2060 or MEEN 3426.

**OSCM 3986. Internship Work Period. 0 cr. hrs.**


**OSCM 3990. Operations and Supply Chain Management Internship for Minors - Work Period. 0 cr. hrs.**

SNC/UNC grade assessment. Not available to students enrolled in the College of Business Administration Prereq: OSCM 3001 or concurrent enrollment, declared Operations and Supply Chain Management minor, cons. of prog. dir., cons. of Business Career Center.

**OSCM 4010. Manufacturing Planning and Control. 3 cr. hrs.**

Focuses on leading edge techniques used in developing a manufacturing strategy, inventory management, cycle time reduction, production scheduling ERP, JIT/Kanban, synchronous manufacturing, supply chain management and advanced manufacturing systems. Prereq: OSCM 3001.

**OSCM 4015. Service Management. 3 cr. hrs.**

Particular problems and issues of designing, managing and delivering services will be addressed. Issues include service challenge and breakthrough design, productivity, quality, innovation and flexibility, demand and capacity management, manpower planning, scheduling, technology management, strategy and integration. Prereq: OSCM 3001.

**OSCM 4020. Quality and Process Management. 3 cr. hrs.**

A foundation to quality philosophies, principles, techniques and tools is provided. The interrelationship of each is highlighted through addressing customer focus, value and satisfaction; leadership and organizational change; process design, measurement and improvement; and bench marking. Application of decision making, planning and measurement tools will occur. Prereq: OSCM 3001.
OSCM 4025. Purchasing and Supply Management. 3 cr. hrs.
Focuses on the understanding of operational, tactical and strategic role of purchasing and supply management function in an organizational and supply chain management context. Students are taken systematically through an entire process of design and execution of sourcing strategies, supplier evaluation and selection process and design and execution of buyer-supplier relationship strategies. Throughout this process students also learn basics of negotiations and contracting, supply risk management and costing techniques that help them with their careers in purchasing and supply chains. Prereq: OSCM 3001.

OSCM 4040. Global Logistics Management. 3 cr. hrs.
Focuses on global logistics and global trade management, and relates these practices to global supply chain management. Key objectives are to help students think critically about the ways in which global logistics and trade management concepts are fundamental to the overall functioning of the business (regardless of which other disciplines a student may study), and to provide a “vocabulary” for students to carry forward into the rest of their studies and beyond. During the course linkages between operations and other business functions (particularly, finance, accounting, marketing and information technology) will be made. Prereq: OSCM 3001.

OSCM 4045. Globalization and Global Operations. 3 cr. hrs.
Provides an overview of the recent rapid growth of the so-called emerging economies of the world. These include the BRICS nations (Brazil, Russia, India, China, and South Africa) and other countries that are collectively changing the landscape of the global economy. Emerging nations now account for fifty percent of global output and are poised to be the growth markets of the 21st century. Also includes several perspectives on the critical role played by corporations in this fascinating growth story and also material on global operations from the strategic, supply chain, and marketing perspectives. Relevant to business students interested in studying the role of globalization in economic growth. Prereq: OSCM 3001.

OSCM 4060. Supply Chain Analytics. 3 cr. hrs.
Introduction to spreadsheet-based decision modeling in operations and supply chain management, primarily using Microsoft Excel. Exposed to relevant decision models widely applied in industry. Focuses on relevance and application rather than theory. Topics include network and transportation models, linear programs, decision trees, and simulation. Prereq: OSCM 3001.

OSCM 4080. Applied Procurement. 3 cr. hrs.
Combines comprehensive classroom work on the tasks, processes and procedures involved in the procurement function with on-the-job work which executes key procurement functions against real world priorities in a local company or Marquette University Purchasing Department. Student in-class work will be evaluated by the instructor. On-the-job work will be reviewed and supported by professional procurement staff from a local company. The key objectives of the course are (1) to help students understand and think critically about the essential functions of procurement; (2) to execute those functions in a real-world environment; and (3) to add value to their assigned company. By linking the classroom work with applied work addressing real-world needs, the value to both the student and the university will be enhanced. Prereq: OSCM 3001 and consent of instructor.

OSCM 4085. Applied Logistics. 3 cr. hrs.
Entails a combination of traditional classroom lectures with applied work in a real-world setting. The objectives are to provide students with the theoretical foundations of network design and modeling and expose students to the nuances and complexities of network modeling and application in the real world. To these ends, students work in teams on a real-world project in an area company under the supervision of a professional designated by the company. Classroom work will be evaluated by the instructor and applied work will be evaluated by both the work supervisor and the instructor. Prereq: OSCM 3001, OSCM 4040, OSCM 4060 and cons. of instr.

OSCM 4130. Supply Chain Strategy and Practice. 3 cr. hrs.
Presents a synthesis of the principles in strategic and supply chain management, and how supply chain strategies are developed and executed. Developing an appropriate supply chain strategy, one that if correctly executed will help deliver a competitive advantage to a firm, has become a critical process for most, if not all organizations. Prereq: OSCM 3001 and Sr. stndg.; OSCM 4010 and one additional course from OSCM 4020, OSCM 4025 or OSCM 4040.

OSCM 4931. Topics in Operations and Supply Chain Management. 3 cr. hrs.
Topics may vary. Specific topics will be designated in the Schedule of Classes. Prereq: OSCM 3001.

OSCM 4953. Seminar in Operations and Supply Chain Management. 3 cr. hrs.
Prereq: OSCM 3001.

OSCM 4996. Operations and Supply Chain Management Internship - Grading Period. 3 cr. hrs.

OSCM 4990. Operations and Supply Chain Management Internship for Minors-Grading Period. 3 cr. hrs.
S/U grade assessment. Not available to students enrolled in the College of Business Administration Prereq: OSCM 3001 and OSCM 3990 or concurrent enrollment, declared Operations and Supply Chain Management minor, cons. of prog. dir., cons. of Business Career Center.

OSCM 4995. Independent Study in Operational Supply Chain Management. 1-4 cr. hrs.
Prereq: Consent of department Chair.
Real Estate

Department of Finance Chairperson: Anthony Pennington-Cross, Ph.D.
Department of Finance website (http://business.marquette.edu/departments/finance-real-estate)

We train you to become a commercial real estate professional. Real Estate professionals answer questions such as—will a new coffee shop, condo or industrial complex thrive in this neighborhood? Marquette real estate majors work across the country from coast to coast for consulting firms, commercial banks, brokerage companies and development firms, among others. The opportunities are boundless!

Real Estate Major

Required Courses:

REAL 4002  Commercial Real Estate Finance  3
REAL 4120  Cases in Commercial Real Estate  3
REAL 4130  Commercial Real Estate Development  3

Two of the following:  6

REAL 4110  Commercial Real Estate Valuation
REAL 4330  Advanced Real Estate Analysis
REAL 4931  Topics in Real Estate
REAL 4953  Seminar in Real Estate
REAL 4986  Real Estate Internship - Grading Period
FINA 4001  Advanced Financial Management
FINA 4011  Investment Analysis
ECON 4012  Urban and Regional Economics
ACCO 4080  Analysis of Corporate Financial Statements
CNEN 3810  Introduction to Construction Management

Four Business electives  12

Total Credit Hours  27

Courses

REAL 3001. Introduction to Commercial Real Estate. 3 cr. hrs.
Provides the students with an understanding of the principles of property economics and finance, land use regulations and laws and contractual agreements (including for purchase and use of property) that govern commercial real estate. The acquisition, valuation and use of debt on commercial real estate is about the purchase of the site and improvements and the “bundle of rights” to do certain things with them. Prereq: ECON 1103, ACCO 1030.

REAL 3986. Internship Work Period. 0 cr. hrs.

REAL 4002. Commercial Real Estate Finance. 3 cr. hrs.
Provides the student with an in-depth knowledge of real estate finance, real estate investment, and the operation of the real estate capital markets. The objective of the course is to understand the many sources and uses of capital in the commercial real estate industry. The course begins with the mechanics of mortgage finance, followed by a detailed presentation of mortgage underwriting, lender ratios, and discounted cash flow analysis. Prereq: FINA 3001.

REAL 4110. Commercial Real Estate Valuation. 3 cr. hrs.
This course uses the “three approaches” to value process to estimate the fair market value a commercial building in the Milwaukee metropolitan area. The primary focus of this course is on an applied market analysis and the lease-by-lease modeling of tenant income for a commercial property as part of the income approach to value. The sales comparison and cost approaches to value are included in the course and are part of a narrative appraisal. Prereq: REAL 3001 or concurrent enrollment.

REAL 4120. Cases in Commercial Real Estate. 3 cr. hrs.
Focuses on the applied analysis of commercial real estate. Emphasizes the analysis of real estate for purchase, development or financing across the major real estate investment sub-areas (apartments, office, retail and warehouse/distribution). The objective is to take conceptual real estate knowledge and apply it to Harvard Business School and Milwaukee Area cases. Knowledge from the many required finance, marketing, real estate, accounting and other business and economics courses is used to analyze the cases. Prereq: REAL 3001; REAL 4130; REAL 4002, which may be taken concurrently.

REAL 4130. Commercial Real Estate Development. 3 cr. hrs.
Provides students with an in-depth examination of the real estate development process. Focuses on the physical and analytical tools necessary in the real estate development process including: finding the development opportunity, land acquisition/site analysis, building design and public approvals, legal, market analysis, project management, construction, leasing and financing Prereq: REAL 3001; REAL 4002 which may be taken concurrently.
REAL 4330. Advanced Real Estate Analysis. 3 cr. hrs.
Prepares students for two case competitions in which Marquette University participates. Students prepare to analyze, write a report and present a development/redevelopment proposal for a track of land or existing building. Students also prepare by reviewing the previous year’s Eisenberg and NAIOP cases and completing additional assignments. Each team meets twice per week to work with case advisers and team members. Prereq: REAL 3001, REAL 4130; REAL 4002, which may be taken concurrently; cons. of instr.

REAL 4931. Topics in Real Estate. 3 cr. hrs.
Prereq: REAL 3001.

REAL 4953. Seminar in Real Estate. 3 cr. hrs.
Prereq: REAL 3001.

REAL 4986. Real Estate Internship - Grading Period. 3 cr. hrs.
S/U grade assessment. Prereq: Jr. stndg., cons. of prog. dir. and cons. of Business Career Center. REAL 3986 or concurrent enrollment.

REAL 4995. Independent Study in Real Estate. 1-4 cr. hrs.
Prereq: Cons. of dept. ch.
Minors Offered

The above-mentioned minors are intended to provide a business background for students not enrolled in the College of Business Administration. These minors are not available to students in the College of Business Administration.

Minor in Business Administration

Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUAD 1060</td>
<td>Business Applications: Basic Business Analytic Tools</td>
<td>1</td>
</tr>
<tr>
<td>ACCO 1030</td>
<td>Principles of Financial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ACCO 1031</td>
<td>Principles of Managerial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ECON 1103</td>
<td>Principles of Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>ECON 1104</td>
<td>Principles of Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>FINA 3001</td>
<td>Introduction to Financial Management</td>
<td>3</td>
</tr>
<tr>
<td>MANA 3001</td>
<td>Behavior and Organization</td>
<td>3</td>
</tr>
<tr>
<td>MARK 3001</td>
<td>Introduction to Marketing</td>
<td>3</td>
</tr>
</tbody>
</table>

Statistics 2

Total Credit Hours 25

1 BIEN 1100 or CEEN 1210 or GEEN 1130 or GEEN 1200 or GEEN 1210 can be substituted.

2 BUAD 1560 Introduction to Statistics and Business Analytics, MATH 1700 Modern Elementary Statistics, MATH 4720 Statistical Methods, MEEN 3426 Engineering Statistics, BIEN 2100 Statistics for Biomedical Engineering, SOCI 2060 Social Statistics or PSYC 2001 Psychological Measurements and Statistics may be used to satisfy the statistics requirement.

NOTE:

• A C grade or better must be earned in each course except BUAD 1060 Business Applications: Basic Business Analytic Tools where a student must earn a grade of S.

• All minor courses must be taken at Marquette; the assistant dean in the College of Business Administration must approve any transfer of credits.

• Undergraduate students outside the College of Business Administration should limit their enrollment in business courses (excluding and ECON 1103 Principles of Microeconomics and ECON 1104 Principles of Macroeconomics) to no more than 25 percent of the total credit hours applied to their degree programs.

Minor in Human Resources

Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUAD 2100</td>
<td>Accounting and Finance Fundamentals for Non-Business Majors</td>
<td>3</td>
</tr>
<tr>
<td>or ACCO 1030</td>
<td>Principles of Financial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ECON 1103</td>
<td>Principles of Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>HURE 3001</td>
<td>Management of Human Resources</td>
<td>3</td>
</tr>
</tbody>
</table>

Statistics 1

Three of the following HURE electives: 9

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MANA 3035</td>
<td>Diversity in Organizations</td>
</tr>
<tr>
<td>or MANA 3001</td>
<td>Behavior and Organization</td>
</tr>
<tr>
<td>HURE 4003</td>
<td>Employment Law</td>
</tr>
<tr>
<td>HURE 4005</td>
<td>Employee Benefit Systems</td>
</tr>
<tr>
<td>HURE 4010</td>
<td>Strategic Compensation and Rewards</td>
</tr>
<tr>
<td>HURE 4030</td>
<td>Staffing Organizations</td>
</tr>
<tr>
<td>HURE 4080</td>
<td>Training and Development</td>
</tr>
<tr>
<td>HURE 4140</td>
<td>International Human Resources Management</td>
</tr>
<tr>
<td>HURE 4931</td>
<td>Topics in Human Resources</td>
</tr>
<tr>
<td>HURE 4953</td>
<td>Seminar in Human Resources</td>
</tr>
<tr>
<td>HURE 4990</td>
<td>Human Resources Internship for Minors - Grading Period</td>
</tr>
</tbody>
</table>

Total Credit Hours 21
Minor in Information Technology

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUAD 2100</td>
<td>Accounting and Finance Fundamentals for Non-Business Majors</td>
<td>3</td>
</tr>
<tr>
<td>or ACCO 1030</td>
<td>Principles of Financial Accounting</td>
<td></td>
</tr>
<tr>
<td>ECON 1103</td>
<td>Principles of Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>INTE 3001</td>
<td>Introduction to Information Technology</td>
<td>3</td>
</tr>
<tr>
<td>INTE 4052</td>
<td>Data Base Management Systems</td>
<td>3</td>
</tr>
<tr>
<td>INTE 4158</td>
<td>Systems Analysis and Design</td>
<td>3</td>
</tr>
</tbody>
</table>

One of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>INTE 4540</td>
<td>Global Technology Experience</td>
<td>3</td>
</tr>
<tr>
<td>INTE 4051</td>
<td>Business Applications Development</td>
<td></td>
</tr>
<tr>
<td>INTE 4053</td>
<td>Project Management</td>
<td></td>
</tr>
<tr>
<td>INTE 4054</td>
<td>Emerging Technologies</td>
<td></td>
</tr>
<tr>
<td>INTE 4055</td>
<td>Web-based Applications</td>
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</tr>
<tr>
<td>INTE 4056</td>
<td>Information Technology Governance</td>
<td></td>
</tr>
<tr>
<td>INTE 4931</td>
<td>Topics in Information Technologies</td>
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</tr>
<tr>
<td>INTE 4953</td>
<td>Seminar in Information Technology</td>
<td></td>
</tr>
</tbody>
</table>

Total Credit Hours 21

1 MATH 1700 Modern Elementary Statistics, MATH 4720 Statistical Methods, PSYC 2001 Psychological Measurements and Statistics, BUAD 1560 Introduction to Statistics and Business Analytics or SOCI 2060 Social Statistics may be substituted.

NOTE:

- A grade of C or better must be earned in each course.
- All minor courses must be taken at Marquette; the assistant dean in the College of Business Administration must approve any transfer of credits.

Minor in Innovation and Entrepreneurship

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1001</td>
<td>Introduction to Economics ¹</td>
<td>3</td>
</tr>
<tr>
<td>or ECON 1103</td>
<td>Principles of Microeconomics</td>
<td></td>
</tr>
<tr>
<td>ENTP 3001</td>
<td>Understanding Entrepreneurship</td>
<td>3</td>
</tr>
<tr>
<td>BUAD 2100</td>
<td>Accounting and Finance Fundamentals for Non-Business Majors</td>
<td>3</td>
</tr>
<tr>
<td>or ACCO 1030</td>
<td>Principles of Financial Accounting</td>
<td></td>
</tr>
<tr>
<td>ENTP 4010</td>
<td>New Venture Creation</td>
<td>3</td>
</tr>
<tr>
<td>Statistics ²</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

One of the following business electives:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENTP 4020</td>
<td>Consulting to Entrepreneurs</td>
<td></td>
</tr>
<tr>
<td>ENTP 4931</td>
<td>Topics in Entrepreneurship</td>
<td></td>
</tr>
<tr>
<td>MANA 4010</td>
<td>Motivation and Leadership</td>
<td></td>
</tr>
<tr>
<td>MANA 3034</td>
<td>Negotiations and New Ventures</td>
<td></td>
</tr>
<tr>
<td>INTE 3001</td>
<td>Introduction to Information Technology</td>
<td></td>
</tr>
<tr>
<td>OSCM 3001</td>
<td>Operations and Supply Chain Management</td>
<td></td>
</tr>
</tbody>
</table>

¹ MATH 1700 Modern Elementary Statistics, MATH 4720 Statistical Methods, PSYC 2001 Psychological Measurements and Statistics, BUAD 1560 Introduction to Statistics and Business Analytics or SOCI 2060 Social Statistics may be substituted.
Minor in Marketing

Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 1103</td>
<td>Principles of Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>MARK 3001</td>
<td>Introduction to Marketing</td>
<td>3</td>
</tr>
<tr>
<td>MARK 4060</td>
<td>Marketing Research</td>
<td>3</td>
</tr>
<tr>
<td>Statistics</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Three marketing electives</td>
<td>9</td>
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<tr>
<td></td>
<td>Total Credit Hours</td>
<td>21</td>
</tr>
</tbody>
</table>

1 MATH 1700 Modern Elementary Statistics, MATH 4720 Statistical Methods, PSYC 2001 Psychological Measurements and Statistics, BUAD 1560 Introduction to Statistics and Business Analytics may be substituted.

- A C grade or better must be earned in each course.
- All minor courses must be taken at Marquette; the assistant dean in the College of Business Administration must approve any transfer credits.

Minor in Operations Supply Chain Management

Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUAD 2100</td>
<td>Accounting and Finance Fundamentals for Non-Business Majors</td>
<td>3</td>
</tr>
<tr>
<td>or ACCO 1030</td>
<td>Principles of Financial Accounting</td>
<td></td>
</tr>
<tr>
<td>ECON 1001</td>
<td>Introduction to Economics</td>
<td>3</td>
</tr>
<tr>
<td>or ECON 1103</td>
<td>Principles of Microeconomics</td>
<td></td>
</tr>
<tr>
<td>OSCM 3001</td>
<td>Operations and Supply Chain Management</td>
<td>3</td>
</tr>
<tr>
<td>Statistics</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Two of the following:</td>
<td></td>
</tr>
<tr>
<td>OSCM 4010</td>
<td>Manufacturing Planning and Control</td>
<td></td>
</tr>
<tr>
<td>OSCM 4015</td>
<td>Service Management</td>
<td></td>
</tr>
<tr>
<td>OSCM 4020</td>
<td>Quality and Process Management</td>
<td></td>
</tr>
<tr>
<td>OSCM 4025</td>
<td>Purchasing and Supply Management</td>
<td></td>
</tr>
<tr>
<td>OSCM 4040</td>
<td>Global Logistics Management</td>
<td></td>
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<tr>
<td>OSCM 4045</td>
<td>Globalization and Global Operations</td>
<td></td>
</tr>
<tr>
<td>OSCM 4060</td>
<td>Supply Chain Analytics</td>
<td></td>
</tr>
<tr>
<td>OSCM 4080</td>
<td>Applied Procurement</td>
<td></td>
</tr>
<tr>
<td>OSCM 4931</td>
<td>Topics in Operations and Supply Chain Management</td>
<td></td>
</tr>
<tr>
<td>OSCM 4953</td>
<td>Seminar in Operations and Supply Chain Management</td>
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<tr>
<td></td>
<td>Total Credit Hours</td>
<td>18</td>
</tr>
</tbody>
</table>

1 MATH 1700 Modern Elementary Statistics, MATH 4720 Statistical Methods or PSYC 2001 Psychological Measurements and Statistics, BUAD 1560 Introduction to Statistics and Business Analytics may be substituted.

- A C grade or better must be earned in each course.
- All minor courses must be taken at Marquette; the assistant dean in the College of Business Administration must approve any transfer credits.
- ECON 1001 Introduction to Economics cannot be substituted for ECON 1103 Principles of Microeconomics.
Minors Offered

MEEN 3426 Engineering Statistics, MATH 1700 Modern Elementary Statistics, MATH 4720 Statistical Methods, BIEN 2100 Statistics for Biomedical Engineering PSYC 2001 Psychological Measurements and Statistics, BUAD 1560 Introduction to Statistics and Business Analytics, or SOCI 2060 Social Statistics may be substituted.

NOTE:

• A grade of C or better must be earned in each course.
• All minor courses must be taken at Marquette; the assistant dean in the College of Business Administration must approve any transfer of credits.
Other Business Courses

Business Administration Courses

BUAD 1001. Business Day 1. 3 cr. hrs.
An overview of the functions of a for-profit business concern. Students are exposed to the basic concepts of business such as accounting, economics, finance and budgeting, marketing and promotion, operations and the management of human resources. Students manage a simulated business concern and make decisions on issues such as pricing, employment, operations, promotions and ethical situations. Exploration of self-awareness, character development and leadership and how those elements factor into personal development as well as the performance of the business operation. Prereq: Admitted to the College of Business after January 2015.

Application of spreadsheets to identify, define and solve business problems to help support decision making. Students enhance analytical skills primarily through spreadsheet applications (formatting, logical functions, statistical functions and data analysis, charting, goal seek, etc.) Other business tools may be introduced. NOTE: Course should be taken during the first two semesters in the College of Business Administration. Prereq: Enrolled in the College of Business or declared business minor.

BUAD 1560. Introduction to Statistics and Business Analytics. 4 cr. hrs.
Introduction to statistical and business analytic methods used in the analysis of business decisions. Covers issues involving data and data collection, descriptive statistics and data visualization issues. Reviews the use of probability and probability distributions in business decisions. Introduction to sampling and sampling distributions, development of statistical estimation and statistical inference, including confidence intervals for means and proportions, analysis of variance, and various hypothesis tests. Develops correlation, simple linear regression and introduces simple time series analysis and decision analysis methods Prereq: MATH 1400 or MATH 1450; BUAD 1060 or concurrent enrollment.

SNC/UNC grade assessment; course does not fulfill requirements of any major in the College of Business Administration. Prereq: Soph. stndg., and enrolled in the College of Business Administration, cons. of progr. dir., cons. of Business Career Center, and cons. of Executive Assoc. Dean.

Introduces students to basic business concepts and practises with the goal of developing an understanding of the relationship between communication and the various business functions of corporations. Emphasizes the relationship between key corporate functions such as finance, marketing, sales, production, management, and information technology. Available only to students not enrolled in Business Administration. Prereq: Corporate Communications major.

BUAD 2100. Accounting and Finance Fundamentals for Non-Business Majors. 3 cr. hrs.
Fundamentals of accounting and finance for non-business students including how financial decisions affect the outcome of the business. Students become familiar with business terms and procedures including what constitutes revenues, expenses, assets, liabilities and owner's equity. Students also learn the basics of financial statement analysis, cost structures including fixed, variable, breakeven analysis and overhead. Prereq: Not enrolled in the College of Business.

BUAD 2986. Applied Business Learning Experience-Grading Period. 1 cr. hr.
S/U grade assessment; course does not fulfill requirements of any major in the College of Business Administration. Prereq: Soph. stndg., and enrolled in the College of Business Administration, cons. of progr. dir., cons. of Business Career Center, and cons. of Executive Assoc. Dean.

BUAD 3089. Business and the Non-Profit Sector. 1-3 cr. hrs.
This course involves business service to a community non-profit organization and benefits the student by supplying direct sustained involvement with non-profit and social service organizations. Students will be expected to apply their business education, especially in their majors, to community and social issues. S/U grade assessment. Prereq: Enrolled in Business Administration and Jr. stndg; and cons. of instr.

Students apply written and oral communication skills in discipline-based competitions. Preparation includes analysis of the domestic and global financial markets. Presentation requires real-time application of critical thinking and problem solving skills. Prereq: Jr. stndg. and cons. of dept. ch.

BUAD 3986. Business Administration Internship - Work Period. 0 cr. hrs.
SNC/UNC grade assessment. Prereq: Jr. stndg., cons. of prog. dir. and cons. of internship dir.

BUAD 3987. Internship Work Period. 0 cr. hrs.
For students completing a full-time internship, with no other enrollment, during the fall or spring semester. Allows students to remain in full-time status for deferment purposes, while completing the internship; however, there is no financial aid provided for this class. SNC/UNC grade assessment. Prereq: Jr. stndg., cons. of prog. dir. and cons. of internship dir.

BUAD 4931. Topics in Business Administration. 3 cr. hrs.
Prereq: Jr. stndg.

BUAD 4953. Seminar in Business Administration. 3 cr. hrs.
Prereq: Jr. stndg.

BUAD 4986. Business Administration Internship - Grading Period. 3 cr. hrs.
S/U grade assessment. Prereq: Jr. stndg., cons. of prog. dir. and cons. of internship dir.
BUAD 4987. Business Administration Internship - Grading Period. 3 cr. hrs.
S/U grade assessment. Prereq: Jr. stndg., cons. of prog. dir. and cons. of internship dir.

BUAD 4995. Independent Study in Business Administration. 1-4 cr. hrs.
Prereq: Consent of Assistant Dean.

Business Law Courses

BULA 3001. Legal Environment of Business. 3 cr. hrs.
A review of basic business law principles in the regulatory environment of government and society. Coverage includes the administrative environment, jurisdiction, litigation and arbitration remedies, torts, contracts, both commercial instruments and secured transaction under the UCC, and international law. Prereq: Jr. stndg.

BULA 3040. The Legal and Regulatory Environment of International Business. 3 cr. hrs.
A review of the legal environment of international business and of the structure and organization of foreign legal systems, international trade agreements, associations and regulatory agencies. The course will include a comparative analysis of the legal principles, issues, conventions, and competitive influences affecting international business activities as conducted by U.S. multinational enterprises when operating outside of the United States; and, by foreign multi-national enterprises when operating within the United States. In addition, the course will review international dispute resolution mechanisms as applied by the international Court of Justice, the European Union, and various arbitral organizations. Prereq: Jr. stndg.

BULA 4001. Business Law. 3 cr. hrs.
A review of the principles of law related to business organizations with emphasis upon agency, partnership and corporation law principles; UCC contract concepts related to the sale of goods, and property law related to personal and real property (land use regulation), bailments, wills, trusts and estates, insurance environment and employment law. Prereq: BULA 3001.

BULA 4931. Topics in Business Law. 3 cr. hrs.
Prereq: BULA 3001.

BULA 4953. Seminar in Business Law. 3 cr. hrs.
Prereq: BULA 3001.

BULA 4995. Independent Study in Business Law. 1-4 cr. hrs.
Prereq: Consent of department chair.

Leadership Education Develop Courses

LEAD 1000. Foundations for Business Leadership. 1 cr. hr.
This course provides undergraduate business students with an introductory overview of the major functional areas of business, including information regarding potential career options in these functional areas. In addition, students receive information regarding the expectations and standards that they must achieve in order to attain their goals in the business world. The course will also include topics ranging from developing computer literacy skills and orientation to the college and its policies. S/U grade assessment. Prereq: Enrolled in Business Administration; first semester freshman.

LEAD 1050. Business Leadership Professional Development. 0 cr. hrs.
Provides students with an overview of the functional areas of business including potential career options in these functional areas. In addition, students receive information on career planning, networking and professional business etiquette. Prereq: Enrolled in the College of Business.

Focuses on students developing their business skills to enter and exceed in the business community. Emphasis is placed on communication (both verbal and written, as well as presentation skills); practical application of ethics; formal and non-formal dining etiquette; interviewing (for an internship or job); and interacting with business executives in a real life situation with representatives from a student's chosen major(s). S/U grade assessment. Prereq: Enrolled in Business Administration and Soph. stndg. and LEAD 1000 or LEAD 1050; BUAD 1060 which may be taken concurrently; BUAD 1001 which may be taken concurrently.

LEAD 3000. Strategies for the Future and Dealing in the Business Community. 1 cr. hr.
Deals with the future decisions many students will make in their business careers. Students are presented graduate opportunities available to them (MS, MBA, Law, etc.); legal considerations for all business people; interacting effectively in the business environment; transitioning between jobs; dressing for success; and additional ethical training. S/U grade assessment. Prereq: Enrolled in the College of Business Administration; Jr. stndg.; LEAD 2000; ACCO 1031 and CMST 2300 both of which may be taken concurrently.

Management Courses

MANA 3001. Behavior and Organization. 3 cr. hrs.
Behavior of people individually and in groups. Emphasizes organization environment, communication, motivation, supervision and productivity. Develops fundamentals of organization theory, structure and administration. Prereq: Jr. stndg.

MANA 3002. Business and Its Environment. 3 cr. hrs.
Overview of social, political and legal opportunities and constraints influencing business decision-making; social trends and underlying causes, including changes in population and income distribution and their business significance; patterns of change in political strength of identifiable groups on social, geographic and economic interest bases; antitrust, trade regulation and the legal system. Prereq: Jr. stndg.
MANA 3034. Negotiations and New Ventures. 3 cr. hrs.
This course examines the art and science of negotiations with the aim of developing student's negotiation abilities. This development will be achieved through readings, discussion, and active participation in negotiation exercises. This course is designed to complement the skills learned in other business courses. Representative negotiations to be completed in the course include salary negotiations, car and home purchases, customer contracts, vendor contracts, venture capital arrangements, and partnership agreements among others. Prereq: Jr. stndg.; Restricted to College of Business Administration students only.

MANA 3035. Diversity in Organizations. 3 cr. hrs.
Addresses the personal and managerial implications of diversity in organizations. The course will incorporate both a cognitive and experiential understanding of diversity and group differences. We examine demographic trends in the workforce, differentiate cultural practices and values among diverse groups, explore the concepts of social identity and privilege, and discuss strategies for dealing with discrimination and stereotyping. Prereq: Jr. stndg. Same as MANA 3035.

MANA 4010. Motivation and Leadership. 3 cr. hrs.
Central issues in motivation and leadership at work, and applying theories and concepts of organizational behavior will be addressed. Specific issues may include theories of motivation, the impact of various reward structures, employee participation programs, the management of poor performers, and approaches to leadership. These topics are addressed from both theoretical and applied perspectives. Prereq: MANA 3001.

MANA 4040. International Management. 3 cr. hrs.
Present and future trends in the international commercial arena. The course examines international trading trends for major sectors of the U.S. economy. This course differentiates international from domestic management. Prereq: Sr. stndg.

MANA 4101. Strategic Management. 3 cr. hrs.
Requires a knowledge of all functional areas. Broad involvement in management decision-making process. Integrates functional areas through analysis of actual business case histories and related readings. Class discussion and written reports. Management game used when appropriate. Prereq: Sr stndg. and ECON 3001 (or ECON 3003) and FINA 3001 and MANA 3001 and OSCM 3001 and MARK 3001; MANA 3002 is NOT a prerequisite.

MANA 4931. Topics in Organizational Management. 3 cr. hrs.
Prereq: Jr. stndg.

MANA 4953. Seminar in Management. 3 cr. hrs.
Prereq: Jr. stndg.

MANA 4995. Independent Study in Management. 1-4 cr. hrs.
Prereq: Cons. of dept. ch.
College of Communication

From the Dean

Diederich College of Communication website (http://diederich.marquette.edu)

Welcome!

Innovation and revolutionary changes are happening in the field of communication and students in the J. William and Mary Diederich College of Communication study and practice in this creative and exciting discipline. Through our academic programs, students actively engage with award-winning faculty and media professionals to integrate theory with new practices and develop critical thinking skills. With our state-of-the-art technology in emerging and multiplatform media, our location in the media center of a vibrant urban area, and opportunities to practice and train in diverse local and international communication venues, we are an exceptional place to study this challenging, creative and exciting discipline.

Students gain knowledge, skills and hands-on training across a wide range of communication interests — from developing marketing campaigns for non-profits to investigative in-depth reporting for online news sites, from designing sets for main stage theatre productions to creating a documentary film. Our eight degree programs in Advertising, Communication Studies, Corporate Communication, Digital Media, Journalism, Media Studies, Public Relations and Theatre Arts offer challenging and enlightening courses taught by outstanding faculty and professionals, as well as opportunities for hands-on experiences in student media, study abroad programs, professional internships, clubs and more.

What makes us unique? We’ve been providing journalism education for over 100 years. Our theatre and performing arts programs are accredited by the National Association of Schools of Theatre. A $28 million endowment from the Diederich family in 2005 not only enhanced our national reputation, but continues to enable us to enhance learning as well, by bringing outstanding leaders in communication into the classroom, keeping instruction and technology current, inviting guest directors and acting groups for theatre productions and supporting transformational experiences for our students. Exciting programs like the O’Brien Fellowship, Neighborhood News Service, Insight Summit Series and theatre for young audiences encourage public service and community outreach.

We stress the integration of theory and practice, working to build an understanding of human behavior, faith and culture. A degree from the Diederich College of Communication prepares students to use their communication skills to lead, inspire and make a difference.

Ana C. Garner, Ph.D.
Interim Dean, Diederich College of Communication

College Mission Statement

The Diederich College of Communication advances knowledge and prepares students for intellectual, artistic, professional and ethical leadership in a complex technological and multi-cultural world. The College uses a core of common knowledge, values and communication skills to improve understanding of communication as a cultural and social process and to develop the skills necessary for success in constantly changing information environments. Specifically, we are committed to learning centered on critical thinking, theoretical development, aesthetic judgment and evaluation, professional skills and standards, socio-cultural impact and relationships and the ethical and moral questions facing the field.
Degrees Offered

Marquette University confers the degree of bachelor of arts on those students who have satisfactorily completed one or more of the following majors: advertising, communication studies, corporate communication, digital media, journalism, media studies, public relations and theatre arts. Students who successfully complete the Comprehensive Honors (p. 47) curriculum may earn a degree of honors bachelor of arts.
Majors and Minors

Majors

The Diederich College of Communication offers majors in advertising, communication studies, corporate communication, digital media, journalism, media studies, public relations and theatre arts. Specific major requirements and typical four-year programs are listed within each of the major sections.

Students who have not chosen their major at the time of admission to the college should do so no later than the second term of the sophomore year. Advisers are assigned to students based on the major. Students can declare their major in the college records office.

Minors

Students in the Diederich College of Communication are required to complete a minor or second major. Some students choose a minor outside of the communication field, such as an advertising major with a marketing minor, or a communication studies major with a psychology minor. Other students choose a minor within communication, such as a journalism major with a digital media minor, or a theatre major with a public relations minor. Minors are listed by college within this bulletin, and the Diederich College of Communication offers minors in advertising, communication studies, corporate communication, digital media, public relations and theatre arts, as well as dance, film, fine arts and music. Some restrictions may apply when combining majors and minors within the college.

Students can also complete an interdisciplinary minor composed of a minimum of 18 hours of course work complementary to the major. Courses which comprise the interdisciplinary minor are selected by the student, approved by the adviser and subject to the approval of the Diederich College of Communication undergraduate curriculum committee and the associate dean.
Academic Regulations

Students in the Diederich College of Communication are expected to comply with the academic requirements and regulations listed in the university section of this bulletin (http://bulletin.marquette.edu/undergrad/academicregulations) and must fulfill the graduation requirements stated in the bulletin issued the year they entered Marquette. Students who have interrupted their enrollment for two or more consecutive terms, follow the requirements and regulations listed in the bulletin in effect during the academic year of their return. (Exceptions are made for students who interrupted their enrollment to serve in the Armed Forces).

Academic Dishonesty

The college adheres to the University Academic Integrity Policy (p. 50) found in the university section of this bulletin. Ethical behavior is essential to any communication professional and it is expected of students in the Diederich College of Communication. Cheating, plagiarism, unapproved collaboration or falsifying work in whole or in part are infractions that can result in a failing grade for an assignment and/or a course or even dismissal from the college.

Academic Dismissal/Probation/Academic Alert (CAA)

Academic Dismissal

The Diederich College of Communication adheres to the University Academic Censure Policy (p. 55).

Students admitted to the Diederich College of Communication are expected to meet college academic standards. Academic performance is monitored carefully by the college, and students who fail to maintain steady progress or demonstrate adequate achievement will be subject to academic censure.

In addition, any internal transfer student who has his/her ‘Required to Withdraw for Academic Reasons’ appeal approved by the college will be reinstated or readmitted as an undeclared major on probation for a minimum of one semester and special conditions will be prescribed in writing at the time of the student’s transfer into the college. The internal transfer student who fails to fulfill the specified terms of the conditions, will be required to withdraw for academic reasons at the end of the semester and there is no guarantee any future appeal will be upheld.

Academic Probation

Undergraduate students in academic difficulty are placed on academic probation by the Diederich College of Communication. Students in the college are expected to maintain a C (2.000) academic average overall, and those who earn a GPA below 2.000 for the term or otherwise fail to maintain progress necessary to meet university and college graduation requirements are subject to academic censure. A student on academic probation is directed as to what academic outcome she/he is expected to attain in the subsequent semester in order to continue enrollment.

College Academic Alert (CAA)

Students admitted to the Diederich College of Communication are expected to meet college academic standards and maintain good academic standing. Academic performance is monitored carefully by the Committee on Scholastic Actions, and students either not maintaining steady progress or not demonstrating adequate achievement will be barred from future registration by a College Academic Alert (CAA) registration hold. That is,

The bases for committee review are:

- grade point average (GPA) deficiency
- inadequate progress
- grades of CD, D, F, I, W, WA, UW or ADW
- the number of semesters on college probation
- the violation of special conditions

Therefore, it is possible that a student will be barred from registration by a CAA even though the student’s cumulative GPA exceeds 2.000. Students concerned about their academic progress should consult the college office.

Students placed on CAA status will be notified by letter or email of the committee’s decision and of the appeal process. If an appeal is approved, special conditions may be prescribed in writing at the time of the student’s reinstatement or readmission into the college. Conditions may also be prescribed in writing in the case of a student whose course performance or failure to follow academic advice warrants such action. All students to whom conditions have been specified will be subject to committee review and possible CAA restriction should they fail to fulfill the specified terms. In addition, any internal transfer student who has his/her CAA appeal approved by the college will be reinstated or readmitted as an undeclared major on probation for a minimum of one semester and special conditions will be prescribed in writing at the time of the transfer into the college. The internal transfer student who fails to fulfill the specified terms of the conditions, will be subject to CAA restriction at the end of the semester and there is no guarantee any future appeal will be upheld.

If a student’s appeal is denied, the student may request to enroll in another college via the process outlined in the University Academic Censure Policy (http://bulletin.marquette.edu/undergrad/academicregulations/#AcademicCensure) of this bulletin, and if accepted, the CAA hold will be removed after transfer into the new college.
Unless the CAA is removed via the individual colleges’ appeal process, the student may not register for courses at Marquette and may be dropped from any classes for future terms in which he/she is registered.

Advisers
Each student in the college is assigned a faculty adviser with whom the student should confer at least once each term. Among other duties, the faculty advisers assist students in planning and accomplishing their programs of study. However, it is wholly each student’s responsibility to know and fulfill the requirements for graduation specified for his or her selected program.

Attendance
Because absence from class will prevent a student from getting the full benefit of a course and because in many courses, each student’s involvement contributes to the learning process for all other students in the class, the college has adopted the University Attendance Policy (p. 50) for all of its undergraduate courses.

Background Checks, Drug Testing
Some degrees, majors and/or courses may require a student to submit to a criminal background check and/or drug testing. The results of those checks and/or tests may affect the student’s eligibility to continue in that degree, major and/or course.

CD and D Grades
Grades of CD in courses offered by the Diederich College of Communication will be accepted toward majors and/or minors offered by the college provided the student receiving the CD grade has a minimum grade point average of 2.000 in the major or minor. Grades of D generally do not fulfill the credit hour requirement for a major or minor in the Diederich College. Students having received a grade of D in a Diederich College of Communication course, should contact the department chair who will determine whether or not the course can be accepted or suggest that the course be repeated or replaced by a substitute course. If a student receives a grade of CD or D in a major or minor course offered by another college on campus, that department chair must be consulted. Credit is given only once for repeated courses. See the University Repeated Courses Policy (p. 72).

Professional Standards
All written work and oral presentations produced by students in all classes under the jurisdiction of the Diederich College of Communication are expected to conform to professional standards of lucidity, coherence, grammar, spelling and punctuation. All instructors in all classes under the jurisdiction of the college will consider the factors listed above, as well as substance, in grading written and oral presentations.

Transfer Credit Policy
Students planning to take course work at other institutions should obtain college approval before enrolling. Approval will be based on a review of course descriptions in the current bulletin of the college or university at which the courses will be taken. The student should present a bulletin or website address with such information at the time approval is sought. If prior approval is not obtained, there is no guarantee that credits earned will be accepted by Marquette University. Approval forms may be obtained at the college records office.

In accordance with the University Transfer Credit Policy (p. 20), the Diederich College of Communication will grant credit for courses taken for a grade and completed at a C or better. Only credits will transfer, not grades. Courses completed in a quarter-hour system will be converted to semester credits. A Marquette equivalent will be specified for each transferable course. Some transferable courses, for which there is no discernible Marquette equivalent, will be awarded credit using “generic” numbers such as 9290-9299 and 9390-9399. These credits will count toward the degree and may fulfill college core, major or minor requirements. However, they will not fulfill any requirement where a specific course number (i.e. PHIL 1001 Philosophy of Human Nature or THEO 1001 Introduction to Theology) has been indicated. Contact the director of student records with any questions or concerns regarding transfer credits.

Accreditation
The college’s theatre arts program is accredited by the National Association of Schools of Theatre.
Graduation Requirements

Amount and Quality of Work

Candidates for a degree must earn a minimum of 120 credit hours. Candidates must also earn a minimum number of grade points equal to twice the number of credit hours attempted at Marquette (2.000 grade point average). Lower-division courses are numbered 1000 to 2999; upper-division courses are numbered 3000 to 4999. Thirty-two hours of credit in upper-division courses must be earned by candidates for a degree.

Students may be required to submit a portfolio or take part in some other non-credit activity to satisfy Diederich College of Communication or departmental assessment requirements.

Applications for graduation are submitted via the Student Center in CheckMarq (https://checkmarq.mu.edu) by the deadline indicated in the Academic Calendar.

It is the responsibility of students to know and fulfill all university and college requirements, including those outlined in the University Graduation Policy (p. 68) in this bulletin.
Degree Requirements

General Degree Requirements

Candidates for the baccalaureate degree must complete a minimum of 120 credit hours including the following requirements:

<table>
<thead>
<tr>
<th>Area</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Core of Common Studies</td>
<td>36</td>
</tr>
<tr>
<td>Diederich College of Communication Curriculum</td>
<td>19-21</td>
</tr>
<tr>
<td>Major</td>
<td>33-41</td>
</tr>
<tr>
<td>Minor (or Second Major)</td>
<td>18-24</td>
</tr>
</tbody>
</table>

University Core of Common Studies (UCCS)

See the University Core of Common Studies section of this bulletin.

Examining the World:
- 6 credits Rhetoric (R)
- 3 credits Mathematical Reasoning (MR)

Engaging the World:
- 3 credits Diverse Cultures (DC)
- 3 credits Histories of Cultures and Societies (HCS)
- 3 credits Individual and Social Behavior (ISB)
- 3 credits Literature/Performing Arts (LPA)
- 3 credits Science and Nature (SN)

Evaluating the World:
- 6 credits Human Nature and Ethics (HNE)
- 6 credits Theology (T)

Note: Consult the Core of Common Studies website (http://www.marquette.edu/core-of-common-studies) for an updated list of approved core courses.

Diederich College of Communication Curriculum

The Diederich College of Communication builds on the foundational educational experience provided by Marquette’s Core of Common Studies. It does this through a college curriculum that amplifies and deepens the knowledge, skills and values imparted to students in the nine knowledge areas of the Common Core, and by offering students the opportunity to develop specialized knowledge and skills in a variety of undergraduate majors and minors. The Diederich College of Communication thereby extends the student’s core of common studies experiences, and focuses further learning in pursuit of a specialized degree. College of Communication students are required to take the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMST 1000</td>
<td>Introduction to Communication</td>
<td>3</td>
</tr>
<tr>
<td>COMM 1050</td>
<td>Communication Pathways</td>
<td>1</td>
</tr>
<tr>
<td>COMM 1100</td>
<td>Contemporary Presentation</td>
<td>3</td>
</tr>
<tr>
<td>COMM 1200</td>
<td>Media in Society</td>
<td>3</td>
</tr>
<tr>
<td>COMM 2500</td>
<td>Introduction to Communication Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>6-8 credit hours in Foreign Language or Diverse Cultures</td>
<td>6-8</td>
<td></td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td></td>
<td>19-21</td>
</tr>
</tbody>
</table>

Foreign Language/Diverse Cultures Requirement

Students must complete two semesters of foreign language or Diverse Cultures courses and can fulfill this requirement by taking two foreign language courses, two UCCS approved Diverse Cultures courses, or one semester of foreign language and one semester of approved Diverse Cultures courses. The two semesters of foreign language can be from the same language or from two different languages. These courses cannot also be used to fulfill any UCCS requirements. Students who have never studied a foreign language or who wish to pursue a new language must begin with level 1001. Students who wish to continue studying the same language begun in high school must complete the Foreign Language Placement Exam. On the basis of this exam, students will be placed in the appropriate language course. For further details on the placement exam in French, German and Spanish see the university section on Placement in Foreign Languages or visit the Department of Foreign Languages and Literature’s website (http://www.marquette.edu/fola).
Minor Requirement

Communication students must complete a minor or a second major. More information regarding minors is contained in the Majors and Minors Overview (p. 414) section of this bulletin.
Student Media

Student media at Marquette operates out of Johnston Hall and provides opportunities for undergraduate and graduate students to develop skills and gain experience creating multimedia content in different genres and using different storytelling tools and platforms. All student media operations are organized under the umbrella of the Marquette Wire (marquettewire.org) – a continuously updated website that also serves as a portal to the other divisions of student media, all of which are staffed and managed by students, with professional advice and some administrative assistance provided by a full-time faculty member.

Marquette Journal
The Marquette Journal is a magazine published several times a year, both online and in print, that provides a platform for in-depth reporting, features, photography, fiction, poetry and graphic arts projects. The Journal seeks to promote creative expression and intellectual exploration while offering opportunities for students to gain experience in magazine editing, writing, design and production.

Marquette Radio (MUR)
Marquette Radio provides music, news, talk and entertainment content that is streamed live via the Wire and is distributed to residence halls and other campus buildings via cable. Students MUR gain experience in audio news production, announcing, program development and management. The station broadcasts seven days a week during the academic year from its studios in Johnston Hall.

Marquette Tribune
The Marquette Tribune has been the official campus newspaper since 1916 and has won dozens of regional and national awards for excellence. It is published weekly during the school year and provides news, opinion, features and entertainment of interest to students, faculty, staff and alumni of the university. Much of its content also appears on the Wire and is regularly distributed via social media.

Marquette University Television (MUTV)
MUTV is an entirely student-run station that provides news, sports and entertainment programming to the campus community via closed circuit channel 99, and to general audiences via the Wire and YouTube. Students use state-of-the-art technology to produce television programs using both field techniques and the two color studio spaces located in Johnston Hall.

Marquette Wire
The Wire serves as the principal source of news, opinion and entertainment content for the Marquette community. The staff takes a digital-first approach to news reporting and often break stories on the Wire and through the use of social media to provide readers with the timeliest information possible. Student media staff members also take advantage of this online platform to present stories blending text, audio, video and graphics.

Student Media Advertising
Student Media Advertising functions as a professional agency that sells advertising to support all student media operations. It also publishes a housing guide, provides specialized marketing services, and manages Marquette Living (marquetteliving.org) – an online resource for students seeking roommates or housing.
Student Organizations

Advertising Club
The purpose of the Marquette University Advertising Club is to promote better understanding of the functions of advertising, sales promotion and marketing communication; to stimulate and encourage advertising professionalism across the Marquette community through advertising education; to promote career possibilities in advertising; to apply the skills, creativity and energy of advertising in helping to solve social problems and to promote fellowship and the free exchange of ideas. The club is affiliated with the American Advertising Federation and the Business Marketing Association. Membership is open to all students interested in advertising, communication and marketing.

College Student Council
The Diederich College of Communication Student Council integrates social and academic student activities across the college. The council provides opportunities in a wide variety of leadership positions.

Debate Team
Debate is open to all interested undergraduate students and accommodates students with little or no academic debate experience as well as those with sufficient ability and experience to step immediately into national caliber competition. Debate is designed as an outlet for students who are interested in developing research and argumentation skills in a competitive environment. The debate team competes in tournaments on college and university campuses across the country.

Honors Societies

Lambda Pi Eta
Lambda Pi Eta is an honorary society that also serves as a service organization to the college and local community. It is sponsored by the National Communication Association and honors outstanding full-time undergraduate students who are currently pursuing a major or minor housed in the Diederich College of Communication. For eligibility, students are required to achieve a 3.250 GPA in their major or minor, a 3.000 overall GPA and have completed 12 credit hours in the major or minor. Benefits include the possibility of attending/participating in a regional communication conference and/or in the annual National Communication Association conference, as well as the privilege of being a member of the society.

Kappa Tau Alpha
A Marquette chapter of Kappa Tau Alpha, the national honor society for journalism and mass communication, was established at Marquette in 1929. Undergraduate students majoring in advertising, broadcast and electronic communication, journalism and public relations who are in the upper ten percent scholastically in their junior or senior year are eligible for membership. Graduate students in the upper ten percent scholastically in their group who have completed 12 hours in journalism or mass communication are also eligible for membership. Selections are made annually.

Marquette University Players
The Marquette University Players invites participation by students from across the campus, regardless of major. Student members participate in studio productions each academic year.

Professional Societies

Public Relations Student Society of America
The Marquette University Public Relations Student Society of America (PRSSA) chapter provides students with a better understanding of public relations in a corporate as well as nonprofit setting. The club receives the professional guidance offered by the Wisconsin Chapter of Public Relations Society of America (PRSA). As members of the PRSSA, students are able to actively participate within the professional ranks through field trips and attendance at PRSA functions. Membership is open to all students interested in public relations.

Society of Professional Journalists
The Marquette Chapter of the Society of Professional Journalists (SPJ) is affiliated with the national organization of SPJ and assists members in establishing professional journalism contacts, participating in professional meetings and activities and maintaining awareness of crucial issues in professional journalism.
Advertising

Chairperson: Daradirek (Gee) Ekachai, Ph.D.

The advertising major teaches students to build brands in a global marketplace. To do that means engaging consumers, thinking strategically, and gaining critical insights in order to create content that moves consumers to action—whether it be casting a vote, buying a product, visiting a website, retweeting a post, making a donation in support of a cause, building brand advocacy, etc. Students also learn the social, legal, and ethical implications of advertising in a complex world.

The curriculum is both conceptual and applied with foundational courses in copywriting, account planning, design, media strategy and campaigns with an array of electives in areas such as sports promotion, mobile communication, social and emerging media, digital analytic, and international communication, to name a few. These courses and a required internship allow students to specialize in a chosen area and develop a professional network.

Advertising Major

A total of 36 credits of course work must be completed for the major in advertising. Students with a major in advertising cannot take more than 48 credits in the mass communication areas (ADVE, COMM, DGMD, JOUR and PURE) and are required to take 72 credits outside of mass communication areas. The following courses must be completed toward the 36 credits:

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADVE 1400</td>
<td>Advertising Principles</td>
<td>3</td>
</tr>
<tr>
<td>ADPR 2100</td>
<td>Communication Design Toolbox</td>
<td>3</td>
</tr>
<tr>
<td>ADPR 2200</td>
<td>Media Writing</td>
<td>3</td>
</tr>
<tr>
<td>ADPR 3986</td>
<td>Internship in Advertising and Public Relations</td>
<td>3</td>
</tr>
<tr>
<td>ADVE 3000</td>
<td>Advertising Research and Account Planning</td>
<td>3</td>
</tr>
<tr>
<td>ADVE 3400</td>
<td>Advertising Copywriting</td>
<td>3</td>
</tr>
<tr>
<td>ADVE 4100</td>
<td>Advertising Media Planning</td>
<td>3</td>
</tr>
<tr>
<td>ADVE 4997</td>
<td>Advertising Campaigns</td>
<td>3</td>
</tr>
<tr>
<td>COMM 3800</td>
<td>Media Law</td>
<td>3</td>
</tr>
<tr>
<td>COMM 3900</td>
<td>Ethical Problems of Mass Communications</td>
<td>3</td>
</tr>
</tbody>
</table>

Choose two electives (6 credits) from ADVE, PURE, ADPR and/or any of the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCOM 2000</td>
<td>Issues in Corporate Communication</td>
</tr>
<tr>
<td>CCOM 4700</td>
<td>Corporate Advocacy</td>
</tr>
<tr>
<td>CMST 3410</td>
<td>Intercultural Communication</td>
</tr>
<tr>
<td>CMST 4260</td>
<td>Communication Technologies in the Workplace</td>
</tr>
<tr>
<td>CMST 4270</td>
<td>Communicating in Multinational Organizations</td>
</tr>
<tr>
<td>CMST 4400</td>
<td>Cross-Cultural Communication in the United States</td>
</tr>
<tr>
<td>DGMD 2205</td>
<td>Introduction to Digital Media Production</td>
</tr>
<tr>
<td>DGMD 2250</td>
<td>Intermediate Digital Media Production</td>
</tr>
<tr>
<td>DGMD 2335</td>
<td>Introduction to Scriptwriting</td>
</tr>
<tr>
<td>DGMD 2555</td>
<td>Corporate Media</td>
</tr>
<tr>
<td>DGMD 2565</td>
<td>The Business of Entertainment</td>
</tr>
<tr>
<td>DGMD 2710</td>
<td>Sound Design</td>
</tr>
<tr>
<td>DGMD 3510</td>
<td>Sales and Promotion</td>
</tr>
<tr>
<td>ENTP 3001</td>
<td>Understanding Entrepreneurship</td>
</tr>
<tr>
<td>JOUR 1200</td>
<td>Basic News Photography</td>
</tr>
<tr>
<td>PSYC 3201</td>
<td>Introductory Social Psychology</td>
</tr>
<tr>
<td>THAR 1150</td>
<td>Acting for Non-Theatre Majors</td>
</tr>
</tbody>
</table>

Total Credit Hours 36

The following courses are also required but do not count as hours in the major:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMST 3300</td>
<td>Persuasion</td>
<td>3</td>
</tr>
<tr>
<td>ECON 1103</td>
<td>Principles of Microeconomics</td>
<td>3</td>
</tr>
<tr>
<td>MARK 3001</td>
<td>Introduction to Marketing</td>
<td>3</td>
</tr>
</tbody>
</table>
PSYC 1001  General Psychology  3
And one of the following:  3
  COSC 1000  Introduction to Computer Science
  MATH 1700  Modern Elementary Statistics
  PSYC 2001  Psychological Measurements and Statistics
  BUAD 1560  Introduction to Statistics and Business Analytics

Total Credit Hours  15

Typical Program for Advertising Majors

**Freshman**

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 1050</td>
<td>1</td>
<td>COMM 1100</td>
<td>3</td>
</tr>
<tr>
<td>CMST 1000</td>
<td>3</td>
<td>COMM 1200</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1001</td>
<td>3</td>
<td>ADVE 1400</td>
<td>3</td>
</tr>
<tr>
<td>UCCS History</td>
<td>3</td>
<td>Foreign Language or UCCS Diverse Culture</td>
<td>3-4</td>
</tr>
<tr>
<td>Foreign Language or UCCS Diverse Culture</td>
<td>3-4</td>
<td>PHIL 1001</td>
<td>3</td>
</tr>
<tr>
<td>THEO 1001</td>
<td>3</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>16-17</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td>15-16</td>
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</table>

**Sophomore**

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADPR 2100 or CMST 3300</td>
<td>3</td>
<td>ADPR 2100 or CMST 3300</td>
<td>3</td>
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<tr>
<td>ADPR 2200</td>
<td>3</td>
<td>COM 2500</td>
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<tr>
<td>MATH 1700 (or UCCS Science)</td>
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<td>ECON 1103</td>
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**Junior**

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
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<td>MARK 3001</td>
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<td>3</td>
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<td>PHIL 2310</td>
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**Senior**

<table>
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<td>ADVE 4997</td>
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<td>COMM 3800</td>
<td>3</td>
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<td>UCCS Theology</td>
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<td>Major elective</td>
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### Advertising Minor

Students are required to complete 18 credits (6 required and 12 elective credits) to complete the Advertising minor.

#### Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>ADVE 1400</td>
<td>Advertising Principles</td>
<td>3</td>
</tr>
<tr>
<td>ADPR 2200</td>
<td>Media Writing</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Choose two courses from ADVE and two additional courses from remaining ADVE, ADPR or PURE 3200.</td>
<td>12</td>
</tr>
</tbody>
</table>

**Total Credit Hours:** 18

#### Advertising Public Relations Courses

**ADPR 2100. Communication Design Toolbox. 3 cr. hrs.**
An applied, hands-on course that introduces students to the computing design software environment and the basics of Adobe Creative Suite and video editing software as tools to engage in the design process for the conceptualization and creation of communication design solutions. Prereq: ADVE, CCOM and PURE majors or minors.

**ADPR 2200. Media Writing. 3 cr. hrs.**
Factual and persuasive writing for the mass media. Introduction to and practice in newswriting, public relations writing and advertising copywriting. Basic information gathering. In-class writing exercises require use of computers. Prereq: ENGL 1001 and COMM 1100 or equivalent. Restricted to declared ADVE, CCOM or PURE majors or minors.

**ADPR 3986. Internship in Advertising and Public Relations. 0-3 cr. hrs.**
Work experience in advertising or public relations in specific organizational settings, supervised by an approved professional coupled with related academic work assigned. Approval of departmental internship director required in advance of internship. May be taken more than once to a maximum of three total credits. Prereq: ADPR 2200 and ADPR 1400 and cons. of dept. ch.; or ADPR 1400 and JOUR 1100 and cons. of dept. ch.; or ADPR 2200 and ADPR 1800 and cons. of dept. ch.; or ADPR 1800 and JOUR 1100 and cons. of dept. ch. 0 credit will be SNC/UNC grade assessment; 1-3 credits will be S/U grade assessment.

**ADPR 4000. Sports Promotion. 3 cr. hrs.**
Examines how sport organizations attract fan attention and, ultimately, generate revenue by applying strategies and tactics related to public relations, advertising, marketing and sponsorship. Topics include: sport promotion techniques, media relations, new technology, special event planning, ethics of the field, professionalism and career opportunities. Students learn about the practitioner’s responsibilities to society, client/organization, fans, media and other practitioner’s. Prereq: ADVE 1400 or PURE 1800 or cons. of instr. Restricted to declared ADVE or PURE majors or minors.

**ADPR 4300. Emerging and Social Media in a Dynamic Marketplace. 3 cr. hrs.**
Examines the strategic uses, impact and implications of emerging and social media. Addresses the need to adapt to a digital, networked marketplace where change is the rule rather than the exception. Expands student knowledge of emerging and social media and their application to advertising and public relations challenges. Students use this knowledge to find more strategic and effective ways to communicate with clients, publics, target markets and other stakeholders. Prereq: ADVE 1400 or PURE 1800; or cons. of instr. Restricted to declared ADVE, CCOM or PURE majors or minors.

**ADPR 4500. Advertising and Public Relations Account Management. 3 cr. hrs.**
The fundamentals of management in both the client and agency environments. Analyzes client and agency structures and functions. Explores project estimating, budgeting and time management. Examines account profitability maintenance and account team productivity. Reviews techniques for agency and supplier selection. Special emphasis on the ethical aspects of account work. Prereq: ADVE 1400 or PURE 1800; or cons. of instr. Restricted to declared ADVE or PURE majors or minors.

**ADPR 4600. International Advertising and Public Relations. 3 cr. hrs.**
Students develop knowledge and skills related to strategic communications within a global marketplace. A variety of topics are addressed including the role of culture in global communication, differences in styles of communication across international groups and the role brands play in this process. Content explores culture as it applies to advertising and public relations directed at different international audiences and globalization, while keeping in mind the importance of ethics and social responsibility. Prereq: ADVE 1400 or PURE 1800.

**ADPR 4850. Mobile Communication. 3 cr. hrs.**
Examines current usage trends, mobile marketing and the future of digital and mobile communication. Students learn how brands face the challenge of creatively integrating mobile tactics into their digital brand strategies through examination of case studies and contemporary best practices. Students learn how to conduct ethnographic research in an effort to understand how consumers engage with mobile devices. They explore the use of agile, human-centered, EX <user experience> design for prototyping, evaluating mobile websites and testing mobile applications to develop mobile marketing strategies that creatively integrate mobile-based tactics. Prereq: ADVE 1400 or PURE 1800 and Jr. stndng. or cons. of instr. Restricted to ADVE, PURE or CCOM majors or minors.
ADPR 4951. MU Led Travel/Study Abroad. 3 cr. hrs.
Designed to bring advertising and culture to life within the context of the global marketplace. Students spend three weeks in both London and Prague, visit local and multinational advertising agencies and media companies, and experience local culture. Course taught in an international setting by Marquette professors and where students earn Marquette credit. Study Abroad expenses apply. Prereq: Jr. stndg., cons. of the Office of International Education, and one of the following courses: ADVE 1400, PURE 1800, or CCOM 2000.

ADPR 4953. Seminar in Advertising and Public Relations. 1-3 cr. hrs.
Specific subjects of seminars to be announced in the Schedule of Classes. Variable topics. Prereq: ADVE 1400 or PURE 1800; or cons. of instr. Restricted to declared ADVE or PURE majors or minors.

ADPR 4961. Special Institute/Workshop/Project. 1-3 cr. hrs.
Prereq: Restricted to declared ADPR majors and minors.

ADPR 4995. Independent Study in Advertising and Public Relations. 1-3 cr. hrs.
Prereq: Cons. of dept. ch. Prereq: Cons. of dept. ch.

ADPR 4999. Senior Thesis. 1-3 cr. hrs.
The application of rigorous methodology in developing and writing a thesis under the direction of an adviser. Prereq: Cons. of dept. ch.

Advertising Courses

ADVE 1400. Advertising Principles. 3 cr. hrs.
An overview of advertising as it relates to marketing and mass media. The course examines the advertising industry, including advertisers, advertising media and ad agencies, advertising history, its social and economic effects, advertising law and ethical standards. Students are introduced to the advertising planning process: product, market and consumer research, creative and media strategy, production of messages and evaluation of advertising effectiveness.

ADVE 3000. Advertising Research and Account Planning. 3 cr. hrs.
Allows students to enhance their basic research skills by learning specific research practices in advertising and public relations research with attention to the planning process. Topics include: audiences, consumer insights, strategic messages, media, public opinion and account planning. Provides an opportunity for critique and practice of professional communication research. Prereq: ADVE 1400 or PURE 1800; and COMM 2500. Restricted to ADVE or PURE majors or minors.

ADVE 3400. Advertising Copywriting. 3 cr. hrs.
Rigorous study and practice in planning and preparation of advertising messages. Emphasis on writing for all media. Artistic and scientific aspects of advertising creativity. Principles of creative strategy including: product/service research, target audience analysis, and selection of persuasive appeals and creative approaches. Evaluation of advertising effectiveness. Lecture/lab format. Prereq: ADVE 1400 or PURE 1800; and ADPR 2200. Restricted to declared ADVE or PURE majors or minors.

ADVE 4100. Advertising Media Planning. 3 cr. hrs.
Provides the skills for evaluating traditional and non-traditional media to strategically reach and influence target audiences and to fulfill specific advertising objectives. Explores the role of emerging media and its impact on the way advertisers communicate with consumers. Students develop media plans that apply the principles of scheduling and buying and incorporate the findings from primary and secondary research. Additional topics include: ethical forms of targeting, consumer motivations and economic trends. Prereq: ADVE 1400 and COMM 2500; or cons. of instr. Restricted to declared ADVE or PURE majors or minors.

ADVE 4200. Gender in Advertising from the Inside-out. 3 cr. hrs.
A critical exploration into the advertising creative environment, providing students the opportunity to explore the gender-bound world of advertising creative from the inside-out. Students gain an understanding of gender, and its interaction with race, fleshing out the social structures in relation to the advertising industry and the creative department specifically. Prereq: Jr. stndg and one of the following: ADVE 1400, CCOM 2000, HURE 3001, MARK 3001, PURE 1800, SOCI 1001 or WGST 1001.

ADVE 4400. Advanced Advertising Copywriting. 3 cr. hrs.
A continuation of ADVE 3400. Emphasis on formulating strategy and producing executions for coordinated, multi-media campaigns. Each student creates a portfolio which showcases his or her talent and ability to work as a professional copywriter. Prereq: ADVE 3400; or cons. of instr. Restricted to declared ADVE or PURE majors or minors.

ADVE 4997. Advertising Campaigns. 3 cr. hrs.
Senior capstone course in integrated advertising campaign planning. Students working in groups, plan and develop advertising campaigns for real world advertisers. Campaigns include research, objective setting, strategy, media selection, message preparation, sales promotion and public relations and budgets. Project culminates in formal, competitive presentations. Prereq: ADVE 1400, ADVE 3000, ADVE 3400 and ADVE 4100; or cons. of instr. Restricted to declared ADVE majors only.
Communication Studies

Chairperson: Scott D'Urso, Ph.D.

Our ability to communicate defines what it means to be human and is a central feature of our existence. People communicate in a variety of contexts: interpersonal, group, organizational, public and intercultural. This major examines the theories, concepts and skills related to human interaction and gives students the opportunity to develop personal communication skills. The focus of the major is the development of the ability to understand and critique communication practices.

The communication studies major explores organizational and managerial communication, family communication, gender and interpersonal communication, multicultural and international communication and argumentation and persuasion. Students have the flexibility to choose a specific area of focus or to combine several in ways that best meet their interests and career plans. Communication studies majors are prepared for careers in a variety of fields including corporations, politics, family and social service agencies, multinational organizations, law, nonprofit organizations and education.

Communication Studies Major

A total of 33 credits of course work must be completed for the major in communication studies.

**Required Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMST 1000</td>
<td>Introduction to Communication</td>
<td>3</td>
</tr>
<tr>
<td>CMST 2100</td>
<td>Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>CMST 2310</td>
<td>Argument in Contemporary Society</td>
<td>3</td>
</tr>
<tr>
<td>CMST 2600</td>
<td>Foundations of Communication Studies</td>
<td>3</td>
</tr>
<tr>
<td>CMST 3200</td>
<td>Organizational Communication</td>
<td>3</td>
</tr>
<tr>
<td>CMST 3300</td>
<td>Persuasion</td>
<td>3</td>
</tr>
<tr>
<td>CMST 4997</td>
<td>Communication and Contemporary Issues</td>
<td>3</td>
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</tbody>
</table>

Additional 12 hours of CMST electives (See suggested CMST Academic/Career Emphases) 12

Total Credit Hours 33

**Suggested Communication Studies Academic/Career Emphases**

Students are encouraged to focus their Communication Studies degree in one of two Academic/Career emphases: Organizational and Public Communication or Relational Communication. These two Academic/Career emphases will enable students to focus their degree and point their studies toward a viable and rewarding career track. These Academic/Career emphases are suggested rather than required.

**Organizational and Public Communication (12 credit hours):** Focuses on communication content and practices essential to success in both for-profit and non-profit organizations as well as in public settings such as the law and politics. Combined with a carefully selected minor, this academic/career emphasis assists with career options in a range of business sectors including marketing, human resources, sales, management, law, public policy, speech writing and international business. This academic/career emphasis also compliments various graduate program offerings.

Select 12 credit hours from the following electives: 12

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMST 3210</td>
<td>Business and Professional Presentations</td>
</tr>
<tr>
<td>CMST 3340</td>
<td>Classical Rhetorical Theory</td>
</tr>
<tr>
<td>CMST 3350</td>
<td>Modern Rhetorical Theory and Criticism</td>
</tr>
<tr>
<td>CMST 3800</td>
<td>Communication and the Legal Process</td>
</tr>
<tr>
<td>CMST 4220</td>
<td>Communication Approaches to Training and Development</td>
</tr>
<tr>
<td>CMST 4230</td>
<td>Managerial Communication</td>
</tr>
<tr>
<td>CMST 4250</td>
<td>Leadership and Communication</td>
</tr>
<tr>
<td>CMST 4260</td>
<td>Communication Technologies in the Workplace</td>
</tr>
<tr>
<td>CMST 4270</td>
<td>Communicating in Multinational Organizations</td>
</tr>
<tr>
<td>CMST 4330</td>
<td>Freedom of Speech</td>
</tr>
<tr>
<td>CMST 4360</td>
<td>Rhetoric of Social Movements</td>
</tr>
<tr>
<td>CMST 4600</td>
<td>Communication Consulting</td>
</tr>
</tbody>
</table>

Total Credit Hours 12

**Relational Communication (12 credit hours):** Focuses on communication content and practices essential to success in interpersonal relationships regardless of setting. Combined with a carefully selected minor, this academic/career emphasis assists with career options in a variety of relational
communication vocations including human resources, mediation, fundraising/event planning and health administration. This academic/career emphasis also compliments various graduate program offerings.

Select 12 credit hours from the following electives:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMST 2000</td>
<td>Introduction to Small Group Communication</td>
</tr>
<tr>
<td>CMST 2010</td>
<td>Communication Approaches to Interviewing</td>
</tr>
<tr>
<td>CMST 3100</td>
<td>Communication and Conflict</td>
</tr>
<tr>
<td>CMST 3410</td>
<td>Intercultural Communication</td>
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<td>CMST 4110</td>
<td>Family Communication</td>
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<td>CMST 4120</td>
<td>Gender and Communication</td>
</tr>
<tr>
<td>CMST 4130</td>
<td>Communication and Urban Families</td>
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<td>CMST 4400</td>
<td>Cross-Cultural Communication in the United States</td>
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<tr>
<td>CMST 4500</td>
<td>Health Communication</td>
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Total Credit Hours: 12

Additional Electives Available to CMST Majors:

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<th>Course</th>
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<tbody>
<tr>
<td>CMST 1300</td>
<td>Public Speaking</td>
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<tr>
<td>CMST 2800</td>
<td>Debate/Forensic Practicum</td>
</tr>
<tr>
<td>CMST 3240</td>
<td>Diffusion of Innovations: The Role of Communication in Technological Change</td>
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<tr>
<td>CMST 3310</td>
<td>Ethics in Human Communication</td>
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<td>CMST 4320</td>
<td>Philosophy of Communication</td>
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<td>CMST 4810</td>
<td>Directing Speech Activities</td>
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<tr>
<td>CMST 4953</td>
<td>Seminar in Communication Studies</td>
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<td>CMST 4961</td>
<td>Special Institute/Workshop/Project in Communication Studies</td>
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<td>Internship in Communication Studies</td>
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<td>CMST 4995</td>
<td>Independent Study in Communication Studies</td>
</tr>
<tr>
<td>CMST 4999</td>
<td>Senior Thesis</td>
</tr>
</tbody>
</table>

Notes:

• Internships are recommended for each academic/career emphasis. Close advising is recommended to assist students in designing their academic/career emphases.

• The suggested academic/career emphases are complimentary to many graduate programs. For example, the Relational Emphasis is well suited to graduate study in areas of Health Administration and Dispute Resolution, and the Organizational and Public Communication Emphasis is well suited to graduate study in Human Resources and other business-related programs.

Suggested Minors for Communication Studies Majors

Students in the Diederich College of Communication with a Communication Studies major may choose any minor offered through the university; however, the following minors are suggested for the academic/career emphases.

Organizational and Public Communication - Minors in Marketing, Human Resources, Advertising, Public Relations, Criminology & Law Studies or Political Science.


Typical Program for Communication Studies Majors

**Freshman**

<table>
<thead>
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<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
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<td>COMM 1200</td>
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<td>CMST 1000</td>
<td>3</td>
<td>Foreign language or UCCS Diverse Culture</td>
<td>3-4</td>
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<tr>
<td>ENGL 1001</td>
<td>3</td>
<td>CMST 2100 or 2600</td>
<td>3</td>
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<td>UCCS History</td>
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<td>UCCS Math or Science</td>
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<tr>
<td>Foreign language or UCCS Diverse Culture</td>
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<td>Elective</td>
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### Sophomore

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<td>COMM 1100</td>
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<td>COMM 2500</td>
<td>3</td>
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<td>CMST 2100 or 2600</td>
<td>3</td>
<td>UCCS Diverse Culture or Minor/elective course</td>
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<tr>
<td>CMST 2310</td>
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<td>Major/Minor electives</td>
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<tr>
<td>UCCS Math or Science</td>
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<td>UCCS Literature/Performing Arts</td>
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<td>UCCS Diverse Culture or Minor/elective course</td>
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### Junior

<table>
<thead>
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<th>Hours</th>
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<tbody>
<tr>
<td>CMST 3200</td>
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<td>CMST 3300</td>
<td>3</td>
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<tr>
<td>PHIL 1001</td>
<td>3</td>
<td>PHIL 2310</td>
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<td>Major/Minor electives</td>
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<td>Major/minor electives</td>
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### Senior

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<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>Major/Minor electives</td>
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<td>CMST 4997</td>
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<tr>
<td>UCCS Theology</td>
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<td>Major/minor electives</td>
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<tr>
<td></td>
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</tr>
</tbody>
</table>

Total credit hours: 120-122

### Wisconsin Teaching Licensure in Speech Communication (Middle Childhood/Early Adolescence)

In addition to completing all requirements as specified by the College of Education, students must also complete all requirements listed under the communication studies major.

### Wisconsin Teaching Licensure in Speech Communication (Early Adolescence/Adolescence)

In addition to completing all requirements as specified by the College of Education as well as those listed under the communication studies major, students seeking Wisconsin teaching licensure in speech communication at the early adolescence/adolescence level must also complete:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 1200</td>
<td>Media in Society</td>
<td>3</td>
</tr>
<tr>
<td>CMST 4810</td>
<td>Directing Speech Activities</td>
<td>3</td>
</tr>
<tr>
<td>CMST 4400</td>
<td>Cross-Cultural Communication in the United States</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours 9

The latter two will count toward required electives in the communication studies major.

### Communication Studies Minor

#### Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMST 1000</td>
<td>Introduction to Communication</td>
<td>3</td>
</tr>
<tr>
<td>CMST 2100</td>
<td>Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>CMST 2310 or CMST 3300</td>
<td>Argument in Contemporary Society</td>
<td>3</td>
</tr>
</tbody>
</table>
Courses

CMST 1000. Introduction to Communication. 3 cr. hrs.
A survey of communication principles and processes as they relate to interpersonal communication, small group communication, culture and communication, persuasion, communication in organizations, and mediated communication.

CMST 1300. Public Speaking. 2 cr. hrs.
Examines theory and practice of effective public speaking. The course includes informative, persuasive, and occasional speaking. Criticism and critical listening skills will also be emphasized.

CMST 2000. Introduction to Small Group Communication. 3 cr. hrs.
Examines theories, principles and methods of small group communication. The course will focus on such topics as: leadership, problem solving, roles, norms, and climate. The class takes a systems approach to groups and students will have hands-on experience in a decision making group.

CMST 2010. Communication Approaches to Interviewing. 3 cr. hrs.
Stresses communication theory and current research related to interviewing. Provides in-class practice with interchanging roles as interviewer/interviewee in several types of interviews. Current research in interviewing techniques, assistance in resume preparation and legal guidelines for questions are among the topics for discussion.

CMST 2100. Interpersonal Communication. 3 cr. hrs.
Examines person-to-person communication with a focus on such topics as social roles, conflict management, relationship development, perception, communication effectiveness and relevant theories. Prereq: CMST 1000.

CMST 2300. Business Communication. 2 cr. hrs.
Provides students with the opportunity to explore and develop the presentation skills necessary for success within the context of business through a study of communication and theory. Includes informative, persuasive, and small group presentations, as well as an emphasis on critical thinking, listening, non-verbal and technological presentation skills. Students may not receive credit for both CMST 2300 and CMST 1300. Prereq: Soph. Stndg. and enrolled in College of Business.

CMST 2310. Argument in Contemporary Society. 3 cr. hrs.
Explores the role of argument in contemporary society. Includes analysis and application of various theories of public argumentation. Areas include identification of fallacies, refutation, forms of argument, and formal and informal logic.

CMST 2600. Foundations of Communication Studies. 3 cr. hrs.
Surveys major theoretical approaches to communication studies, reviews the history of the discipline and introduces students to basic research methods in the field.

CMST 2800. Debate/Forensic Practicum. 1 cr. hr.
Students participate in intercollegiate debate and/or individual events and travel to various tournaments. May be repeated for 1 credit per term. A maximum of 3 credits can be applied to the CMST major.

CMST 3100. Communication and Conflict. 3 cr. hrs.
Communication and conflict explores theoretical and experiential avenues to conflict management, resolution, and regulation through communication styles and methods. The communicative contexts for investigation are interpersonal and organizational (profit and non-profit). Exercises and case studies provide an opportunity to implement theoretical learning from the course. Prereq: CMST 2100 or cons. of instr.

CMST 3200. Organizational Communication. 3 cr. hrs.
Presents historical and current perspectives on the origins and usefulness of organizational theories as they relate to communication issues. Emphasizes the relationship between organizational life and communication principles. Ultimate goals, assumptions, and cases relating to organizational communication theories are developed and discussed.

CMST 3210. Business and Professional Presentations. 3 cr. hrs.
Explores and offers practice in the types of oral communication faced in organizational settings. The emphasis is on creation, development, and delivery of professional presentations building on persuasion and informative speaking skills.

CMST 3240. Diffusion of Innovations: The Role of Communication in Technological Change. 3 cr. hrs.
Introduces the role communication plays in the spread of new ideas through social systems. By investigating the variables that influence the diffusion process, students learn how to assess and proactively affect change processes. Prereq: CMST 3200 or cons. of instr.

CMST 3300. Persuasion. 3 cr. hrs.
Surveys theories, principles, and practices of persuasion. Special emphasis on the social, psychological and cultural study of influence. Prereq: CMST 1000.

CMST 3310. Ethics in Human Communication. 3 cr. hrs.
Explores theoretical and practical ethical questions of importance to responsible communicators in personal and public contexts. Discussion of ethical theories in communication studies provide an opportunity to explore case studies and contemporary communication dilemmas critically, while heightening personal sensitivity to the underlying ethical implications of human communication. Prereq: CMST 3300 or cons. of instr.
CMST 3340. Classical Rhetorical Theory. 3 cr. hrs.
Analyzes Greek and Roman rhetorical theory from the rise of the early sophists in Greece to rhetoric's decline in the early Christian era. Special emphasis on Plato, Aristotle, Cicero, and Quintilian. Prereq: CMST 1000 and CMST 3300; or cons. of instr.

CMST 3350. Modern Rhetorical Theory and Criticism. 3 cr. hrs.
Discusses contemporary theoretical and critical approaches to the description, analysis, interpretation, and evaluation of public discourse. Examines and applies principles established by such theorists as Kenneth Burke, Ernest G. Bormann, Chaim Perelman, and Stephen Toulmin, among others. Prereq: CMST 1000 and CMST 3300; or cons. of instr.

CMST 3410. Intercultural Communication. 3 cr. hrs.
Examines the influence of culture on communication within Europe, Asia, Latin America, and Africa. International in scope, the course also analyzes communication between people from different national cultures and provides an analytical framework for dissecting intercultural exchanges. Prereq: CMST 2100 or cons. of instr.

CMST 3800. Communication and the Legal Process. 3 cr. hrs.
This course focuses on the role of communication in the American legal system. The course is designed to acquaint students with the various dimensions of communication in the practice of law with a particular emphasis on the trial process.

CMST 4110. Family Communication. 3 cr. hrs.
Introduces communication phenomena in the family setting. Examines how communication affects the development, maintenance and enhancement of family relations. Prereq: CMST 2100 or cons. of instr.

CMST 4120. Gender and Communication. 3 cr. hrs.
Examines the relationship between gender and communication. Includes discussion of verbal and nonverbal communication patterns of males and females, various explanations for these patterns, perceptions of gender differences and the implications these perceptions have for people in several contexts (public, interpersonal and organizational). Prereq: CMST 2100 or cons. of instr.

CMST 4130. Communication and Urban Families. 3 cr. hrs.
Investigates communication about urban families, the communication links between urban families and institutions and communication practices within urban families. Emphasizes the diversity among urban families as well as the stressors and strengths found in the urban context. Prereq: CMST 2100 or cons. of instr.

CMST 4140. Intergenerational Communication. 3 cr. hrs.
Focuses on communication theories and the role of communication in intergenerational interactions within a wide variety of contexts including: interpersonal, workplace, familial, health, and mediated technology. Prereq: CMST 1000 and 2100; or cons. of instr.

CMST 4220. Communication Approaches to Training and Development. 3 cr. hrs.
Emphasizes development of training sessions within organizations. Diagnostic methods for assessing needs and determining the utility of specific training are explored. Roles of consultant, in-house human resource trainer, and liaison with subject matter experts are differentiated. Students develop training modules for communication skills training. Prereq: CMST 3200 or cons. of instr.

CMST 4230. Managerial Communication. 3 cr. hrs.
The communication relationship between managers and employees involves a set of circumstances not often found in everyday communication with friends and colleagues. The differences in power, knowledge, job description, and life experiences create many unique and challenging interactions. Takes an in-depth look at the circumstances which affect communication between managers and their employees as well as at a number of theories and strategies for improving communication in the workplace. Prereq: CMST 3200 or cons. of instr.

CMST 4250. Leadership and Communication. 3 cr. hrs.
Explores communication variables involved when leaders attempt to influence members to achieve a goal. Topics include: power, credibility, motivation, research on leader traits, styles and situations, and current models of leadership such as transactional, transformational, charismatic, and functional approaches. The different leadership challenges posed by community and institutional settings will also be explored. Prereq: CMST 3200 or cons. of instr.

CMST 4260. Communication Technologies in the Workplace. 3 cr. hrs.
Presents a historical and theoretical review of the impact of new communication technologies on organizations and their membership. Focuses on the organizational, social and communicative implications of new communication technologies across a broad range of contexts in the organizational setting, including: interpersonal, groups and teams, management, and technological innovations. Includes some special topics particularly relevant to new communication technologies including: anonymity, privacy and surveillance, and technology apprehension. Prereq: CMST 3200 or cons. of instr.

CMST 4270. Communicating in Multinational Organizations. 3 cr. hrs.
Examines the influence of culture on communication in organizations. Global comparisons in organizational communication are offered including analysis of European, Asian and Latin American corporate cultures. Intercultural communication in U.S. organizations is also explored. Prereq: CMST 3200 or cons. of instr.

CMST 4320. Philosophy of Communication. 3 cr. hrs.
Outlines foundational theories and concepts regarding rhetoric's contribution to our understanding of reality, knowledge, truth, and certainty. Topics include: the role of rhetoric in the construction of our knowledge of science, politics, ethics, religion, law, gender and culture. Prereq: CMST 3300 or cons. of instr.
CMST 4330. Freedom of Speech. 3 cr. hrs.
Examines definitions, issues, problems and requirements for protecting or curbing free expression of speech in areas such as defamation and invasion of privacy; religious-moral heresy; provocation to anger; commercial speech; time, place, manner and institutional constraints; and prior restraint. Analysis of landmark cases and contemporary public arguments. Prereq: CMST 3300 or cons. of instr.

CMST 4360. Rhetoric of Social Movements. 3 cr. hrs.
Examines the rhetoric of social change and methodologies for analysis and appraisal of social movement discourse. Rhetorical strategies will be traced through contemporary movements including: civil rights, feminism, Native American, anti-nuclear, abortion, gun control, Ku Klux Klan, and others. Prereq: CMST 1000 and CMST 3300; or cons. of instr.

CMST 4400. Cross-Cultural Communication in the United States. 3 cr. hrs.
Examines the dynamics of cross-cultural communication in the U.S. and obstacles to effective interaction across American co-cultures. Examines the interpersonal patterns of selected ethnic groups, races, religions and social classes in the U.S. with the aim of improving cross-cultural understanding and communication. Prereq: CMST 2100 or cons. of instr.

CMST 4500. Health Communication. 3 cr. hrs.
Examines the role of communication in health care with a focus on provider training and the provider-patient relationship. Theoretical models for developing effective health communication programs are discussed and applied within a variety of health care settings. Prereq: CMST 2100 or cons. of instr.

CMST 4600. Communication Consulting. 3 cr. hrs.
Introduction to communication consulting and the design implementation of communication audits for corporate and non-profit settings. Surveys various models of consulting. Learn to design and implement a communication audit that includes needs assessment, interpretation, and recommendations. Methods of audits include survey design, interviews and focus groups. Prereq: CMST 1000, CMST 3200, and Sr. stndg.

CMST 4810. Directing Speech Activities. 3 cr. hrs.
Theory and practice in the organization and management of co-curricular speech activities in high school and college.

CMST 4953. Seminar in Communication Studies. 1-3 cr. hrs.
Special subjects of seminar to be announced in the Schedule of Classes. Variable topics.

CMST 4961. Special Institute/Workshop/Project in Communication Studies. 1-3 cr. hrs.

CMST 4986. Internship in Communication Studies. 1-3 cr. hrs.
Internship in Communication Studies provides students with the opportunity to apply theories, skills and techniques in communication as believed appropriate within specific organizational settings. S/U grade assessment. Prereq: CMST 1000 and CMST 2310; or cons. of instr. CMST 3200 is recommended but not required.

CMST 4995. Independent Study in Communication Studies. 1-3 cr. hrs.
Prereq: Cons. of dept. ch.

CMST 4997. Communication and Contemporary Issues. 3 cr. hrs.
A capstone experience for Communication Studies majors. Examines communication theories and principles in the context of contemporary events and social issues. Students conduct original communication research and apply theories to specific communication contexts and practices. Prereq: CMST 2600 and must have completed at least 21 additional credit hours in the CMST major.

CMST 4999. Senior Thesis. 1-3 cr. hrs.
The application of rigorous methodology in developing and writing a thesis under the direction of an adviser. Prereq: Cons. of dept. ch.
Corporate Communication

Chairperson: Daradirek (Gee) Ekachai, Ph.D.

Work in the corporate environment requires students to accurately assess internal and external corporate communication needs and frame strategic responses that are appropriate to multiple contexts and audiences. Students also need to understand the role of the corporation within our contemporary global society as well as the way in which communication helps shape, maintain and ultimately transform various aspects of corporate identity, culture and vision.

The corporate communication major is designed to address these needs by providing a broad-based curriculum that draws from both theory and practice. After successfully completing this major, students are able to think critically about the role of the corporation, understand the intersection of corporate and communication practice and develop skills that can be applied across various corporate contexts.

Corporate Communication Major

A total of 39 credits of course work are required for completion of the major in corporate communication.

Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCOM 2000</td>
<td>Issues in Corporate Communication</td>
<td>3</td>
</tr>
<tr>
<td>CCOM 3250</td>
<td>Corporate Writing</td>
<td>3</td>
</tr>
<tr>
<td>CCOM 4700</td>
<td>Corporate Advocacy</td>
<td>3</td>
</tr>
<tr>
<td>CCOM 4750</td>
<td>Corporate Social Responsibility</td>
<td>3</td>
</tr>
<tr>
<td>ADPR 2200</td>
<td>Media Writing</td>
<td>3</td>
</tr>
<tr>
<td>BUAD 2100</td>
<td>Accounting and Finance Fundamentals for Non-Business Majors</td>
<td>3</td>
</tr>
<tr>
<td>or FINA 3001</td>
<td>Introduction to Financial Management</td>
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</tr>
<tr>
<td>CMST 3200</td>
<td>Organizational Communication</td>
<td>3</td>
</tr>
<tr>
<td>CMST 4600</td>
<td>Communication Consulting</td>
<td>3</td>
</tr>
<tr>
<td>ECON 1001</td>
<td>Introduction to Economics (*)</td>
<td>3</td>
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<tr>
<td>MATH 1700</td>
<td>Modern Elementary Statistics (**)</td>
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<td>Total Credit Hours</td>
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Students must select three courses from the list below:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADPR 4300</td>
<td>Emerging and Social Media in a Dynamic Marketplace</td>
<td>3</td>
</tr>
<tr>
<td>BUAD 3089</td>
<td>Business and the Non-Profit Sector</td>
<td></td>
</tr>
<tr>
<td>BULA 3001</td>
<td>Legal Environment of Business</td>
<td></td>
</tr>
<tr>
<td>CMST 3410</td>
<td>Intercultural Communication</td>
<td></td>
</tr>
<tr>
<td>CMST 4260</td>
<td>Communication Technologies in the Workplace</td>
<td></td>
</tr>
<tr>
<td>CCOM 4931</td>
<td>Topics in Corporate Communication</td>
<td></td>
</tr>
<tr>
<td>CCOM 4986</td>
<td>Corporate Communication Internship (***</td>
<td>3</td>
</tr>
<tr>
<td>ENTP 3001</td>
<td>Understanding Entrepreneurship</td>
<td></td>
</tr>
<tr>
<td>HURE 3001</td>
<td>Management of Human Resources</td>
<td></td>
</tr>
<tr>
<td>MARK 3001</td>
<td>Introduction to Marketing</td>
<td></td>
</tr>
<tr>
<td>PHIL 4330</td>
<td>Business Ethics</td>
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<tr>
<td>PURE 1800</td>
<td>Public Relations Principles</td>
<td></td>
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<tr>
<td>PURE 3850</td>
<td>Crisis Communication and Reputation Management</td>
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<td>Total Credit Hours</td>
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</table>

* ECON 1103 may be substituted.
** PSYC 2001, SOCI 2001, or BUAD 1560 may be substituted.
*** Up to 3 internship credits may be counted toward the major.

Typical Program for Corporate Communication Majors

Freshman

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Hours</th>
<th>Course Code</th>
<th>Hours</th>
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<tbody>
<tr>
<td>COMM 1050</td>
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<td>ECON 1001</td>
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<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMST 1000</td>
<td>3</td>
<td>COMM 1100 (or Minor/elective course)</td>
<td>3</td>
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<tr>
<td>ENGL 1001</td>
<td>3</td>
<td>Foreign language or UCCS Diverse Culture</td>
<td>3-4</td>
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<tr>
<td>UCCS History</td>
<td>3</td>
<td>UCCS Science</td>
<td>3</td>
</tr>
<tr>
<td>Foreign language or UCCS Diverse Culture</td>
<td>3-4</td>
<td>COMM 1200</td>
<td>3</td>
</tr>
<tr>
<td>THEO 1001</td>
<td>3</td>
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**Sophomore**

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<tr>
<th>Term</th>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>First Term</td>
<td>COMM 1100 (or Minor/elective course)</td>
<td>3</td>
<td>ADPR 2200 or BUAD 2100</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>CCOM 2000</td>
<td>3</td>
<td>MATH 1700</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>ADPR 2200 or BUAD 2100</td>
<td>3</td>
<td>PHIL 1001</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>COMM 2500</td>
<td>3</td>
<td>UCCS Literature/Performing Arts</td>
<td>3</td>
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<tr>
<td></td>
<td>CMST 3200 (or Major elective)</td>
<td>3</td>
<td>CMST 3200 (or Major elective)</td>
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**Junior**

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<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
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<tbody>
<tr>
<td>First Term</td>
<td>PHIL 2310</td>
<td>3</td>
<td>CCOM 4700</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>CCOM 3250</td>
<td>3</td>
<td>UCCS Theology</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>CMST 4600</td>
<td>3</td>
<td>CCOM elective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Minor/electives</td>
<td>6</td>
<td>UCCS Diverse Culture</td>
<td>3</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Minor/elective</td>
<td>3</td>
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**Senior**

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<th>Term</th>
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<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
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<tr>
<td>First Term</td>
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<td>CCOM 4750</td>
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</table>

**Total credit hours: 120-122**

**Corporate Communication Minor**

Students are required to complete 18 credits (9 required and 9 elective credits) to complete the minor.

**Required courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCOM 2000</td>
<td>Issues in Corporate Communication</td>
<td>3</td>
</tr>
<tr>
<td>CCOM 4700</td>
<td>Corporate Advocacy</td>
<td>3</td>
</tr>
<tr>
<td>CMST 3200</td>
<td>Organizational Communication</td>
<td>3</td>
</tr>
</tbody>
</table>

**Elective Courses (select 3 courses)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADPR 4300</td>
<td>Emerging and Social Media in a Dynamic Marketplace</td>
<td>3</td>
</tr>
<tr>
<td>BUAD 3089</td>
<td>Business and the Non-Profit Sector</td>
<td>3</td>
</tr>
<tr>
<td>BULA 3001</td>
<td>Legal Environment of Business</td>
<td>3</td>
</tr>
<tr>
<td>CCOM 3250</td>
<td>Corporate Writing</td>
<td>3</td>
</tr>
<tr>
<td>CCOM 4986</td>
<td>Corporate Communication Internship</td>
<td>3</td>
</tr>
<tr>
<td>CCOM 4931</td>
<td>Topics in Corporate Communication</td>
<td>3</td>
</tr>
<tr>
<td>CCOM 4995</td>
<td>Independent Study in Corporate Communication</td>
<td>3</td>
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</table>
Corporate Communication

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>CMST 3410</td>
<td>Intercultural Communication</td>
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<tr>
<td>CMST 4260</td>
<td>Communication Technologies in the Workplace</td>
</tr>
<tr>
<td>HURE 3001</td>
<td>Management of Human Resources</td>
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<tr>
<td>MANA 3035</td>
<td>Diversity in Organizations</td>
</tr>
<tr>
<td>MARK 3001</td>
<td>Introduction to Marketing</td>
</tr>
<tr>
<td>PHIL 4330</td>
<td>Business Ethics</td>
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<tr>
<td>PURE 1800</td>
<td>Public Relations Principles</td>
</tr>
<tr>
<td>PURE 3850</td>
<td>Crisis Communication and Reputation Management</td>
</tr>
</tbody>
</table>

Total Credit Hours: 18

1. Maximum of 3 internship credits may count towards minor.
2. Junior standing required to enroll, completion of at least one business course prior is highly recommended – Recommended courses include ECON 1001 Introduction to Economics, ECON 1103, or BUAD 2100 Accounting and Finance Fundamentals for Non-Business Majors
3. Course has a prerequisite of ECON 1103.

Courses

CCOM 2000. Issues in Corporate Communication. 3 cr. hrs.
Offers an introduction to contemporary issues in corporate communication. Traces the history of the corporation and examines its relationship to contemporary issues in society. Explores concepts such as corporate voice, corporate identity construction, mission and branding. Considers the way in which communication is vital to both the day-to-day operations of the corporation and the corporation's ability to achieve its overall mission.

CCOM 3250. Corporate Writing. 3 cr. hrs.
Takes a practical and analytical approach to the development of content and style in corporate communication. Emphasis on the development of effective writing skills for clear, concise and audience-centered business documents. Additional focus on correct communication in corporate practice as related to corporate image and identity. Prereq: CCOM 2000 and ADPR 2200; or cons. of instr.

CCOM 4700. Corporate Advocacy. 3 cr. hrs.
Apply concepts from corporate communication and rhetorical criticism to analyze how organizations use symbols to develop organizational culture, manage organizational impressions, manage crises, and advocate for particular positions. Builds abilities to critically think about and analyze the persuasive messages of organizations. Prereq: CCOM 2000.

CCOM 4750. Corporate Social Responsibility. 3 cr. hrs.
Analyzes the range of public debates about the social responsibilities of corporations. Key questions explored in this integrative, capstone-type course include the following: What sorts of public communication practices are commonly taken to hinder or promote corporate social responsibility? What are the ethical implications for civic life of corporations' internal communication practices? How do corporations manage their ethical relations with communities, nongovernmental organizations and other stakeholders? What sorts of groups have historically participated in public controversies over corporate social responsibility? Prereq: CCOM 2000; Sr. stndg. or cons. of dept. ch.

CCOM 4931. Topics in Corporate Communication. 3 cr. hrs.

CCOM 4986. Corporate Communication Internship. 0-3 cr. hrs.
Provides students with the opportunity to apply theories, skills and techniques in a real-world corporate communication setting. 0 credit will be SNC/UNC grade assessment; 1-3 credits will be S/U grade assessment. Prereq: CCOM 2000 and cons. of dept. chair.

CCOM 4995. Independent Study in Corporate Communication. 1-3 cr. hrs.
Independent study with a faculty member centered on a particular topic in corporate communication. Prereq: CCOM 2000, CCOM 3250.
Digital Media

Chairperson: Stephen Hudson-Mairet, M.F.A.

The major in digital media (DGMD) is designed to provide students with the knowledge and skills necessary to effectively navigate a variety of 21st century media positions. Such opportunities exist in commercial radio and television, documentary and narrative film-making, public broadcasting, corporate media, cable communication and associated emergent technology industries. Courses emphasize the hands-on creative use of video and audio in the development of informative and entertaining media content. DGMD majors get a unique balance of theory and practice, emphasizing analysis and understanding of media in addition to the development of such media. Recent DGMD alumni have gone into a variety of careers including: producing, sports casting, radio promotions, media management, casting, on-camera presentation and performance, film and corporate video editing. Students interested in broadcast journalism should select journalism as a major, with a minor in Digital Media.

Digital Media Major

A total of 36 credits of course work must be completed for the major in digital media. Students with a major in digital media cannot take more than 48 credits in the mass communication areas (ADVE, ADPR, COMM, DGMD, JOUR, PURE) and are required to take 72 credits outside of mass communication areas.

Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>DGMD 2205</td>
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<td>DGMD 2250</td>
<td>Intermediate Digital Media Production</td>
<td>3</td>
</tr>
<tr>
<td>DGMD 2335</td>
<td>Introduction to Scriptwriting</td>
<td>3</td>
</tr>
<tr>
<td>DGMD 3840</td>
<td>Film and TV Aesthetics</td>
<td>3</td>
</tr>
<tr>
<td>DGMD 4997</td>
<td>Senior Capstone</td>
<td>3</td>
</tr>
<tr>
<td>COMM 3800</td>
<td>Media Law</td>
<td>3</td>
</tr>
<tr>
<td>COMM 3900</td>
<td>Ethical Problems of Mass Communications</td>
<td>3</td>
</tr>
<tr>
<td>COMM 4400</td>
<td>Mass Communication Theory and Research</td>
<td>3</td>
</tr>
</tbody>
</table>

Choose one of three (History/Criticism/Theory):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DGMD 3700</td>
<td>Global Television</td>
<td>3</td>
</tr>
<tr>
<td>DGMD 4810</td>
<td>Radio and Television History</td>
<td>3</td>
</tr>
<tr>
<td>DGMD 4850</td>
<td>Television Criticism</td>
<td>3</td>
</tr>
</tbody>
</table>

9 credits of electives from the list below:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>THAR 1100</td>
<td>Acting 1: Fundamental Technique</td>
<td></td>
</tr>
<tr>
<td>THAR 2160</td>
<td>Voice and Speech 1</td>
<td></td>
</tr>
<tr>
<td>THAR 2180</td>
<td>Acting for Camera</td>
<td></td>
</tr>
<tr>
<td>COMM 4100</td>
<td>Mass Media and the American Family</td>
<td></td>
</tr>
<tr>
<td>COMM 4500</td>
<td>Race and Gender Issues in Mass Media</td>
<td></td>
</tr>
<tr>
<td>COMM 4600</td>
<td>Media Management</td>
<td></td>
</tr>
</tbody>
</table>

Total Credit Hours 36

The following courses are also required but do not count as hours in the major:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 1001</td>
<td>General Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

And one of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1700</td>
<td>Modern Elementary Statistics</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 2001</td>
<td>Psychological Measurements and Statistics</td>
<td></td>
</tr>
<tr>
<td>SOCI 2060</td>
<td>Social Statistics</td>
<td></td>
</tr>
</tbody>
</table>

Total Credit Hours 6

Recommended Areas of Emphasis

In addition to the required sequence, the following courses are strongly recommended for those students who wish to have an emphasis in a specific area within the digital media discipline. Students should choose 6-9 credits as their elective credits.

Production

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DGMD 4275</td>
<td>Advanced Digital Media Production and Direction</td>
<td>3</td>
</tr>
</tbody>
</table>
DGMD 4260  
Documentary Production  
3
DGMD 4280  
Narrative Cinematic Production  
3
Total Credit Hours
9

Produce/Management
DGMD 2555  
Corporate Media  
3
DGMD 2565  
The Business of Entertainment  
3
DGMD 2610  
Program Development  
3
COMM 4600  
Media Management  
3
Total Credit Hours
12

Performance
DGMD 3240  
Television Performance  
3
THAR 1100  
Acting 1: Fundamental Technique  
3
THAR 2160  
Voice and Speech 1  
3
Total Credit Hours
9

Historical/Critical
DGMD 3700  
Global Television  
3
DGMD 4810  
Radio and Television History  
3
DGMD 4850  
Television Criticism  
3
Total Credit Hours
9

**Typical Program for Digital Media Majors**

**Freshman**

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 1050</td>
<td>1</td>
<td>COMM 1100</td>
<td>3</td>
</tr>
<tr>
<td>CMST 1000</td>
<td>3</td>
<td>COMM 1200</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1001</td>
<td>3</td>
<td>DGMD 2205</td>
<td>3</td>
</tr>
<tr>
<td>UCCS History</td>
<td>3</td>
<td>THEO 1001</td>
<td>3</td>
</tr>
<tr>
<td>Foreign Language or UCCS Diverse Culture</td>
<td>3-4</td>
<td>Foreign Language or UCCS Diverse Culture</td>
<td>3-4</td>
</tr>
<tr>
<td>PSYC 1001</td>
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<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>16-17</td>
<td>15-16</td>
</tr>
</tbody>
</table>

**Sophomore**

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 2500</td>
<td>3</td>
<td>DGMD 2250</td>
<td>3</td>
</tr>
<tr>
<td>DGMD 2335</td>
<td>3</td>
<td>MATH 1700 (or UCCS Science)</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 1001</td>
<td>3</td>
<td>UCCS Diverse Culture or Minor/elective course</td>
<td>3</td>
</tr>
<tr>
<td>UCCS Diverse Culture or Minor/elective course</td>
<td>3</td>
<td>UCCS Literature/Performing Arts</td>
<td>3</td>
</tr>
<tr>
<td>Minor/elective</td>
<td>3</td>
<td>Minor/electives</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>

**Junior**

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>DGMD 3840 (or elective)</td>
<td>3</td>
<td>DGMD 3840 (or elective)</td>
<td>3</td>
</tr>
<tr>
<td>COMM 4400</td>
<td>3</td>
<td>COMM 3800 or 3900</td>
<td>3</td>
</tr>
<tr>
<td>MATH 1700 (or UCCS Science)</td>
<td>3</td>
<td>Minor/electives</td>
<td>6</td>
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</tbody>
</table>
### Digital Media Minor

**Required Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DGMD 2205</td>
<td>Introduction to Digital Media Production</td>
<td>3</td>
</tr>
<tr>
<td>DGMD 2250</td>
<td>Intermediate Digital Media Production</td>
<td>3</td>
</tr>
</tbody>
</table>

Choose at least one of the following (History/Criticism/Theory):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DGMD 3700</td>
<td>Global Television</td>
<td>3</td>
</tr>
<tr>
<td>DGMD 3840</td>
<td>Film and TV Aesthetics</td>
<td>3</td>
</tr>
<tr>
<td>DGMD 4810</td>
<td>Radio and Television History</td>
<td>3</td>
</tr>
<tr>
<td>DGMD 4850</td>
<td>Television Criticism</td>
<td>3</td>
</tr>
</tbody>
</table>

9 credits of electives

Choose any DGMD courses and/or any of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>THAR 1100</td>
<td>Acting 1: Fundamental Technique</td>
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</tr>
<tr>
<td>THAR 2160</td>
<td>Voice and Speech 1</td>
<td>3</td>
</tr>
<tr>
<td>THAR 2180</td>
<td>Acting for Camera</td>
<td>3</td>
</tr>
<tr>
<td>COMM 4600</td>
<td>Media Management</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credit Hours** 18

Some courses under the headings of ADPR, COMM and JOUR may be counted as DGMD electives with departmental approval.

**Courses**

**DGMD 2205. Introduction to Digital Media Production. 3 cr. hrs.**

Basic audio and video production and post-production techniques used in radio, television, emergent media and online. Prereq: Restricted to Digital Media (DGMD) majors and minors; or cons. of instr.

**DGMD 2250. Intermediate Digital Media Production. 3 cr. hrs.**

Intermediate audio and video production and post-production techniques used in television, corporate media, emergent media, film and online. Emphasis on skills acquisition and portfolio development. Prereq: DGMD 2205 and DGMD 2335.

**DGMD 2335. Introduction to Scriptwriting. 3 cr. hrs.**

Students learn to write in the proper script style for a variety of film, radio and television formats. Writing workshop approach.

**DGMD 2555. Corporate Media. 3 cr. hrs.**

Analysis and practice in the development, acquisition and utilization of electronic media in the corporate world. Emphasis on problems of budget, audience, objectives, evaluation and production as encountered in corporate media communication.

**DGMD 2565. The Business of Entertainment. 3 cr. hrs.**

Students receive a thorough grounding in the financial processes and economies in the industry to better understand the basic business and operational framework of film and television. Topics covered range from project development and product distribution to forward funding future projects.

**DGMD 2610. Program Development. 3 cr. hrs.**

Planning and development of programs for specialized audience and objectives. Preparation of program layouts for television, cable, and corporate systems.
DGMD 2710. Sound Design. 3 cr. hrs.
Aesthetics of audio mixing in various program genres (drama, commercial, documentary, interviewing, feature, etc.) utilizing stereo and multi-track consoles and digital effects devices and workstations. Prereq: DGMD 2205; or cons. of instr.

DGMD 2810. Radio Programming. 3 cr. hrs.
Examination and case study analysis of the contemporary radio industry. Emphasis on music formats, news, talk, sports, syndication, and other sources of program material. Includes study of audience demographics, profiles, ratings, and promotions.

DGMD 3240. Television Performance. 3 cr. hrs.

DGMD 3510. Sales and Promotion. 3 cr. hrs.
Methods, organization, compensation, and administration of sales and promotion activities. Motivational and organizational techniques; methods of selling and alternative approaches to market, product, and media analysis. Case study approach.

DGMD 3700. Global Television. 3 cr. hrs.
Explores the historical, social, cultural, political and economic origins of television as a media institution around the world, taking into account the different sources of funding such as commercial, for-profit industries and government initiatives.

DGMD 3840. Film and TV Aesthetics. 3 cr. hrs.
Students explore aesthetics through a variety of film and television texts. Emphasis on developing a critical eye as both a media viewer and producer. Prereq: Soph. stndg.

DGMD 3964. Practicum in Student Media. 1-3 cr. hrs.
Students who work for MUR or MUTV not only gain valuable hands-on experience, but can receive credit. Depending on the hours worked per semester, students earn 1-3 credits. Students earning less than 3 credits can repeat the practicum for a total of 3 credits. S/U grade assessment. Prereq: Cons. of dept. ch. or media director.

DGMD 3986. Internship in Digital Media. 0-3 cr. hrs.
Observation, participation, and experience in a radio, television, cable, or corporate setting. Augmented with selected readings, papers or conferences with adviser. 0 credit will be SNC/UNC grade assessment; 1-3 credit(s) will be S/U grade assessment. Prereq: Cons. of dept. ch.

DGMD 4260. Documentary Production. 3 cr. hrs.
Students create documentary digital media projects that employ non-fiction story structure and advanced techniques of shooting and editing, including hand-held and stationary camera, audio and microphone techniques and field lighting. Students learn documentary theory and history, and also master project research, development, production and editing techniques. By developing individual voice and storytelling techniques, students create original, meaningful non-fiction works. Prereq: DGMD 2205 or cons. of instr.

DGMD 4275. Advanced Digital Media Production and Direction. 3 cr. hrs.
Development of program-length dramatic and non-dramatic in-studio or location productions for television and emergent media distribution. Prereq: DGMD 2205.

DGMD 4280. Narrative Cinematic Production. 3 cr. hrs.
Create a short film, executing each step of production (pre-production to post-production). Professional film crew roles are stressed. Rotate through many of the technical positions of a small production team (camera operator, sound recordist, gaffer, DIT, editor, etc). Emphasis on skills mastery and portfolio development. Prereq: DGMD 2250; or cons. of instr.

DGMD 4345. Advanced Scriptwriting. 3 cr. hrs.
Development and writing of scripts for television and/or feature films. Includes development of concepts for new television series, miniseries, and movies for television, and study of their specific writing requirements, as well as writing for current television series. Writing workshop approach. Prereq: DGMD 2335.

DGMD 4620. Television Programming. 3 cr. hrs.
Analysis of television programming theories. Includes data-based criticisms of different programming strategies. Primary emphasis on prime-time network entertainment programming; includes consideration of effective programming for other "day parts" and news. Students program their own network on the basis of theories and data provided.

DGMD 4800. Digital Media Law and Policy. 3 cr. hrs.
Focuses on contemporary problems in media law and policy. Emphasis is placed on the Internet, mobile and social media, broadcasting, broadband and emerging technologies and on the most current legal and policy controversies and debates affecting those media. Students debate and seek to resolve law and policy problems while also studying and critiquing policymaking processes. Prereq: COMM 3800 or cons. of instr.

DGMD 4810. Radio and Television History. 3 cr. hrs.
Historical, cultural and commercial growth of American radio and television broadcasting, with special emphasis on programming, from pre-commercial beginnings to the present. Key genres, persons, issues and trends in the development of American prime-time television.
DGMD 4845. Women and Documentary. 3 cr. hrs.
Students explore potent, groundbreaking, funny, inspiring and thought-provoking documentaries made by women. Topics of social justice, autobiographical themes, cinema verite, hybrid and traditional forms are featured among the American and international documentaries viewed, which showcase the works of critically acclaimed documentarians. Students learn to apply an analytical lens to these works and understand not only the perspectives of those in front of the camera, but those of the women who created them.

DGMD 4850. Television Criticism. 3 cr. hrs.
Stimulating serious thought about television as a societal force. Examines the major critical approaches that have historically been applied to television programming. Studies major television scholars whose work appears in academic publications and the mass media.

DGMD 4860. Digital Campaign Strategies, Planning and Analysis. 3 cr. hrs.
Examines digital campaigns that focus on political or social action issues. Goal is to develop more informed consumers and critics of political and social action communication campaigns. Exposure to relevant theories, methods and ideas, and application of that knowledge to current campaign activity. Explores how campaigns have changed over time, campaign planning, how attitudes are influenced, opinions are created and behaviors are triggered and campaign design and evaluation.

DGMD 4931. Topics in Digital Media. 1-3 cr. hrs.
Various topics in broadcast and electronic communication to be announced in the Schedule of Classes. Includes extensive screening and/or other activities. Lecture/lab format.

DGMD 4953. Seminar in Digital Media. 1-3 cr. hrs.
Special subjects of seminar to be announced in the Schedule of Classes. Variable topics.

DGMD 4961. Special Institute/Workshop/Project. 1-3 cr. hrs.
Offered for variable credit.

DGMD 4995. Independent Study in Digital Media. 1-3 cr. hrs.
Independent study offered for variable credit. Prereq: Cons. of dept. ch.

DGMD 4997. Senior Capstone. 1-3 cr. hrs.
In order to demonstrate professional proficiency and to enhance their learning, students will complete a 1-3 credit capstone plus their choice of senior-level elective course selected from DGMD 4810, DGMD 4850, DGMD 4280, DGMD 4260, or a DGMD 4953. Prereq: DGMD major; Sr. stndg; DGMD 2250.

DGMD 4999. Senior Thesis. 1-3 cr. hrs.
The application of rigorous methodology in developing and writing a thesis under the direction of an adviser. Prereq: Cons. of dept. ch.
Journalism

Chairperson: John Pauly, Ph.D.

The journalism major prepares students to gather, synthesize and present news and information, using a variety of multimedia tools. The curriculum emphasizes the development of strong writing and reporting skills; an understanding of social science research methods; familiarity with the law, history and ethics of the profession; and skillful use of social media and other digital storytelling techniques. Journalism’s grounding in the liberal arts and its commitment to writing and analysis also make it good preparation for careers in law, business, government and education.

Journalism Major

A total of 37 credits of course work must be completed for the major in journalism. Students with a major in journalism cannot take more than 48 credits in the mass communication areas (ADVE, COMM, DGMD, JOUR and PURE) and are required to take 72 credits outside of the mass communication areas. The following courses must be completed toward the 37 credits:

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>JOUR 1100</td>
<td>Digital Journalism 1: Journalism Bootcamp</td>
<td>3</td>
</tr>
<tr>
<td>JOUR 1550</td>
<td>Digital Journalism 2: Reporting and News Design</td>
<td>3</td>
</tr>
<tr>
<td>JOUR 1964</td>
<td>Journalism Practicum</td>
<td>1</td>
</tr>
<tr>
<td>JOUR 2100</td>
<td>Digital Journalism 3: Community Reporting</td>
<td>3</td>
</tr>
<tr>
<td>COMM 3800</td>
<td>Media Law</td>
<td>3</td>
</tr>
<tr>
<td>COMM 3900</td>
<td>Ethical Problems of Mass Communications</td>
<td>3</td>
</tr>
</tbody>
</table>

One Theory/Research Course:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 4100</td>
<td>Mass Media and the American Family</td>
<td>3</td>
</tr>
<tr>
<td>COMM 4200</td>
<td>International Communication</td>
<td></td>
</tr>
<tr>
<td>COMM 4300</td>
<td>Survey Research and Reasoning for Communication Professionals</td>
<td></td>
</tr>
<tr>
<td>COMM 4400</td>
<td>Mass Communication Theory and Research</td>
<td></td>
</tr>
<tr>
<td>COMM 4500</td>
<td>Race and Gender Issues in Mass Media</td>
<td></td>
</tr>
<tr>
<td>COMM 4550</td>
<td>Media and the &quot;Other&quot;</td>
<td></td>
</tr>
<tr>
<td>COMM 4750</td>
<td>Media, Technology and Culture</td>
<td></td>
</tr>
</tbody>
</table>

One History Course:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>DGMD 4810</td>
<td>Radio and Television History</td>
<td>3</td>
</tr>
<tr>
<td>JOUR 4600</td>
<td>History of American News Media</td>
<td></td>
</tr>
</tbody>
</table>

Two Advanced Multimedia Reporting Courses. Take two separate offerings of the following variable topic course. 6

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>JOUR 4932</td>
<td>Advanced Topics in Journalism</td>
<td>6</td>
</tr>
</tbody>
</table>

Two Electives: Choose from all upper division COMM and JOUR classes. 6

One Senior Capstone Course:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>JOUR 4996</td>
<td>Capstone: Journalism News Service</td>
<td>3</td>
</tr>
<tr>
<td>JOUR 4997</td>
<td>Capstone: Magazine with a Mission</td>
<td></td>
</tr>
</tbody>
</table>

Total Credit Hours 37

One of the following courses is also required but does not count as hours in the major:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1700</td>
<td>Modern Elementary Statistics</td>
<td></td>
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<tr>
<td>PSYC 2001</td>
<td>Psychological Measurements and Statistics</td>
<td></td>
</tr>
<tr>
<td>SOCI 2060</td>
<td>Social Statistics</td>
<td></td>
</tr>
</tbody>
</table>

Total Credit Hours 0

Typical Program for Journalism Majors

Freshman

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>First Term</th>
<th>Second Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 1050</td>
<td></td>
<td>1</td>
<td>COMM 1200</td>
</tr>
<tr>
<td>CMST 1000</td>
<td></td>
<td>3</td>
<td>PHIL 1001</td>
</tr>
<tr>
<td>ENGL 1001</td>
<td></td>
<td>3</td>
<td>Foreign language or UCCS Diverse Culture</td>
</tr>
</tbody>
</table>
Marquette University - Undergraduate Bulletin

<table>
<thead>
<tr>
<th>Course</th>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>JOUR 1964</td>
<td>1</td>
<td>JOUR 1100</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Foreign language or UCCS Diverse Culture</td>
<td>3-4</td>
<td>Minor/elective</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>THEO 1001</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UCCS History</td>
<td>3</td>
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</tr>
<tr>
<td></td>
<td>17-18</td>
<td></td>
<td>15-16</td>
<td></td>
</tr>
</tbody>
</table>

**Sophomore**

<table>
<thead>
<tr>
<th>Course</th>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 1100</td>
<td>3</td>
<td>JOUR 2100</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>COMM 2500</td>
<td>3</td>
<td>MATH 1700 (or UCCS Science)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>JOUR 1550</td>
<td>3</td>
<td>PHIL 2310</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MATH 1700 (or UCCS Science)</td>
<td>3</td>
<td>UCCS Diverse Culture or Minor/elective course</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>UCCS Diverse Culture or Minor/elective course</td>
<td>3</td>
<td>UCCS Literature/Performing Arts</td>
<td>3</td>
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</tr>
<tr>
<td></td>
<td>15</td>
<td></td>
<td>15</td>
<td></td>
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</tbody>
</table>

**Junior**

<table>
<thead>
<tr>
<th>Course</th>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>JOUR History elective</td>
<td>3</td>
<td>JOUR 4932</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>JOUR Theory/Research elective</td>
<td>3</td>
<td>UCCS Theology</td>
<td>3</td>
<td></td>
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<tr>
<td>JOUR major elective</td>
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</table>

**Senior**

<table>
<thead>
<tr>
<th>Course</th>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 3800 or 3900</td>
<td>3</td>
<td>COMM 3800 or 3900</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>JOUR 4932 1</td>
<td>3</td>
<td>JOUR 4996 or 4997</td>
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<td>Minor/electives</td>
<td>8</td>
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<tr>
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</tr>
</tbody>
</table>

Total credit hours: 120-122

* Two terms of Advanced Topics in Journalism are required.

**Wisconsin Teaching Licensure in Journalism (Middle Childhood/Early Adolescence)**

In addition to completing all requirements as specified by the College of Education, students must also complete all requirements listed under the journalism major.

**Wisconsin Teaching Licensure in Journalism (Early Adolescence/Adolescence)**

In addition to completing all requirements as specified by the College of Education, students seeking Wisconsin teaching licensure in journalism at the early adolescence/adolescence level must also complete 37 hours including:

**Required Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 1200 Media in Society</td>
<td>3</td>
</tr>
<tr>
<td>COMM 3800 Media Law</td>
<td>3</td>
</tr>
<tr>
<td>COMM 3900 Ethical Problems of Mass Communications</td>
<td>3</td>
</tr>
<tr>
<td>JOUR 1100 Digital Journalism 1: Journalism Bootcamp</td>
<td>3</td>
</tr>
<tr>
<td>JOUR 1550 Digital Journalism 2: Reporting and News Design</td>
<td>3</td>
</tr>
</tbody>
</table>
Courses

JOUR 1100. Digital Journalism 1: Journalism Bootcamp. 3 cr. hrs.
Covers basic journalism skills and concepts, including news values, story selection and fact verification by covering neighborhoods and events. Students will find and interview sources and write for radio, TV, web and print, with emphasis on learning and audio skills. Projects appear on a course website.

JOUR 1200. Basic News Photography. 3 cr. hrs.
Explore the historical, technical and aesthetic aspects of news photography. Assignments cover control of exposure, light, motion and composition. Lab work includes training and use of 35mm cameras and basic knowledge of software to produce a variety of finished images. Emphasis on visual communication in the digital age. Cameras are available for assignments.

Students move beyond event coverage and learn to research and produce stories about important neighborhood issues. Students learn to cover civic issues related to police, fire, courts and taxation, and dig for statistics and facts in databases. Includes writing for radio, TV, web and print, with an emphasis on learning still photography skills. Projects appear on a course website. Prereq: JOUR 1100.

JOUR 1964. Journalism Practicum. 1 cr. hr.
Students are introduced to the field of journalism, its standards and practices. Assignments in writing, editing and production. Guest speakers from mass communication fields. S/U grade assessment.

JOUR 2100. Digital Journalism 3: Community Reporting. 3 cr. hrs.
Students learn to mine databases, public records, archives, interviews, public meetings and press conferences for critical information. Students use their investigative skills to uncover and report issues of public interest. Students continue to develop news writing, editorial judgement and story production skills and values, with a special emphasis on video journalism. Projects appear on a class website. Prereq: JOUR 1550.

JOUR 3500. Television Reporting. 3 cr. hrs.
Students will produce professional quality television news stories that demonstrate the techniques of video storytelling, including reporting, writing, shooting and editing.

JOUR 3700. Radio Reporting. 3 cr. hrs.
Students will develop advanced writing and production techniques used in a variety of radio formats and become stronger storytellers.

JOUR 3986. Internship in Journalism. 0-3 cr. hrs.
Work experience in an area related to major supervised by an approved professional coupled with related academic work assigned. Approval of adviser and Internship Program Director required in advance of internship. May not substitute for a Journalism writing requirement. May be taken more than once to a maximum of three credits. Prereq: Jr. stndg.; JOUR major; and cons. of dept. ch. 0 credit will be SNC/UNC grade assessment; 1-3 credits will be S/U grade assessment.

JOUR 4160. Narrative Nonfiction Reporting. 3 cr. hrs.
Emphasizes longform journalism, stresses strong reporting, immersion in a single subject over the course of a semester, in-depth interviews and detailed observation. Students work individually, turning in portions of their work weekly. Produce a publishable 10,000 to 15,000 word article as the final project. Prereq: JOUR 2100 or equiv., cons. of instr.
JOUR 4200. Publications Editing. 3 cr. hrs.
Editing principles and practices for print and online news publications. Editing copy, photos, charts and graphs; verification of information; writing headlines and captions. News judgment, wire services, backpack journalism, digital newsroom; digital production software. Prereq: JOUR 2100; or ADPR 1800; or ENGL 3210; or cons. of dept. ch.

JOUR 4360. Freelance Writing. 3 cr. hrs.
Covers how newsstand, trade and online magazines work, how magazines use freelancers and writers, how magazine writing differs from newspaper reporting and other media, what excellence in magazine writing looks like and how students can focus, improve and polish their writing to sell to or work on a magazine.

JOUR 4400. Media Entrepreneurship. 3 cr. hrs.
The business side of being a journalist: management, financial, practical and professional issues running an online or print publication, operating as a backpack journalist, working as a freelancer. Management structures, business practices, contracts and marketing. Prereq: Jr. Stndg.

JOUR 4500. Newspaper Design and Production. 3 cr. hrs.
Fundamentals of design and production for print and online newspapers. Students develop skills in working with separate and integrated print and online delivery systems. Introduction to digital forms of news content for online news publications: audio, video, slide shows and podcasts. Digital production software. Prereq: JOUR 4200 or cons. of instr.

JOUR 4510. Magazine Design and Production. 3 cr. hrs.
Fundamentals of magazine design and production. Students develop understanding of basic elements of publication design and critical skills through analysis of various design problems. Prereq: JOUR 4200; computer workshop or demonstrated proficiency on the Macintosh computer with current design software.

JOUR 4520. Online Editing and Design. 3 cr. hrs.
Fundamental principles of processing and managing information in verbal and visual forms for Web publication. An emphasis on special editing and design issues created by the online environment and internet technology. Legal and ethical issues on the Internet. Prereq: JOUR 4200; computer workshop or demonstrated proficiency on the Macintosh computer with current design software.

JOUR 4600. History of American News Media. 3 cr. hrs.
The origin and development of Journalism in the United States considered in relation to American political, social and economic history. Consideration of newspapers, magazines, the electronic media, and important figures within each field. Prereq: Jr. Stndg.

Covers strategies and methods for advising yearbooks, newspapers, online news and features in the context of scholastic journalism and for teaching journalism. Includes developing student staff; planning, production and assessment of scholastic publications and online products; evaluation of journalism texts for secondary level; working with faculty, school administrators, school boards, parents; budgeting; advertising sales; using desktop publishing and current software. Prereq: Jr. Stndg.; JOUR 4200; cons. of instr.

JOUR 4931. Topics in Journalism. 3 cr. hrs.
Study of, and practice in, various areas of specialized work such as regional, small community, union, organization journalism, and the special interest press. Prereq: Jr. Stndg.

JOUR 4932. Advanced Topics in Journalism. 3 cr. hrs.
Advanced reporting and producing of news stories on a single topic that varies by semester. Prereq: JOUR 2100 or cons. of instr.

JOUR 4951. MU Led Travel/Study Abroad. 3 cr. hrs.
Travel to London to explore the arts, British culture and writing about the arts. Develop critical theories for evaluation of the arts within the cultural context of London. Observe, participate in and reflect upon the cultural similarities and differences. Think critically about the production of the lively arts in disparate cultures and apply journalistic reporting and writing skills to writing arts criticism for dance, music, museums, dining and theatre. Course taught in an international setting by Marquette professors and where students earn Marquette credit. Study Abroad expenses apply.

JOUR 4953. Seminar in Journalism. 1-3 cr. hrs.
Specific subjects of seminars to be announced in the Schedule of Classes. Variable topics. Prereq: Jr. Stndg.

JOUR 4955. Independent Study in Journalism. 1-3 cr. hrs.
Prereq: Jr. Stndg. and cons. of dept. ch. Prereq: Jr. Stndg. and cons. of dept. ch.

JOUR 4996. Capstone: Journalism News Service. 3 cr. hrs.
Students are the staff of an online news service, providing coverage of the area’s underserved. Students provide news stories using a range of new media and links to the online Diederich Magazine. Prereq: JOUR 2100; Sr. Stndg.

JOUR 4997. Capstone: Magazine with a Mission. 3 cr. hrs.
Students are the staff of a city magazine that addresses Marquette’s social justice mission. Students produce print and online magazines with a social media presence. Students write, research, shoot, edit, design and produce stories about people and events that affect lines and spark change. Prereq: JOUR 2100; Sr. Stndg.

JOUR 4999. Senior Thesis. 1-3 cr. hrs.
The application of rigorous methodology in developing and writing a thesis under the direction of an adviser. Prereq: Jr. Stndg. and cons. of dept. ch.
Media Studies

Chairperson: John Pauly, Ph.D.

The media studies major is an undergraduate interdisciplinary communication major that examines the media’s relationship with, and role in, democratic society. Rooted in the liberal arts disciplines, the major is for students who want to understand the mediated messages through which contemporary society is constructed. Courses for the major cover all types of media, placing them within their historical, cultural, social, economic, legal and ethical contexts. Students engage in critical, cultural analysis to assess media practices and structures and the impact these have on individual perceptions, issues of social justice, public policy and the media themselves.

The major focuses upon critical inquiry and analysis of the media’s role and impact on contemporary society rather than upon media skills. Students who complete this major are, for example, able to: 1) understand and articulate the historical and legal practices and relationships between media, culture and society, 2) critically evaluate the ethical responsibilities of media in society and 3) apply relevant theories and research methods to gauge the individual and social impact of media messages. The major is appropriate for students who are pursuing careers in law, business, politics, teaching, the media professions, or media-driven businesses and industries, or who are planning to pursue graduate studies.

Media Studies Major

A total of 36 credit hours are required.

Students whose first major is advertising, digital media, journalism or public relations may not double major in media studies.

Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 3800</td>
<td>Media Law</td>
<td>3</td>
</tr>
<tr>
<td>COMM 3900</td>
<td>Ethical Problems of Mass Communications</td>
<td>3</td>
</tr>
<tr>
<td>COMM 4500</td>
<td>Race and Gender Issues in Mass Media</td>
<td>3</td>
</tr>
<tr>
<td>or COMM 4550</td>
<td>Media and the “Other”</td>
<td></td>
</tr>
<tr>
<td>COMM 4750</td>
<td>Media, Technology and Culture</td>
<td>3</td>
</tr>
<tr>
<td>COMM 4999</td>
<td>Senior Thesis</td>
<td>3</td>
</tr>
<tr>
<td>CMST 3350</td>
<td>Modern Rhetorical Theory and Criticism</td>
<td>3</td>
</tr>
<tr>
<td>or CMST 4320</td>
<td>Philosophy of Communication</td>
<td></td>
</tr>
<tr>
<td>DGMD 4850</td>
<td>Television Criticism</td>
<td>3</td>
</tr>
<tr>
<td>or FILM 2280</td>
<td>Film and Popular Culture</td>
<td></td>
</tr>
<tr>
<td>JOUR 4600</td>
<td>History of American News Media</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>(see list below)</td>
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<td>Total</td>
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Note: No courses within the student’s first major may be taken without prior approval.

Elective Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>ADPR 4600</td>
<td>International Advertising and Public Relations</td>
</tr>
<tr>
<td>COMM 4100</td>
<td>Mass Media and the American Family</td>
</tr>
<tr>
<td>COMM 4200</td>
<td>International Communication</td>
</tr>
<tr>
<td>COMM 4400</td>
<td>Mass Communication Theory and Research</td>
</tr>
<tr>
<td>COMM 4600</td>
<td>Media Management</td>
</tr>
<tr>
<td>COMM 4700</td>
<td>Media and Politics</td>
</tr>
<tr>
<td>COMM 4953</td>
<td>Seminar in Communication</td>
</tr>
<tr>
<td>CMST 3300</td>
<td>Persuasion</td>
</tr>
<tr>
<td>CMST 4260</td>
<td>Communication Technologies in the Workplace</td>
</tr>
<tr>
<td>CMST 4330</td>
<td>Freedom of Speech</td>
</tr>
<tr>
<td>CMST 4360</td>
<td>Rhetoric of Social Movements</td>
</tr>
<tr>
<td>DGMD 4845</td>
<td>Women and Documentary</td>
</tr>
<tr>
<td>DGMD 4860</td>
<td>Digital Campaign Strategies, Planning and Analysis</td>
</tr>
<tr>
<td>DGMD 4931</td>
<td>Topics in Digital Media</td>
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<tr>
<td>FILM 1931</td>
<td>Topics in Film Studies</td>
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### Typical Program for Media Studies Major

#### Freshman

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
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<tbody>
<tr>
<td>COMM 1050</td>
<td>1</td>
<td>COMM 1200</td>
<td>3</td>
</tr>
<tr>
<td>CMST 1000</td>
<td>3</td>
<td>COMM 1100 (or UCCS Diverse Culture)</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 1001</td>
<td>3</td>
<td>Foreign Language or UCCS Diverse Culture</td>
<td>3-4</td>
</tr>
<tr>
<td>UCCS History</td>
<td>3</td>
<td>PHIL 1001</td>
<td>3</td>
</tr>
<tr>
<td>Foreign Language or UCCS Diverse Culture</td>
<td>3-4</td>
<td>UCCS Math</td>
<td>3</td>
</tr>
<tr>
<td>THEO 1001</td>
<td>3</td>
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#### Sophomore

<table>
<thead>
<tr>
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<th>Hours</th>
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<tbody>
<tr>
<td>COMM 2500</td>
<td>3</td>
<td>UCCS Science</td>
<td>3</td>
</tr>
<tr>
<td>COMM 1100 (or UCCS Diverse Culture)</td>
<td>3</td>
<td>PHIL 2310</td>
<td>3</td>
</tr>
<tr>
<td>UCCS Literature/Performing Arts</td>
<td>3</td>
<td>Minor/electives</td>
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#### Junior

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 3800</td>
<td>3</td>
<td>COMM 3900</td>
<td>3</td>
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<tr>
<td>COMM 4750</td>
<td>3</td>
<td>COMM 4500 or 4550</td>
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<td>JOUR 4600</td>
<td>3</td>
<td>CMST 3350 or 4320</td>
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<td>UCCS Theology</td>
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<td>Media Studies electives</td>
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<td>Minor/electives</td>
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#### Senior

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>DGMD 4850 or FILM 2280</td>
<td>3</td>
<td>COMM 4999</td>
<td>3</td>
</tr>
<tr>
<td>Media Studies elective</td>
<td>3</td>
<td>Media Studies elective</td>
<td>3</td>
</tr>
<tr>
<td>Minor/electives</td>
<td>9</td>
<td>Minor/electives</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>15</td>
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<td>14</td>
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</tbody>
</table>

Total credit hours: 120-122
Public Relations

Chairperson: Daradirek (Gee) Ekachai, Ph.D.

The major in public relations is designed to give students knowledge and skills to help organizations and brands accurately communicate their images to customers, employees, investors and the media. Students learn how to apply an integrated and creative approach to promote products and services by mastering public relations strategies and tactics, using both traditional and emerging technologies and social media. Students also need to understand the role of public relations in helping organizations or clients build and maintain ethical leadership as well as be a key driver in solving social issues, crisis mitigation and advance worthwhile causes to improve quality of life and society as a whole.

Our curriculum is both conceptual and applied with courses in writing, strategies, design, campaigns, social media, crisis communication, and sports promotion, to name a few. A required internship lets students specialize in a chosen area and helps develop professional networks.

Public Relations Major

A total of 39 credits of course work must be completed for the major in public relations. Students with a major in public relations cannot take more than 48 credits in the mass communication areas (ADVE, COMM, DGMD, JOUR and PURE) and are required to take 72 credits outside of the mass communication areas. The following courses must be completed toward the 39 credits:

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ADPR 2100</td>
<td>Communication Design Toolbox</td>
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<td>ADPR 2200</td>
<td>Media Writing</td>
<td>3</td>
</tr>
<tr>
<td>ADPR 3986</td>
<td>Internship in Advertising and Public Relations</td>
<td>3</td>
</tr>
<tr>
<td>CMST 3300</td>
<td>Persuasion</td>
<td>3</td>
</tr>
<tr>
<td>COMM 3800</td>
<td>Media Law</td>
<td>3</td>
</tr>
<tr>
<td>or CMST 4330</td>
<td>Freedom of Speech</td>
<td></td>
</tr>
<tr>
<td>COMM 3900</td>
<td>Ethical Problems of Mass Communications</td>
<td>3</td>
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<tr>
<td>PURE 1800</td>
<td>Public Relations Principles</td>
<td>3</td>
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<tr>
<td>PURE 3200</td>
<td>Strategic Communication Design</td>
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</tr>
<tr>
<td>PURE 3600</td>
<td>Public Relations Writing</td>
<td>3</td>
</tr>
<tr>
<td>PURE 3800</td>
<td>Public Relations Strategies</td>
<td>3</td>
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<tr>
<td>PURE 4997</td>
<td>Public Relations Campaigns</td>
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Plus two electives from ADPR, ADVE, PURE courses and/or any of the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>CCOM 2000</td>
<td>Issues in Corporate Communication</td>
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</tr>
<tr>
<td>CCOM 4700</td>
<td>Corporate Advocacy</td>
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</tr>
<tr>
<td>CMST 3100</td>
<td>Communication and Conflict</td>
<td></td>
</tr>
<tr>
<td>CMST 3200</td>
<td>Organizational Communication</td>
<td></td>
</tr>
<tr>
<td>CMST 4260</td>
<td>Communication Technologies in the Workplace</td>
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</tr>
<tr>
<td>CMST 4400</td>
<td>Cross-Cultural Communication in the United States</td>
<td></td>
</tr>
<tr>
<td>CMST 4500</td>
<td>Health Communication</td>
<td></td>
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</tbody>
</table>

Total Credit Hours

39

Typical Program for Public Relations Majors

Freshman

<table>
<thead>
<tr>
<th>Course</th>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 1050</td>
<td></td>
<td>1</td>
<td>COMM 1100</td>
<td>3</td>
</tr>
<tr>
<td>CMST 1000</td>
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<td>3</td>
<td>COMM 1200</td>
<td>3</td>
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<td>ENGL 1001</td>
<td></td>
<td>3</td>
<td>PURE 1800</td>
<td>3</td>
</tr>
<tr>
<td>UCCS History</td>
<td></td>
<td>3</td>
<td>Foreign Language or UCCS Diverse Culture</td>
<td>3-4</td>
</tr>
<tr>
<td>Foreign Language or UCCS Diverse Culture</td>
<td>3-4</td>
<td>PHIL 1001</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>THEO 1001</td>
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</table>

16-17

15-16
### Sophomore

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADPR 2100 (or elective)</td>
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<td>ADPR 2100 (or elective)</td>
<td>3</td>
</tr>
<tr>
<td>ADPR 2200</td>
<td>3</td>
<td>COMM 2500</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 2310</td>
<td>3</td>
<td>UCCS Diverse Culture or Minor/elective course</td>
<td>3</td>
</tr>
<tr>
<td>UCCS Diverse Culture or Minor/elective course</td>
<td>3</td>
<td>UCCS Math or Science</td>
<td>3</td>
</tr>
<tr>
<td>UCCS Math or Science</td>
<td>3</td>
<td>UCCS Theology</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>15</td>
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</table>

### Junior

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PURE 3200 or 3600</td>
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<td>3</td>
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<tr>
<td>PURE 3800 or ADPR 3986</td>
<td>3</td>
<td>PURE 3800 or ADPR 3986</td>
<td>3</td>
</tr>
<tr>
<td>CMST 3300 or COMM 3900</td>
<td>3</td>
<td>CMST 3300 or COMM 3900</td>
<td>3</td>
</tr>
<tr>
<td>UCCS Literature/Performing Arts</td>
<td>3</td>
<td>Major elective</td>
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<tr>
<td>Minor/elective</td>
<td>3</td>
<td>Minor/elective</td>
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### Senior

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
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<th>Hours</th>
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<tr>
<td>COMM 3800</td>
<td>3</td>
<td>Minor/electives</td>
<td>11</td>
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<tr>
<td>PURE 4997</td>
<td>3</td>
<td>Major elective</td>
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<td></td>
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</table>

Total credit hours: 120-122

### Public Relations Minor

Students are required to complete 18 credits (6 required and 12 elective credits) to complete the Public Relations minor.

### Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PURE 1800</td>
<td>Public Relations Principles</td>
<td>3</td>
</tr>
<tr>
<td>ADPR 2200</td>
<td>Media Writing</td>
<td>3</td>
</tr>
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</table>

Choose two courses from PURE and two more courses from remaining ADPR or PURE courses.

Total Credit Hours 18

### Advertising Public Relations Courses

**ADPR 2100. Communication Design Toolbox. 3 cr. hrs.**

An applied, hands-on course that introduces students to the computing design software environment and the basics of Adobe Creative Suite and video editing software as tools to engage in the design process for the conceptualizaton and creation of communication design solutions. Prereq: ADVE, CCOM and PURE majors or minors.

**ADPR 2200. Media Writing. 3 cr. hrs.**

Factual and persuasive writing for the mass media. Introduction to and practice in newswriting, public relations writing and advertising copywriting. Basic information gathering. In-class writing exercises require use of computers. Prereq: ENGL 1001 and COMM 1100 or equivalent. Restricted to declared ADVE, CCOM or PURE majors or minors.
ADPR 3986. Internship in Advertising and Public Relations. 0-3 cr. hrs.
Work experience in advertising or public relations in specific organizational settings, supervised by an approved professional coupled with related academic work assigned. Approval of departmental internship director required in advance of internship. May be taken more than once to a maximum of three total credits. Prereq: ADPR 2200 and ADPR 1400 and cons. of dept. ch.; or ADPR 1400 and JOUR 1100 and cons. of dept. ch.; or ADPR 2200 and ADPR 1800 and cons. of dept. ch.; or ADPR 1800 and JOUR 1100 and cons. of dept. ch. 0 credit will be SNC/UNC grade assessment; 1-3 credits will be S/U grade assessment.

ADPR 4000. Sports Promotion. 3 cr. hrs.
Examines how sport organizations attract fan attention and, ultimately, generate revenue by applying strategies and tactics related to public relations, advertising, marketing and sponsorship. Topics include: sport promotion techniques, media relations, new technology, special event planning, ethics of the field, professionalism and career opportunities. Students learn about the practitioner's responsibilities to society, client/organization, fans, media and other practitioner's. Prereq: ADVE 1400 or PURE 1800 or cons. of instr. Restricted to declared ADVE or PURE majors or minors.

ADPR 4300. Emerging and Social Media in a Dynamic Marketplace. 3 cr. hrs.
Examines the strategic uses, impact and implications of emerging and social media. Addresses the need to adapt to a digital, networked marketplace where change is the rule rather than the exception. Expands student knowledge of emerging and social media and their application to advertising and public relations challenges. Students use this knowledge to find more strategic and effective ways to communicate with clients, publics, target markets and other stakeholders. Prereq: ADVE 1400 or PURE 1800; or cons. of instr. Restricted to declared ADVE, CCOM or PURE majors or minors.

ADPR 4500. Advertising and Public Relations Account Management. 3 cr. hrs.
The fundamentals of management in both the client and agency environments. Analyzes client and agency structures and functions. Explores project estimating, budgeting and time management. Examines account profitability maintenance and account team productivity. Reviews techniques for agency and supplier selection. Special emphasis on the ethical aspects of account work. Prereq: ADVE 1400 or PURE 1800; or cons. of instr. Restricted to declared ADVE or PURE majors or minors.

ADPR 4600. International Advertising and Public Relations. 3 cr. hrs.
Students develop knowledge and skills related to strategic communications within a global marketplace. A variety of topics are addressed including the role of culture in global communication, differences in styles of communication across international groups and the role brands play in this process. Content explores culture as it applies to advertising and public relations directed at different international audiences and globalization, while keeping in mind the importance of ethics and social responsibility. Prereq: ADVE 1400 or PURE 1800.

ADPR 4850. Mobile Communication. 3 cr. hrs.
Examines the strategic uses, impact and implications of emerging and social media. Addresses the need to adapt to a digital, networked marketplace where change is the rule rather than the exception. Expands student knowledge of emerging and social media and their application to advertising and public relations challenges. Students use this knowledge to find more strategic and effective ways to communicate with clients, publics, target markets and other stakeholders. Prereq: ADVE 1400 or PURE 1800; or cons. of instr. Restricted to declared ADVE, CCOM or PURE majors or minors.

ADPR 4951. MU Led Travel/Study Abroad. 3 cr. hrs.
Designed to bring advertising and culture to life within the context of the global marketplace. Students spend three weeks in both London and Prague, visit local and multinational advertising agencies and media companies, and experience local culture. Course taught in an international setting by Marquette professors and where students earn Marquette credit. Study Abroad expenses apply. Prereq: Jr. stndg., cons. of the Office of International Education, and one of the following courses: ADVE 1400 or PURE 1800, or CCOM 2000.

ADPR 4953. Seminar in Advertising and Public Relations. 1-3 cr. hrs.
Specific subjects of seminars to be announced in the Schedule of Classes. Variable topics. Prereq: ADVE 1400 or PURE 1800; or cons. of instr. Restricted to declared ADVE or PURE majors or minors.

ADPR 4955. Independent Study in Advertising and Public Relations. 1-3 cr. hrs.
Prereq: Cons. of dept. ch. Prereq: Cons. of dept. ch.

ADPR 4999. Senior Thesis. 1-3 cr. hrs.
The application of rigorous methodology in developing and writing a thesis under the direction of an adviser. Prereq: Cons. of dept. ch.

Public Relations Courses

PURE 1800. Public Relations Principles. 3 cr. hrs.
Principles, history, theory and practice of public relations in business, organizations and agencies. Analyses of public relations programs; the responsibility of the public relations practitioner to management and to relevant publics; ethics of public relations practice; the future of the field and career opportunities.

PURE 3200. Strategic Communication Design. 3 cr. hrs.
An applied course that teaches the fundamentals of cross-platform designs for strategic communication tactics, including print, digital, interactive, mobile and web-based media. Students learn basic design concepts and expand foundational technology skills to support public relations and marketing communication functions. Prereq: ADPR 2100 and either ADVE 1400 or PURE 1800. Restricted to declared ADVE, CCOM and PURE majors or minors.
PURE 3600. Public Relations Writing. 3 cr. hrs.
Covers the basics of public relations writing, including the principles of effective professional writing, finding and generating newsworthy information for print, electronic and “new” media. Topics covered include: news releases, fact sheets, brochures, online public relations, media kits, speech writing, crisis communication, and spokesperson training. Writing portfolios are assembled for purposes of future internships and employment. All classes held in a computerized writing laboratory. Prereq: PURE 1800 and ADPR 2200; and restricted to declared ADVE, CCOM and PURE majors and minors.

PURE 3800. Public Relations Strategies. 3 cr. hrs.
Covers public relations theories and strategic planning processes and how they are applied to “read world” public relations cases and problems. Emphasis is on the role of strategic problem solving and public relations. Case study analysis is used to explore the effectiveness of PR strategies and expose students to a variety of PR applications (e.g., media relations, social media, internal communication, international promotion, investor relations, IMC). Students also learn and discuss ethical decision-making in various PR situations. Prereq: PURE 1800; cons. of instr.; PURE major or minor.

PURE 3850. Crisis Communication and Reputation Management. 3 cr. hrs.
Students learn the vital role communication practitioners play in contemporary crisis communication and reputation management, and the tools used to prepare for and manage emergency situations from a communications perspective. Students learn to balance their roles as the strategic thinker (assessing organizational vulnerability, team development, etc.) and the effective tactician (message development, channel selection, etc.) and reconcile them against the reality organizations in crisis face when serving myriad stakeholders in the digital age. Class instruction includes: lectures, case studies and in-class exercises designed to develop real-time thought processes and writing for situations that could threaten brand reputation. Prereq: ADPR 1400 or ADPR 1800; PURE, CCOM or ADVE majors or minors.

PURE 4800. Advanced Public Relations Writing. 3 cr. hrs.
Designed to advance the writing and production skills developed in PURE 3600: Public Relations Writing. Applies PR strategies and theories to writing for specific stakeholders in a variety of PR situations. Emphasis is on clear, concise messages for strategic and persuasive communication in multimedia formats such as print, audio, visual, web-based and social media. In addition to developing thorough knowledge of the various formats used in creating traditional PR materials, student also plan and execute specialized forms of writing such as annual reports, white papers, op-ed articles and sponsorship/fundraising proposals. Assignments contribute to professional portfolio development. Prereq: PURE 1800, PURE 3600; or cons. of instr. Restricted to declared PURE majors or minors.

PURE 4997. Public Relations Campaigns. 3 cr. hrs.
Senior capstone course in public relations issues management for corporations, government and non-profit groups. Working in teams, students design a public communication campaign involving media management, community relations, educational outreach or other methods of advocacy in the public forum for achieving social justice goals using public relations strategies and tactics. Students design public communication campaign proposals for local or national clients. Student campaign designs are read and responded to by industry professionals, the client and the instructor. Students conduct field research, analyze results and incorporate findings in their action plans. Prereq: PURE 1800, PURE 3200, PURE 3600 and PURE 3800; or cons. of instr. Restricted to declared PURE majors.
Theatre Arts

Chairperson: Stephen Hudson-Mairet, M.F.A.

The major in theatre arts is designed for theatre students who wish to develop their professional talents and relate them to broader understanding of the world. At Marquette the BA program in theatre arts offers intensive student-centered training in performance and/or production within a liberal arts foundation. All theatre students establish a foundation in the fundamentals of making theatre: performance, stagecraft, costume technology, theatre history and then have the opportunity to concentrate in an area of performance, design/technical theatre, directing or pursue a generalist understanding of the art form.

Theatre arts majors are required to pursue a second minor or major in addition to their primary course of study. Students have also found it beneficial to double major in any of the areas from across the university, thereby obtaining a broad range of connections between the performing arts and other disciplines.

Theatre Arts Major

A total of 41 credits of course work must be completed for the major in theatre arts:

Required Courses

Complete a total of 3 credits of:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEAR 2964</td>
<td>Performing Arts Practicum</td>
<td>3</td>
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Additional requirements:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>THAR 1100</td>
<td>Acting 1: Fundamental Technique</td>
<td>3</td>
</tr>
<tr>
<td>THAR 1300</td>
<td>Stagecraft</td>
<td>3</td>
</tr>
<tr>
<td>THAR 1310</td>
<td>Stagecraft Practicum</td>
<td>0.5</td>
</tr>
<tr>
<td>THAR 1320</td>
<td>Basic Costume Technology</td>
<td>3</td>
</tr>
<tr>
<td>THAR 1330</td>
<td>Basic Costume Technology Practicum</td>
<td>0.5</td>
</tr>
<tr>
<td>THAR 2140</td>
<td>Voice and Movement for Stage</td>
<td>3</td>
</tr>
<tr>
<td>or THAR 2320</td>
<td>Scenographic Techniques</td>
<td></td>
</tr>
<tr>
<td>THAR 2400</td>
<td>Aspects of Theatrical Design</td>
<td>3</td>
</tr>
<tr>
<td>THAR 2600</td>
<td>Play Analysis 1</td>
<td>3</td>
</tr>
<tr>
<td>THAR 3953</td>
<td>Career and Preparation Studies Seminar</td>
<td>1</td>
</tr>
<tr>
<td>THAR 4200</td>
<td>History of Theatre 1</td>
<td>3</td>
</tr>
<tr>
<td>THAR 4210</td>
<td>History of Theatre II: Modern Theatre</td>
<td>3</td>
</tr>
<tr>
<td>THAR 4240</td>
<td>History of Period Styles</td>
<td>3</td>
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</table>

9 hours of Theatre Arts electives

Total Credit Hours

41

The following two ENGL courses are also required but do not count as hours in the major.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 2010</td>
<td>Literature and Genre (when the topic specializes in Drama or Dramatic Literature as approved by the Digital Media and Performing Arts department)</td>
<td>3</td>
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<tr>
<td>ENGL 4331</td>
<td>Shakespeare</td>
<td>3</td>
</tr>
</tbody>
</table>

In addition to the required sequence, the following courses are strongly recommended for those students who wish to concentrate in a specific discipline within the performing arts:

Performance

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEAR 2964</td>
<td>Performing Arts Practicum (required)</td>
<td>0.5</td>
</tr>
<tr>
<td>THAR 1100</td>
<td>Acting 1: Fundamental Technique (required)</td>
<td>3</td>
</tr>
<tr>
<td>THAR 1120</td>
<td>Acting 2: Advanced Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>THAR 1300</td>
<td>Stagecraft (required)</td>
<td>3</td>
</tr>
<tr>
<td>THAR 1320</td>
<td>Basic Costume Technology (required)</td>
<td>3</td>
</tr>
<tr>
<td>THAR 1340</td>
<td>Make-Up</td>
<td>3</td>
</tr>
<tr>
<td>THAR 2100</td>
<td>Acting 3: Introduction to Character</td>
<td>3</td>
</tr>
<tr>
<td>THAR 2140</td>
<td>Voice and Movement for Stage (required)</td>
<td>3</td>
</tr>
<tr>
<td>THAR 2160</td>
<td>Voice and Speech 1</td>
<td>3</td>
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<tr>
<td>Course</td>
<td>Title</td>
<td>Hours</td>
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<tr>
<td>THAR 2500</td>
<td>Play Direction</td>
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<tr>
<td>THAR 2600</td>
<td>Play Analysis 1 (required)</td>
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<tr>
<td>THAR 3100</td>
<td>Acting 4: Shakespeare</td>
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<tr>
<td>THAR 3953</td>
<td>Career and Preparation Studies Seminar (required)</td>
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<td>THAR 4100</td>
<td>Acting 5: Professional Auditions and Career Preparation</td>
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<td>THAR 4200</td>
<td>History of Theatre 1 (required)</td>
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<tr>
<td>DANC 2500</td>
<td>Composition and Choreography</td>
<td>3</td>
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<tr>
<td>DANC 3100</td>
<td>Theatre Dance</td>
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<tr>
<td>THAR 2140</td>
<td>Voice and Movement for Stage (required)</td>
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<tr>
<td>or THAR 2160</td>
<td>Voice and Speech 1</td>
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**Directing**

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<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>PEAR 2964</td>
<td>Performing Arts Practicum (required)</td>
<td>0.5</td>
</tr>
<tr>
<td>THAR 1100</td>
<td>Acting 1: Fundamental Technique (required)</td>
<td>3</td>
</tr>
<tr>
<td>THAR 1120</td>
<td>Acting 2: Advanced Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>THAR 1300</td>
<td>Stagecraft (required)</td>
<td>3</td>
</tr>
<tr>
<td>THAR 2140</td>
<td>Voice and Movement for Stage (required)</td>
<td>3</td>
</tr>
<tr>
<td>or THAR 2320</td>
<td>Scenographic Techniques</td>
<td></td>
</tr>
<tr>
<td>THAR 2400</td>
<td>Aspects of Theatrical Design (required)</td>
<td>3</td>
</tr>
<tr>
<td>THAR 2500</td>
<td>Play Direction</td>
<td>3</td>
</tr>
<tr>
<td>THAR 2600</td>
<td>Play Analysis 1 (required)</td>
<td>3</td>
</tr>
<tr>
<td>THAR 3953</td>
<td>Career and Preparation Studies Seminar (required)</td>
<td>1</td>
</tr>
<tr>
<td>THAR 4200</td>
<td>History of Theatre 1 (required)</td>
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<tr>
<td>THAR 4360</td>
<td>Theatre Management</td>
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<tr>
<td>THAR 4500</td>
<td>Advanced Play Direction</td>
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**Design/Technical**

<table>
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<tr>
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<th>Title</th>
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<tbody>
<tr>
<td>PEAR 2964</td>
<td>Performing Arts Practicum (required)</td>
<td>0.5</td>
</tr>
<tr>
<td>THAR 1100</td>
<td>Acting 1: Fundamental Technique (required)</td>
<td>3</td>
</tr>
<tr>
<td>THAR 1300</td>
<td>Stagecraft (required)</td>
<td>3</td>
</tr>
<tr>
<td>THAR 1320</td>
<td>Basic Costume Technology (required)</td>
<td>3</td>
</tr>
<tr>
<td>THAR 2320</td>
<td>Scenographic Techniques</td>
<td>3</td>
</tr>
<tr>
<td>THAR 2400</td>
<td>Aspects of Theatrical Design (required)</td>
<td>3</td>
</tr>
<tr>
<td>THAR 2500</td>
<td>Play Direction</td>
<td>3</td>
</tr>
<tr>
<td>THAR 2600</td>
<td>Play Analysis 1 (required)</td>
<td>3</td>
</tr>
<tr>
<td>THAR 3953</td>
<td>Career and Preparation Studies Seminar (required)</td>
<td>1</td>
</tr>
<tr>
<td>THAR 4200</td>
<td>History of Theatre 1 (required)</td>
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<tr>
<td>THAR 4360</td>
<td>Theatre Management</td>
<td>3</td>
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<tr>
<td>THAR 4380</td>
<td>Computer Applications for the Theatre</td>
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<tr>
<td>THAR 4400</td>
<td>Costume Design</td>
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</tr>
<tr>
<td>THAR 4420</td>
<td>Lighting Design</td>
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</tr>
<tr>
<td>THAR 4440</td>
<td>Scenery Design</td>
<td>3</td>
</tr>
</tbody>
</table>

**Participation in Theatre Productions:** All theatre arts majors and minors are required to audition for theatre productions and participate in a technical, design or management capacity. All university students are invited to audition for productions or participate in any of the various capacities. Students must have a minimum 2.000 GPA to participate in any production.

**Typical Program for Theatre Arts Majors**

**Freshman**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 1050</td>
<td>1</td>
<td>COMM 1200</td>
<td>3</td>
</tr>
<tr>
<td>CMST 1000</td>
<td>3</td>
<td>THAR 1120 or 2400</td>
<td>3</td>
</tr>
</tbody>
</table>
### Wisconsin Teaching Licensure in Theatre Arts (Middle Childhood/Early Adolescence)

In addition to completing all requirements as specified by the College of Education, students must also complete all requirements listed under the theatre arts major.

### Wisconsin Teaching Licensure in Theatre Arts (Early Adolescence/Adolescence)

In addition to completing all requirements as specified by the College of Education as well as those listed under the theatre arts major, students seeking Wisconsin teaching licensure in speech communication at the early adolescence/adolescence level must also complete THAR 2500 Play Direction and THAR 4360 Theatre Management. Both courses count as electives in the theatre arts major.
Theatre Arts Minor

Required Courses

Complete a total of 2 credits of:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEAR 2964</td>
<td>Performing Arts Practicum</td>
</tr>
</tbody>
</table>

Additional requirements:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>THAR 1100</td>
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<tr>
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<td>Stagecraft</td>
</tr>
<tr>
<td>THAR 1310</td>
<td>Stagecraft Practicum</td>
</tr>
<tr>
<td>THAR 1320</td>
<td>Basic Costume Technology</td>
</tr>
<tr>
<td>THAR 1330</td>
<td>Basic Costume Technology Practicum</td>
</tr>
<tr>
<td>THAR 2600</td>
<td>Play Analysis 1</td>
</tr>
<tr>
<td>THAR 4200</td>
<td>History of Theatre 1</td>
</tr>
</tbody>
</table>

Total Credit Hours 18

Courses

THAR 1020. Theatre Appreciation. 3 cr. hrs.
Introduces the student to the experience of theatre and seeks to give an understanding of theatrical history and practices, and a deepening appreciation of theatre as an art.

THAR 1100. Acting 1: Fundamental Technique. 3 cr. hrs.
Focuses on basic stage technique for the beginning actor, including exploration, basic concepts and vocabulary, script analysis and the importance of action. Introduction to the foundations of the modern actor and the concepts of Constantin Stanislavski. Involves monologues, exercises and scene work. Prereq: THAR major or THAR minor; or cons. of instr.

THAR 1120. Acting 2: Advanced Fundamentals. 3 cr. hrs.
A continuation of the work begun in THAR 1100, focuses on honesty, simplicity and what it really means to be in-the-moment. Units include scene work, neutral mask and an introduction to the Meisner Technique. Prereq: THAR 1100.

THAR 1150. Acting for Non-Theatre Majors. 3 cr. hrs.
Developing individual skills through the use of theatre games, improvisation, and scene study. Development of critical knowledge of and appreciation for the theatrical performer.

THAR 1300. Stagecraft. 3 cr. hrs.
The basic techniques of stagecraft including construction of scenery and props, painting and rigging, lighting and running of shows. Prereq: THAR 1310 must be taken concurrently.

THAR 1310. Stagecraft Practicum. 0.5 cr. hrs.
Stagecraft practicum provides hands-on training of basic techniques of stagecraft in construction of scenery and props, painting and rigging, lighting and running of shows. S/U grade assessment. Prereq: Must be concurrently enrolled in THAR 1300.

THAR 1320. Basic Costume Technology. 3 cr. hrs.
Primary costume techniques. Emphasis on obtaining a working knowledge of skills necessary to construct theatrical costumes. Includes hand and machine sewing as well as some costume crafts. Students apply skills to mainstage productions. Prereq: THAR 1330 must be taken concurrently.

THAR 1330. Basic Costume Technology Practicum. 0.5 cr. hrs.
Basic Costume Technology Practicum provides hands-on training for primary costuming techniques including hand and machine sewing. S/U grade assessment. Prereq: Must be concurrently enrolled in THAR 1320.

THAR 1340. Make-Up. 3 cr. hrs.
The fundamental techniques of stage makeup through using a variety of materials and exercises.

THAR 1951. MU Led Travel/Study Abroad. 3 cr. hrs.
Travel to London to explore theatre and British culture where students are introduced to many aspects of the theatre production and performance within a cultural context. Observe, participate in and reflect upon the cultural similarities and differences. Examine how the theatrical performances reflect these comparisons. Course taught in an international setting by Marquette professors and where students earn Marquette credit. Study Abroad expenses apply.

THAR 2100. Acting 3: Introduction to Character. 3 cr. hrs.
Emphasis is on creating a personal process through which the actor can come to understand character, explore various approaches to creating characters, and through creative use of self, bring a character to life on stage. Areas of study include research and text analysis, developing a vocabulary and familiarity with a variety of rehearsal techniques as tools for clarifying the objectives, obstacles, and actions of the character within the context of a play. Prereq: THAR 1120.
THAR 4240. History of Period Styles. 3 cr. hrs.
Examines the major historical periods in Western Civilization that provide context for the majority of plays in the Western canon. An overview of the most significant developments in architecture, art, costume, furniture, decorative arts and style for each period, as they influence theatrical production. Designed to prepare the student for professional auditions. Emphasis is placed on presentation, appropriate material selection, analysis and arrangement of material, and developing a repertoire of audition pieces. In addition to prepared monologues the student will develop skills for other audition situations including improvisation, interviews, cold readings, and callbacks. Prereq: THAR 2140 and THAR 3100 and cons. of instr.

THAR 4230. Scenographic Techniques. 3 cr. hrs.
A study of rendering and mechanical drawing as it relates to theatrical design. An exploration of color media and perspective. Prereq: THAR 1300; or cons. of instr.

THAR 4200. History of Theatre I. 3 cr. hrs.
A chronological survey of theatre history, dramatic literature and theory from its origins to the beginnings of realism. Particular emphasis paid to major periods of theatrical achievement in the context of the culture in which they began, studying plays and critical writings as well as conjectural and undocumented styles in acting, design and production methods. Prereq: THAR 1100 and jr. stndg.

THAR 3953. Career and Preparation Studies Seminar. 1 cr. hr.
Emphasis will be on dissemination of information that will prepare the student for pursuing a career in the entertainment industry. Topics include: Professional internships and jobs in the entertainment industry, career planning including graduate school, internships, entry level jobs in performance, design, technical theatre, literary management, stage management, theatre management, portfolios for design and technical theatre, resume and photos for performance, professional unions, equity contracts and organizations. S/U grade assessment. Prereq: THAR major, Jr. or Sr. stndg.

THAR 3800. History of Theatre II: Modern Theatre. 3 cr. hrs.
A survey of 20th century theatre practice from realism through postmodernism and beyond. Attention given to theatre movements outside of mainstream venues such as experimental theatre, surrealism and expressionism, epic theatre, the absurd movement, applied theatre and multi-media presentations and performance art. Prereq: Soph. stndg.

THAR 2600. Play Analysis 1. 3 cr. hrs.
Analyzes tragedy and comedy. Emphasis on performance, drama theory, and historical context of plays.

THAR 2500. Play Direction. 3 cr. hrs.
The principles of play direction as a creative and interpretative art on the stage. Prereq: THAR 1100 and jr. stndg.

THAR 2400. Aspects of Theatrical Design. 3 cr. hrs.
Collaborative communication techniques for theatre artists. The exploration of the designer/director/performer relationship through development of visual and three-dimensional communication skills.

THAR 2320. Scenographic Techniques. 3 cr. hrs.
A study of rendering and mechanical drawing as it relates to theatrical design. An exploration of color media and perspective. Prereq: THAR 1300; or cons. of instr.

THAR 2210. Acting for Camera. 3 cr. hrs.
Basic Film/TV technique for the beginning camera actor, including: blocking, use of set/location, and analysis and illustration of scripts. Introduction to terminology and basic technical skills in camera/microphone usage and performance recording. Prereq: THAR 2100 or DGMD 2205.

THAR 2160. Voice and Movement for Stage. 3 cr. hrs.
Study of the foundational aspects of voice production through movement; linking of the actor’s vocal, physical and emotional resources through text and sound. Movement exercises to free, develop and strengthen the voice; study and practice of relaxation, projection and resonance, breath control, variety and vibration. Prereq: THAR 1100.

THAR 2150. Play Analysis 2. 3 cr. hrs.
Continued work on vocal relaxation and production with an added concentration on removing regionalism and substandard sounds and acquiring clear, unaffected vibrant speech for the stage. Prereq: THAR 2140 or DGMD 2205.

THAR 2140. Voice and Movement for Stage. 3 cr. hrs.
Study of the foundational aspects of voice production through movement; linking of the actor’s vocal, physical and emotional resources through text and sound. Movement exercises to free, develop and strengthen the voice; study and practice of relaxation, projection and resonance, breath control, variety and vibration. Prereq: THAR 1100.

THAR 2100. Acting: Shakespeare. 3 cr. hrs.
Concentrates on the skills needed to perform Shakespearean texts through monologue and scene work. Emphasis on understanding and connecting with the material and then developing the language skills necessary to convey that knowledge to an audience. Exploration of Shakespeare as a product of the Elizabethan world, as well as its universality in modern production. Prereq: THAR 2140 and THAR 2100; or cons. of instr.

A study of the Elizabethan world, as well as its universality in modern production. Prereq: THAR 2140 and THAR 2100; or cons. of instr.

THAR 1300. Acting: Shakespeare. 3 cr. hrs.
Concentrates on the skills needed to perform Shakespearean texts through monologue and scene work. Emphasis on understanding and connecting with the material and then developing the language skills necessary to convey that knowledge to an audience. Exploration of Shakespeare as a product of the Elizabethan world, as well as its universality in modern production. Prereq: THAR 2140 and THAR 2100; or cons. of instr.

THAR 1200. History of Theatre II: Modern Theatre. 3 cr. hrs.
A survey of 20th century theatre practice from realism through postmodernism and beyond. Attention given to theatre movements outside of mainstream venues such as experimental theatre, surrealism and expressionism, epic theatre, the absurd movement, applied theatre and multi-media presentations and performance art. Prereq: Soph. stndg.

THAR 1100. History of Theatre I. 3 cr. hrs.
A study of the Elizabethan world, as well as its universality in modern production. Prereq: THAR 2140 and THAR 2100; or cons. of instr.

THAR 1000. History of Theatre II: Modern Theatre. 3 cr. hrs.
A survey of 20th century theatre practice from realism through postmodernism and beyond. Attention given to theatre movements outside of mainstream venues such as experimental theatre, surrealism and expressionism, epic theatre, the absurd movement, applied theatre and multi-media presentations and performance art. Prereq: Soph. stndg.

THAR 953. Career and Preparation Studies Seminar. 1 cr. hr.
Emphasis will be on dissemination of information that will prepare the student for pursuing a career in the entertainment industry. Topics include: Professional internships and jobs in the entertainment industry, career planning including graduate school, internships, entry level jobs in performance, design, technical theatre, literary management, stage management, theatre management, portfolios for design and technical theatre, resume and photos for performance, professional unions, equity contracts and organizations. S/U grade assessment. Prereq: THAR major, Jr. or Sr. stndg.

THAR 4100. Acting: Professional Auditions and Career Preparation. 3 cr. hrs.
Designed to prepare the student for professional auditions. Emphasis is placed on presentation, appropriate material selection, analysis and arrangement of material, and developing a repertoire of audition pieces. In addition to prepared monologues the student will develop skills for other audition situations including improvisation, interviews, cold readings, and callbacks. Prereq: THAR 2140 and THAR 3100 and cons. of instr.

THAR 3800. History of Theatre II: Modern Theatre. 3 cr. hrs.
A chronological survey of theatre history, dramatic literature and theory from its origins to the beginnings of realism. Particular emphasis paid to major periods of theatrical achievement in the context of the culture in which they began, studying plays and critical writings as well as conjectural and documented styles in acting, design and production methods. Prereq: Soph. stndg.

THAR 3700. History of Theatre I. 3 cr. hrs.
A chronological survey of theatre history, dramatic literature and theory from its origins to the beginnings of realism. Particular emphasis paid to major periods of theatrical achievement in the context of the culture in which they began, studying plays and critical writings as well as conjectural and documented styles in acting, design and production methods. Prereq: Soph. stndg.

THAR 3600. History of Theatre II: Modern Theatre. 3 cr. hrs.
A survey of 20th century theatre practice from realism through postmodernism and beyond. Attention given to theatre movements outside of mainstream venues such as experimental theatre, surrealism and expressionism, epic theatre, the absurd movement, applied theatre and multi-media presentations and performance art. Prereq: Soph. stndg.

THAR 3500. History of Clothing 1: From Ancient Greece to the Reign of Terror. 3 cr. hrs.
An overview of the history of clothing and fashion in Western civilization from 2900 BC through the end of the 18th century, as well as some of the socio-economic and political factors that shaped these styles. The evolution of dress as a result of artistic and cultural change, as well as changes in geographic exploration and trade are covered in a lecture/discussion format. Clothing and fashion are examined as social history and personal statements of status and power.

THAR 3400. History of Clothing 2: From Jane Austen to Austin Powers. 3 cr. hrs.
An overview of the history of clothing and fashion in Europe and North America from the French Revolution through the “Velvet Revolution,” as well as some of the socioeconomic and political factors that shaped these styles. The evolution of dress as a result of artistic and cultural influence, as well as advances in technology are covered in a lecture/discussion format. Clothing and fashion are examined as social history and personal statements of status and individuality.

THAR 3300. History of Clothing 3: From the 20th Century to the Present. 3 cr. hrs.
An overview of the history of clothing and fashion in Western civilization from the 20th century to the present, as well as some of the socio-economic and political factors that shaped these styles. The evolution of dress as a result of artistic and cultural influence, as well as advances in technology are covered in a lecture/discussion format. Clothing and fashion are examined as social history and personal statements of status and individuality.

THAR 3200. History of Clothing 4: From the 19th Century to the Present. 3 cr. hrs.
An overview of the history of clothing and fashion in Western civilization from the 19th century to the present, as well as some of the socio-economic and political factors that shaped these styles. The evolution of dress as a result of artistic and cultural influence, as well as advances in technology are covered in a lecture/discussion format. Clothing and fashion are examined as social history and personal statements of status and individuality.

THAR 3100. Acting: Shakespeare. 3 cr. hrs.
Concentrates on the skills needed to perform Shakespearean texts through monologue and scene work. Emphasis on understanding and connecting with the material and then developing the language skills necessary to convey that knowledge to an audience. Exploration of Shakespeare as a product of the Elizabethan world, as well as its universality in modern production. Prereq: THAR 2140 and THAR 2100; or cons. of instr.

THAR 2100. Acting: Shakespeare. 3 cr. hrs.
Concentrates on the skills needed to perform Shakespearean texts through monologue and scene work. Emphasis on understanding and connecting with the material and then developing the language skills necessary to convey that knowledge to an audience. Exploration of Shakespeare as a product of the Elizabethan world, as well as its universality in modern production. Prereq: THAR 2140 and THAR 2100; or cons. of instr.

A chronological survey of theatre history, dramatic literature and theory from its origins to the beginnings of realism. Particular emphasis paid to major periods of theatrical achievement in the context of the culture in which they began, studying plays and critical writings as well as conjectural and documented styles in acting, design and production methods. Prereq: Soph. stndg.
THAR 4320. Crafts for the Theatre. 3 cr. hrs.
A techniques course that encompasses traditional and new materials which may be used in special projects often encountered in the creation of props and costumes. Includes casting and molding, thermoplastics, mask making, foam carving, jewelry, armor, etc. Prereq: THAR 1300 or THAR 1320 or cons. of instr.

THAR 4340. Advanced Costume Technique. 3 cr. hrs.
Course covers advanced methods of costuming such as beginning pattern drafting, basic tailoring techniques, fabric modification through dyeing and painting, millinery, and costume crafts construction. Prereq: THAR 1320 or cons. of instr.

THAR 4360. Theatre Management. 3 cr. hrs.
Study and practice of theatre administration, business practices, production management and stage management.

THAR 4380. Computer Applications for the Theatre. 3 cr. hrs.
The study and use of various software packages to support the principles of scenic, lighting, and costume design. An introduction to the development of theatrical design presentation using digital technology. Explores the use of digital tools in drafting, modeling, and rendering skills as a means towards basic theatrical design.

THAR 4400. Costume Design. 3 cr. hrs.
Study of the aesthetic and practical application of costume design and how it relates to the theatrical production process. Includes research, script analysis and costume renderings for in class projects. Offered alternate spring terms. Prereq: THAR 2400; or cons. of instr.

THAR 4420. Lighting Design. 3 cr. hrs.
The study and practice of theatrical lighting script analysis, research and planning techniques. Culminates in a realized collaboration. Prereq: THAR 1300; or cons. of instr.

THAR 4440. Scenery Design. 3 cr. hrs.
Study of the principles and practices of designing scenery for the stage. Prereq: THAR 2400; or cons. of instr.

THAR 4500. Advanced Play Direction. 3 cr. hrs.
Study of interpretative styles of play direction, rehearsal techniques, audience analysis, and contemporary trends. Opportunity to test principles in assigned laboratory productions. Prereq: THAR 2500; or cons. of instr.

THAR 4600. Playwriting. 3 cr. hrs.
Study of the structure and execution of dramatic scripts for theatre. Assignments to write and analyze scenes and one act plays.

THAR 4953. Seminar in Theatre Arts. 1-3 cr. hrs.
Specific subjects of seminars to be announced in the Schedule of Classes. Variable topics.

THAR 4961. Independent Project in Theatre Arts. 0-3 cr. hrs.
Prereq: Cons. of instr. 0 credit will be SNC/UNC grade assessment; 1-3 credits will be graded. Prereq: Cons. of instr. 0 credit will be SNC/UNC grade assessment; 1-3 credits will be graded.

THAR 4986. Internship in Theatre Arts. 0-3 cr. hrs.
S/U grade assessment. Prereq: Cons. of dept ch.

THAR 4995. Independent Study in Theatre Arts. 1-3 cr. hrs.
Prereq: Cons. of dept. ch.; cons. of artistic director. Prereq: Cons. of dept. ch.; cons. of artistic director.

THAR 4997. Senior Capstone. 3 cr. hrs.
In order to demonstrate artistic proficiency, students go beyond what has been learned in the classroom, studio, and stage, and begin to replicate the world students will encounter upon graduation. A capstone project requires student to utilize not only their core skills but to develop new "real world" skills they will need in their profession, such as decision making, presentation and communication skills. This project incorporates and synthesizes knowledge gained through coursework within the Performing Arts curriculum. Senior Capstone Projects normally take place in the spring of the final year of study and are selected through an application process in the preceding semester. Guidelines for the application process are available from the department chair. Prereq: THAR major, Sr. stndg. or cons. of instr.

THAR 4999. Senior Thesis. 1-3 cr. hrs.
The application of rigorous methodology in developing and writing a thesis under the direction of an adviser. Prereq: Cons. of dept ch.
Fine Arts Minors

Program Director: Jean Grow, Ph.D.

The fine arts minor represents a unique program created in collaboration with the nearby Milwaukee Institute of Art and Design (MIAD). The collaboration offers students the opportunity to enhance creative skills, increase knowledge of the arts and fulfill artistic desires by choosing one of the two 18-credit minors: Fine Arts-Graphic Design or Fine Arts-Studio Art. Each minor offers a unique blend of creative conceptualizing, execution, theory and technology. MIAD is fully accredited by the National Association of Schools of Art and Design (NASAD).

Students who wish to pursue a FIAR minor must apply for admission to the program. Space is limited and applications are only accepted from Freshmen and Sophomores. Applications are due by October 1 (for admission in spring term) or February 15 (for admission in fall term). Applicants will be notified of their status by October 15 (for spring term) or March 1 (for fall term). All program applications should be emailed to the program director, Dr. Jean Grow, at jean.grow@marquette.edu. No late applications will be accepted. Students must provide an artist statement, a portfolio with up to 10 creative samples and one letter of reference.

- The artist statement should be a 500- to 750-word statement describing the history of the student’s interests and experiences in art, the student’s goals and what motivates the student to achieve those goals. The student statement should also include the following: name, college, rank (freshman or sophomore), major and desired FIAR minor.
- Up to 10 samples of creative work should be uploaded into an online portfolio and the link to it should be included at the conclusion of the artistic statement, along with the name of the student’s reference.
- Reference letters should come from someone who knows of the student’s creative passion and may be a high school teacher. Letters should be sent directly to the program director: jean.grow@marquette.edu (Jean.grow@marquette.edu).

Only full-time Marquette students, accepted into the FIAR program as declared FIAR minors, may registrar for classes. Normally FIAR minors complete one course per term. However, under some circumstances students may be allowed to register for a second class. Any declared minor who has not taken a FIAR class by junior year, may be dropped from the minor. Students may not exceed 18 FIAR credits overall. Students must meet any prerequisites before registering for a course. Placement is subject to availability. Students should consult the Schedule of Classes at the time of registration. Registration forms must be filed by November 15 (for spring term) and April 15 (for fall term). The MIAD Registration form is located on the Marquette Central academic forms website. (http://www.marquette.edu/mucentral/registrar/policy_forms.shtml) The tuition cost of enrolling in MIAD courses is included in the Marquette full-time student tuition rate. However, other course material fees may apply, and students need to pay them directly to MIAD before the start of classes. Additionally, MIAD requires a laptop computer for all Graphic Design minors. A 15” Apple MacBook Pro is strongly recommended. Finally, do not contact MIAD teachers or the registrar regarding scheduling, substitutions and/or waivers. All of these must be approved by Dr. Jean Grow, Marquette FIAR Program Director.

Students registered for FIAR course receive notification from MIAD shortly before classes begin. This notification includes information about supplies, class location, course website, parking options, as well as any specific instructions from individual MIAD instructors. Student lockers are available at MIAD. Transportation to MIAD is not provided; however public transportation is readily available and many students car pool. Finally, all FIAR courses are offered at MIAD unless otherwise noted. MIAD is located at 273 East Erie Street.

Further information can be obtained from Dr. Jean Grow, Program Director and Associate Professor, 510 Johnston Hall, 414-288-6457 or at jean.grow@marquette.edu (Jean.grow@marquette.edu).

Minor in Graphic Design

The graphic design minor is designed for students who wish to pursue work in graphic design across print and digital media.

Required classes must be completed before taking electives.

Required:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>FIAR 1100</td>
<td>Visual and Color Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>FIAR 2030</td>
<td>Typography 1</td>
<td>3</td>
</tr>
<tr>
<td>FIAR 2400</td>
<td>Computer Studio 1</td>
<td>3</td>
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<tr>
<td>FIAR 2900</td>
<td>Communication Design 1</td>
<td>3</td>
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<tr>
<td>FIAR 2910</td>
<td>Communication Design 2</td>
<td>3</td>
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Electives (select one from the following):

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>FIAR 2040</td>
<td>Typography 2</td>
<td>3</td>
</tr>
<tr>
<td>FIAR 2410</td>
<td>Computer Studio 2</td>
<td>3</td>
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</tbody>
</table>

Total Credit Hours 18

Note:
• Only courses listed under FIAR in Marquette’s Snapshot and the Schedule of Classes are available for registration, as only these courses have been approved by the FIAR Program Director. Not all courses offered at MIAD are available to Marquette Fine Art minors. Any questions should be directed to the FIAR Program Director: Dr. Jean Grow.

**Minor in Studio Art**

The studio art minor is designed for students who wish to create a minor that focuses on artistic development. Studio Art courses take an interdisciplinary approach, reflecting today’s art world. The curriculum, which takes a holistic approach, often integrates thematic topics within various courses. This allows students the option of exploring a new medium or discipline, or focusing on one medium or development within a singular artistic discipline.

Required FIAR classes must be completed before taking electives.

<table>
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<tr>
<th>Required</th>
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<tbody>
<tr>
<td>MIAD:</td>
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<tr>
<td>FIAR 1000</td>
<td>Observational Drawing</td>
</tr>
<tr>
<td>FIAR 1100</td>
<td>Visual and Color Dynamics</td>
</tr>
<tr>
<td>Marquette:</td>
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<tr>
<td>THEO 2310</td>
<td>Explorations in Christian Theology (Theology and the Visual Arts topic only)</td>
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<tr>
<th>Electives:</th>
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<tbody>
<tr>
<td>FIAR 1210</td>
<td>Research, Practice and Methods</td>
</tr>
<tr>
<td>FIAR 2067</td>
<td>Studio Principles</td>
</tr>
<tr>
<td>FIAR 2200</td>
<td>Approaches to Making</td>
</tr>
<tr>
<td>FIAR 3060</td>
<td>Open Studio</td>
</tr>
</tbody>
</table>

**Total Credit Hours** 18

* Three electives from within the four categories must be completed. Themes and/or disciplines vary and are listed in the Schedule of Classes for each course. Courses may be repeated, as long as the topic is different.

**NOTE:**

• Research, Practice and Methods - Foundation level courses generally focused on a specific medium or discipline, while building on FIAR 1000 and 1100.

• Studio Principles - Slightly more advanced than foundation level courses, these courses focus on one medium while introducing themes.

• Approaches to Making - Designed around themes, allowing students to select their preferred medium.

• Open Studio - Advanced level courses that require a commitment to artistic inquiry and are thematically driven, allowing students to select their preferred medium.

• Only courses listed under FIAR in Marquette’s Snapshot and the Schedule of Classes are available for registration, as only these courses have been approved by the FIAR Program Director. Not all courses offered at MIAD are available to Marquette Fine Art minors. Any questions should be directed to the FIAR Program Director: Dr. Jean Grow.

**Courses**

**FIAR 1000. Observational Drawing. 3 cr. hrs.**

A one-term course in which students meet twice weekly and will be introduced to the visual language of drawing. How the parts of the drawing relate to each other and to the composition as a whole is explored while each student strives to develop skills using traditional black-and-white media. One-half of the course places primary emphasis on depicting the human form; the other half places emphasis on depicting objects in space. Prereq: Cons. of dept. Fee paid to MIAD. MIAD # [F100].

**FIAR 1100. Visual and Color Dynamics. 3 cr. hrs.**

Dynamics is a problem-solving course in which the student investigates the dynamic visual forces involved in composing on a two-dimensional plane. Students explore the interrelationships of composition, process, perception, and intention. Color and light are also explored as a visual phenomenon, as a perceptual occurrence, as pigment with specific mixing properties, and as an element with powerful expressive and symbolic potential. Time, the fourth dimension, is investigated through problems dealing with simultaneity and sequentiality. The range of tools includes traditional materials/ mediums and digital imaging. The course broadens the student’s skill level in idea development, research strategies, and technique through the exploration of the visual language in both a historical and contemporary context. Approximately one-half of the semester is spent working in a digital environment. Prereq: Cons. of dept. Fee paid to MIAD. MIAD # [F110].
FIAR 1210. Research, Practice and Methods. 3 cr. hrs.
In Research, Practice, and Methods (R.P.M.) students investigate strategies for effective communication. Each course emphasizes process and creative problem solving – appropriately using subject matter and a variety of media as a means of examining conceptual goals. Students engage in critical inquiry and conduct in-depth research to promote the development of their own studio practice within a historical, cultural, and personal context. Prereq: Cons. of Director of Marquette Fine Arts Program and FIAR 1000 and FIAR 1100.

FIAR 2030. Typography 1. 3 cr. hrs.
Typography courses provide the students with an understanding of the integral use of typography in the overall design concept. Type as a communicative and creative element is explored. Students become familiar with the organizational skills necessary for clear communication as well as the formative aspects of typographic symbols and arrangement. Typography I is an introductory course that focuses on the history and practice of using typography in design. This course will familiarize students with several methods for structuring type so that they might gain an understanding of how typographic variables and the principles of legibility and readability affect visual communication. Each student will be encouraged to develop their own personal awareness of and appreciation for typography; so that they will become equipped with the terminology, theory and practice necessary for making design decisions that facilitate understanding among their intended audience. Prereq: Soph. stndg. and FIAR 1100. MIAD # [DS202].

FIAR 2040. Typography 2. 3 cr. hrs.
This course provides students with the continued use of typography within more specific design assignments. Type as a volume of text and the collaboration between text and image in print and digital media is explored. Coursework will enable the student to participate in an advanced study of typographic design. Concentration will be placed on exercises in and the analysis of the perceptual aspects of communication, the ways in which we derive meaning from and contribute meaning to our cultural environment through type. In other words, to explore and clarify the relationships between the spoken word and the published visual language of print and digital words. The continuum of Typography I and Typography II offers an advanced understanding of how typographic variables (placement, order of chronology, size, weight, leading, column width, alignment, style, orientation, and choice of typeface) and principles of legibility and readability affect visual communication. Logistical issues of planning and organizing paginated systems, information systems, and type in motion will also be presented. Each student will continue to develop the personal awareness necessary for making design decisions that facilitate understanding amongst their intended audience. Prereq: FIAR 1100 and FIAR 2030. MIAD # [DS203].

FIAR 2067. Studio Principles. 3 cr. hrs.
This course provides students with the foundational knowledge and skills within a specific area or discipline of focus. Emphasis on tools, materials, techniques and formal visual principles structure a sequence of assignments and exercises. Students will engage in a process of creation, construction and experimentation. Awareness of traditional and contemporary precedents promotes development of skills, personal vision and distinct expression. Through analysis and critique of their own and each other’s work, the class will establish the language of analytic and intuitive problem-solving. MIAD # [NSP206/NSP207] Prereq: Cons. of Director of Marquette Fine Arts Program and FIAR 1000 and FIAR 1100.

Studio Principles of New Genres embraces the ‘new’ in artmaking since the reproducible photograph – exploring performance art, video, audio, social practice, digital practices, timebased forms and more. The emphasis is on creating experiences between artist and audience. We’ll look at the history of New Genre while making a case for creating new histories. Various methods, techniques and demos will provide students with skills to create work that lives in the spaces between traditional boundaries, makes new spaces outside those boundaries, or sidesteps boundaries altogether. This is a studio class with occasional readings, discussions, in-class activities and critiques. Fee paid to MIAD. MIAD # [NSP207C] Prereq: FIAR 1000 and FIAR 1100.

FIAR 2200. Approaches to Making. 3 cr. hrs.
Sections of this course are intended to delve deeply into how a specific subject or mode has been addressed by artists over time. Each thematic subsection will address manifestations of these subjects (see examples below) in multiple media, in subsequent eras, and towards different purposes, studied in the context of students’ continuing engagement with their individuated studio practices. All subsections are meant to be expansive in approach, and to consider all modes and media as represented in historical and current art as equally valid subjects of inquiry and examples for studio practice. Instructors will lead research into the chosen subject areas and prompt students with studio projects designed for direct, hands-on exploration of thematic subjects. Students will employ media familiar to them, and be encouraged to experiment with new media, to expand their artistic exploration and to build manual and oral/written vocabulary for operating within a multidisciplinary environment. Fee paid to MIAD. MIAD # [NSP220/NSP221] Prereq: Cons. of Director of Marquette Fine Arts Program and FIAR 1000 and FIAR 1100.

FIAR 2221. Approaches to Making: Appropriation. 3 cr. hrs.
This course will topically engage appropriation as defined by a range of artistic practices and critical interventions. We will establish a range of current tendencies, then trace them back to their historical lineages. Recognizing the complicated history within appropriation and questions of authorship, students will engage relationships between past and present. Through lecture, discussion, and critique, these relationships will become central in the art making process. Although this is a studio class, students will encounter a number of critical texts. By way of reading and class dialogue, students will become aware of the role theory and history can play in the art making process. This in turn will allow students to develop a discerning way in which to approach their respective practices. Approaches to Appropriation engages an expanded notion of appropriation by acknowledging a range of artistic approaches. Students will be encouraged to conceive of their projects via media best suited to effectively communicate their artistic pursuits. Fee paid to MIAD. MIAD #[NSP221B]. Prereq: FIAR 1000 and FIAR 1100.

FIAR 2400. Computer Studio 1. 3 cr. hrs.
This course introduces students to the general structure of the Macintosh computing platform and engages them in an intensive tool- and function-based experience with the current versions of QuarkXPress and Adobe Illustrator. Digital pre-press fundamentals are also introduced. Prereq: Jr. stndg. and FIAR 1100. Fee paid to MIAD. MIAD # [DS230].
FIAR 2410. Computer Studio 2. 3 cr. hrs.
An introduction to the fundamental workings of the tools and functions inherent in the current version of Adobe Photoshop. Additional challenges include interfacing between QuarkXPress, Adobe Illustrator and Adobe Photoshop to create more complex documents, and advanced aspects of the digital pre-press. Prereq: Jr. stdg., FIAR 1100 and FIAR 2400.; Fee paid to MIAD. MIAD # [DS231].

FIAR 2900. Communication Design 1. 3 cr. hrs.
Fundamentals of communication design are introduced to the student with theoretical and applied studies in design, problem solving, communication, and verbal and visual presentation. Prereq: FIAR 1100; cons. of dept. Fee paid to MIAD. MIAD # [DS200].

FIAR 2910. Communication Design 2. 3 cr. hrs.
Fundamentals of communication design are introduced to the student with theoretical and applied studies in design, problem solving, communication, and verbal and visual presentation. Prereq: FIAR 1100 and FIAR 2900; Fee paid to MIAD. MIAD # [DS201].

FIAR 2931. Topics in Fine Art 1. 1-3 cr. hrs.
Elective topics in Fine Arts. Prereq: FIAR 1100 or FIAR 1120 and FIAR 2810, or cons. of dir. of Marquette Fine Arts Program.

FIAR 3060. Open Studio. 3 cr. hrs.
This course is an introduction to self-directed learning designed to further one’s growth as an artist. Individual artistic investigations will center on self-determined modes of making. Students may choose to concentrate on one discipline or they may work across several disciplines. That choice will be guided by the instructor and by advanced student mentors in the class. Guidance will also be offered as the student defines broad themes for artistic inquiry. Successful self-determined inquiry requires the students to reflect on the trajectory of their work and it further requires them to nurture a dialog with their work. Artistic inquiry will be guided through readings, critiques, visits to exhibitions and through frequent consultation with the instructor and with other students. Development of an ePortfolio provides further opportunities for reflection on the student’s artistic evolution and it provides a convenient means for sharing work beyond the class. Because this course focuses on studio practice, students are expected to be working during class. Gathering materials, doing Internet research, texting, etc., should be done outside of class. To the extent possible, class time will be devoted to studio work and to critique, but expect to start every class with a discussion. Discussions provide an opportunity to explore common ideas, to seek advice, to share discoveries and to provide support for the class community. Prereq: Cons. of Director of Marquette Fine Arts Program and FIAR 1000 and FIAR 1100.

FIAR 3931. Topics in Fine Art 2. 1-3 cr. hrs.
Elective topics in Fine Arts. Prereq: FIAR 1120, FIAR 2810 or cons. of dir. of Marquette Fine Arts Program.

FIAR 4995. Independent Study in Fine Arts. 1-3 cr. hrs.
Research on a selected topic under the direction of a faculty member. Prereq: Cons. of dir. of Marquette Fine Arts Program.
Performing Arts Minors

Chairperson: Stephen Hudson-Mairet, M.F.A.

The Department of Performing Arts offers minors in dance, film, and music that are designed to help you succeed in a variety of ways. For example, you might choose to design and build stage sets, create costumes and bring characters to life through movement, come and music — or you could hone your ability to build connections with the audience, or learn to connect the performing arts to other disciplines through Marquette's broad liberal arts curriculum.

These minors are declared in the sophomore or junior years. Your adviser can assist you in selecting classes to satisfy the minor requirements.

### Dance Minor

**Required Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td><strong>Core Technique Courses</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DANC 2020</td>
<td>Ballet 1</td>
<td>3</td>
</tr>
<tr>
<td>DANC 2120</td>
<td>Modern Dance 1</td>
<td>3</td>
</tr>
<tr>
<td>DANC 2220</td>
<td>African Dance 1</td>
<td>3</td>
</tr>
<tr>
<td>DANC 2420</td>
<td>Tap Dance 1</td>
<td>3</td>
</tr>
<tr>
<td><strong>History and Theory</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DANC 2500</td>
<td>Composition and Choreography</td>
<td>3</td>
</tr>
<tr>
<td>DANC 4500</td>
<td>Dance History</td>
<td>3</td>
</tr>
<tr>
<td><strong>Electives (select one)</strong></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>DANC 2040</td>
<td>Ballet 2</td>
<td></td>
</tr>
<tr>
<td>DANC 2140</td>
<td>Modern Dance 2</td>
<td></td>
</tr>
<tr>
<td>DANC 2440</td>
<td>Tap Dance 2</td>
<td></td>
</tr>
<tr>
<td>DANC 3100</td>
<td>Theatre Dance</td>
<td></td>
</tr>
<tr>
<td>DANC 2240</td>
<td>African Dance 2</td>
<td></td>
</tr>
</tbody>
</table>

Total Credit Hours: 21

### Film Minor

**Required Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>FILM 2620</td>
<td>History of American Film</td>
<td>3</td>
</tr>
<tr>
<td>FILM 2280</td>
<td>Film and Popular Culture</td>
<td>3</td>
</tr>
<tr>
<td>FILM 3620</td>
<td>World Cinema</td>
<td>3</td>
</tr>
</tbody>
</table>

Electives - Choose three courses from the following:

<table>
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</tr>
</thead>
<tbody>
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<td>Topics in Film Studies</td>
<td></td>
</tr>
<tr>
<td>FILM 2260</td>
<td>Film as Art</td>
<td></td>
</tr>
<tr>
<td>FILM 2290</td>
<td>Economic and Social Aspects of Film</td>
<td></td>
</tr>
<tr>
<td>FILM 2600</td>
<td>Writing About Film</td>
<td></td>
</tr>
<tr>
<td>FILM 3300</td>
<td>Auteur Studies</td>
<td></td>
</tr>
<tr>
<td>FILM 3932</td>
<td>Advanced Topics in Film Studies</td>
<td></td>
</tr>
<tr>
<td>FILM 4953</td>
<td>Seminar in Film</td>
<td></td>
</tr>
<tr>
<td>FILM 4995</td>
<td>Independent Study in Film</td>
<td></td>
</tr>
<tr>
<td>DGMD 3840</td>
<td>Film and TV Aesthetics</td>
<td></td>
</tr>
<tr>
<td>ENGL 4740</td>
<td>Film Studies</td>
<td></td>
</tr>
<tr>
<td>MUSI 2420</td>
<td>History of the Musical in America</td>
<td></td>
</tr>
</tbody>
</table>

Electives - Choose three courses from the following:

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<td>Film Studies</td>
<td></td>
</tr>
<tr>
<td>MUSI 2420</td>
<td>History of the Musical in America</td>
<td></td>
</tr>
</tbody>
</table>

Total Credit Hours: 18

**Note:** No more than two courses can be from non-FILM course options.

### Music Minor

**Required Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSI 2410</td>
<td>Music History</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours: 3
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSI 2500</td>
<td>Music Theory 1</td>
<td>3</td>
</tr>
<tr>
<td>MUSI 3500</td>
<td>Music Theory 2</td>
<td>3</td>
</tr>
</tbody>
</table>

Two courses chosen from the following:  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUSI 1610</td>
<td>Carillon Discovery: An Introduction</td>
</tr>
<tr>
<td>MUSI 2420</td>
<td>History of the Musical in America</td>
</tr>
<tr>
<td>MUSI 2440</td>
<td>History of Jazz</td>
</tr>
<tr>
<td>MUSI 2460</td>
<td>Wind Band History and Analysis</td>
</tr>
<tr>
<td>MUSI 2610</td>
<td>Music Technology</td>
</tr>
<tr>
<td>MUSI 2910</td>
<td>The Business of Music</td>
</tr>
<tr>
<td>MUSI 3610</td>
<td>Conducting</td>
</tr>
<tr>
<td>HIST 3165</td>
<td>History of Rock and Roll</td>
</tr>
</tbody>
</table>

Students must also participate in at least four semesters of one-credit, approved ensembles, including:  

<table>
<thead>
<tr>
<th>Course Code</th>
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</tr>
</thead>
<tbody>
<tr>
<td>MUSI 1100</td>
<td>University Chorus</td>
</tr>
<tr>
<td>MUSI 1140</td>
<td>Chamber Choir</td>
</tr>
<tr>
<td>MUSI 1200</td>
<td>Symphonic Band</td>
</tr>
<tr>
<td>MUSI 1210</td>
<td>Wind Ensemble</td>
</tr>
<tr>
<td>MUSI 1300</td>
<td>Symphony Orchestra</td>
</tr>
</tbody>
</table>

**Total Credit Hours** 19

### Dance Courses

**DANC 1100. Disciplines of Movement. 3 cr. hrs.**  
Introduction to movement disciplines like Alexander, Feldenkrais, and Tai Chi for performers. Training geared toward relaxation, loss of inhibition, and ease of flexibility.

**DANC 2020. Ballet 1. 3 cr. hrs.**  
Emphasis placed on beginning ballet and classical dance techniques. No previous dance experience required.

**DANC 2040. Ballet 2. 3 cr. hrs.**  
Emphasis will be placed on intermediate ballet dance techniques. Explores the influence of ballet and classical dance techniques on a range of other dance forms. Prereq: DANC 2020 or cons. of instr.

**DANC 2120. Modern Dance 1. 3 cr. hrs.**  
Emphasis will be placed on fundamental modern dance techniques. No previous dance needed. Offered fall term.

**DANC 2140. Modern Dance 2. 3 cr. hrs.**  
Emphasis will be placed on intermediate modern dance techniques. Explores influences of other dance forms as used in modern dance. Also explores the influence of modern dance techniques on a range of other dance techniques. Prereq: DANC 2120 or cons. of instr.

**DANC 2220. African Dance 1. 3 cr. hrs.**  
Emphasis will be placed on fundamental African Dance techniques. No previous dance needed.

**DANC 2240. African Dance 2. 3 cr. hrs.**  
Emphasis will be placed on Intermediate African Dance techniques. Continues exploration of dance forms in the tradition of the African Diaspora. Explores the use of live drummer interaction with dance form. Prereq: DANC 2220 or cons. of instr.

**DANC 2420. Tap Dance 1. 3 cr. hrs.**  
Emphasis will be placed on fundamental tap dance techniques. No previous tap dance needed.

**DANC 2440. Tap Dance 2. 3 cr. hrs.**  
Continuation of DANC 2420. Prereq: DANC 2420 or equiv.

**DANC 2500. Composition and Choreography. 3 cr. hrs.**  
The examination of the composition of dance forms and structures from a dance/movement perspective. Introduces choreography techniques. Prereq: DANC 2020, or DANC 2120, or DANC 2220 or DANC 2420; or cons. of instr.

**DANC 3100. Theatre Dance. 3 cr. hrs.**  
Basic musical theatre dance techniques for actors and dancers. Movement and dance training geared toward developing an individual's movement potential to its fullest ideal. A study of various techniques of musical comedy dance and traditional dance forms.

**DANC 4500. Dance History. 3 cr. hrs.**  
Survey of dance history with particular emphasis paid to development of major styles of dance and dance achievements. Class includes movement and technique component. Prereq: Prereq: DANC 2020, or DANC 2120, or DANC 2220 or DANC 2420; or cons. of instr.

**DANC 4953. Seminar in Dance. 1-3 cr. hrs.**  
Specific subjects of seminars to be announced in the Schedule of Classes. Variable topics.
DANC 4995. Independent Study in Dance. 1-3 cr. hrs.
Prereq: Cons. of dept. ch. Prereq: Cons. of dept. ch.

DANC 4999. Senior Thesis. 1-3 cr. hrs.
The application of rigorous methodology in developing and writing a thesis under the direction of an adviser. Prereq: Cons. of dept. ch.

Film Courses

FILM 1931. Topics in Film Studies. 3 cr. hrs.
Intensive examination of a topical issue in film. Specialized focus changes but may include issues such as women in film, minorities in film, regional or national films, auteur studies, genre studies, etc. Topics announced in Schedule of Classes.

FILM 2260. Film as Art. 3 cr. hrs.
Study and evaluation of film as an art-form. The various theories of cinematic excellence and aesthetics. A critical approach to film in all its contemporary forms and genres.

FILM 2280. Film and Popular Culture. 3 cr. hrs.
Study of popular culture and its varied categories (myths, stereotypes, icons, heroes, etc.) applied to contemporary American movies and to some other popular entertainers, including television, radio, music and print. Impact of popular media on society, culture and values.

FILM 2290. Economic and Social Aspects of Film. 3 cr. hrs.
Examines the economic structure of the film industry, the effect that this structure has on the making and content of motion pictures, and the affect of motion picture content on viewers, particularly children and young adults.

FILM 2600. Writing About Film. 3 cr. hrs.
Prepares students to write cogent film reviews, in-depth film history, including interviews and background or research, and deeper, often lengthier film analyses of genres or seminal works of a specific filmmaker. The history and craft of scriptwriting is also examined, with special emphasis on adaptation as one foundation of American filmmaking. Includes screenings that correlate with the reading and illustrate key concepts of film writing.

FILM 2620. History of American Film. 3 cr. hrs.
Traces the development of film as a distinctive mode of communication and an important art form within societal and theoretical contexts. Emphasis on films and the film industries of the United States.

FILM 3300. Auteur Studies. 3 cr. hrs.
Intensive examination of the work of a specific filmmaker whose individual style and complete control over all elements of a production provides the film with a unique and personal signature experience. Specialized focus changes but may include auteurs such as Alfred Hitchcock, Robert Altman, Spike Lee, etc. Topics announced in Schedule of Classes.

FILM 3620. World Cinema. 3 cr. hrs.
Studies the history and influences of world cinema from the earliest silent era, touching on the contributions of European pioneers, Soviet theorists and filmmakers and the German Expressionists; through to post-World War II "New Waves" in Italy, France, Germany, Sweden and Japan; finishing with modern China's "Fifth Generation" and other flowering national cinemas of Asia and the Middle East. Studies how the language and components of film production differ in foreign cultures, examines key approaches and concepts represented by seminal non-U.S. filmmakers and tracks the influence of the artistic international cinema on the more commercial American film style and narrative. Prereq: FILM 2620, 2280 or cons. of instr.

FILM 3932. Advanced Topics in Film Studies. 3 cr. hrs.
Advanced intensive examination of a topical issue in film. Specialized focus changes but may include issues such as: women in film, minorities in film, regional or national films, genre studies, etc. Topics announced in Schedule of Classes.

FILM 4953. Seminar in Film. 1-3 cr. hrs.
Specific subjects of seminars to be announced in the Schedule of Classes. Variable topics.

FILM 4995. Independent Study in Film. 1-3 cr. hrs.
Prereq: Cons. of dept. ch. Prereq: Cons. of dept. ch.

Music Courses

MUSI 1020. Appreciation of Music. 3 cr. hrs.
An introductory course designed for the non-music major who wishes to develop musical perception through the development of more acute listening techniques, and structured to emphasize elements of musical style and their development in an historical context.

MUSI 1100. University Chorus. 0-1 cr. hrs.
The University Chorus meets twice weekly and presents at least two major performances per term. The choir is comprised of three major components offering a singing opportunity to ALL interested singers. Literature encompassing a large variety of styles and genres is performed. Placement interviews are held the first three days of each new term. New singers to the program are asked to be registered in either the 0 credit or 1 credit section prior to their placement interview. Returning singers are not required to do an additional placement interview and are asked to be registered in either the 0 or 1 credit section prior to the first rehearsal. Rehearsals begin the first Thursday of each term. 0 credit will be SNC/UNC grade assessment; 1 credit will be graded on A-F scale.
MUSI 1120. Liturgical Choir. 0-1 cr. hrs.
Choir members concentrate on Liturgical music in rehearsals and concert performances. 0 credit will be SNC/UNC grade assessment; 1 credit will be graded on A-F scale. Prereq: Cons. of Instr.

MUSI 1140. Chamber Choir. 0-1 cr. hrs.
An auditioned choir of elite and dedicated singers, both women and men, who meet twice weekly. The choir rehearses a large variety of styles and genres. Members are selected from Marquette University Chorus. Auditions are held during the first three days of the fall and spring term. SNC/UNC grade assessment for 0-credit; graded assessment for 1-credit.

MUSI 1160. Gospel Choir. 0-1 cr. hrs.
Open to all students who qualify through audition held during fall registration week. Audition. 0 credit will be SNC/UNC grade assessment; 1 credit will be graded on A-F scale.

MUSI 1200. Symphonic Band. 0-1 cr. hrs.
Open to all students interested in continuing their musical pursuits. All symphonic band instrumentation and skill levels are welcome. Pep band members will be recruited from the symphonic band. Performances will include all home basketball games (for pep band) and at least one formal concert each term (for symphonic band). Literature for symphonic band will be selected from all periods of music history while pep band literature will include appropriate high energy arrangements representing all areas of pop, rock and jazz. There are also possibilities of organizing ensembles for more playing experience, depending on interest and time. Some university owned instruments are available. Annual fall audition is held for chair placement only. No one is denied admission. 0 credit will be SNC/UNC grade assessment; 1 credit will be graded.

MUSI 1210. Wind Ensemble. 0-1 cr. hrs.
The Wind Ensemble is Marquette's advanced wind and percussion group. The wind ensemble performs high-level wind and band music from all historical eras at high level of musicianship and artistry. The wind ensemble performs two concerts per semester. 0 credit will be SNC/UNC grade assessment; 1 credit will be graded on an A-F scale. Prereq: An audition for placement within the wind ensemble is required.

MUSI 1220. Jazz Ensemble. 0-1 cr. hrs.
Open to all interested students. Literature to include hits from the big band swing era through current jazz standards. Performances include at least one formal concert per term. 0 credit will be SNC/UNC grade assessment; 1 credit will be graded on A-F scale.

MUSI 1300. Symphony Orchestra. 0-1 cr. hrs.
Open to all students, faculty, and alumni interested in continuing their music pursuits. All orchestra instrumentation and skill levels are welcome. Literature will be selected from all periods of music history. Performance will include at least one formal concert per term. Some university owned instruments are available. 0 credit will be SNC/UNC grade assessment; 1 credit will be graded.

MUSI 1610. Carillon Discovery: An Introduction. 3 cr. hrs.
In this introduction to the world of carillon, students explore the history, musical characteristics, bell foundries and carillons worldwide through readings, recordings, the internet and visits to the university carillon. This discovery is designed for a greater appreciation of the carillon for both musicians and non-musicians.

MUSI 2410. Music History. 3 cr. hrs.
Survey of the growth and development of Western Art Music from antiquity to the present time. Includes discussion of Medieval and Renaissance music, the Baroque Classical and Romantic periods, twentieth century and twenty-first century music. Prereq: MUSI 2500 and MUSI 3500.

MUSI 2420. History of the Musical in America. 3 cr. hrs.
Origins and development of the musical theatre in America from its early beginnings before The Black Crook (1866) to the production of the current Broadway season. Credit may be applied towards a Film minor.

MUSI 2440. History of Jazz. 3 cr. hrs.
Traces the colorful history of America's unique contribution to music, jazz, from its roots in African and European music of the nineteenth century to the fully-developed and many-faceted art form it is today. Many recorded musical examples and first-hand interviews highlight the lectures.

MUSI 2460. Wind Band History and Analysis. 3 cr. hrs.
History of the wind band in America from the American Revolution to modern times. Deals with early influences on the band as well as with those individuals who popularize this medium of performance. Included will be structural analysis of pieces written specifically for the wind band. Prereq: MUSI 1200; or cons. of instr.

MUSI 2500. Music Theory 1. 3 cr. hrs.
An introductory course designed for the non-music major who wishes to learn the fundamentals of musical notation, scale construction, intervals, chords, the writing of elementary harmonic progression, and basic techniques of traditional harmony.

MUSI 2610. Music Technology. 3 cr. hrs.
Designed to develop greater historical and aesthetic insights concerning music technology. Provides students with an approach to perceptive and critical composition using the program LOGIC.

MUSI 2910. The Business of Music. 3 cr. hrs.
Designed to broaden the student's concept of music related products and services. Begins with a discussion of what music related products/services are and what profit can be gained. The second portion of the course includes a discussion of various global marketing strategies. Designed for both musicians and non-musicians.
MUSI 3500. Music Theory 2. 3 cr. hrs.
Study of more advanced concepts of music theory, including modulation, chromaticism, altered chords, modal mixture, atonality, 12-tone composition, and other modernistic compositional techniques. Prereq: MUSI 2500.

MUSI 3610. Conducting. 3 cr. hrs.
Class instruction in the basic skills of the art of conducting. Covers the manual technique of conducting, including patterns, style, fermatas, accents and expressive techniques. Includes concepts of score study interpretation, and leadership. Prereq: MUSI 2410.

MUSI 4953. Seminar in Music. 1-3 cr. hrs.
Specific subjects of seminars to be announced in the Schedule of Classes. Variable topics.

MUSI 4995. Independent Study in Music. 1-3 cr. hrs.
Prereq: Cons. of dept. ch. Prereq: Cons. of dept. ch.

MUSI 4999. Senior Thesis. 1-3 cr. hrs.
The application of rigorous methodology in developing and writing a thesis under the direction of an adviser. Prereq: Cons. of dept. ch.

Performing Arts Courses

PEAR 1020. Exploring the Performing Arts 1. 1.5 cr. hr.
Introduces students to the experience of the performing arts of music, theatre and dance. Intended for those living in the Performing Arts Living/Learning Community who have an interest in, but may not have applied experiences in the art forms of music, theatre and dance. Explores the unique collaborative nature of theatre, music and dance as art forms. Seeks to give an understanding of the history and practices and a deepening appreciation of the performing arts. Students are required to attend live performances in conjunction with this course and the requirements of the Performing Arts Living/Learning Community. Prereq: Member of the Performing Arts Living/Learning Community.

PEAR 1021. Exploring the Performing Arts 2. 1.5 cr. hr.
Continuation of PEAR 1020 intended for those living in the Performing Arts Living/Learning Community who have an interest in, but may not have applied experiences in the art forms of music, theatre and dance. Continues the exploration of the unique collaborative nature of theatre, music and dance as art forms. Seeks to give an understanding of the history and practices and a deepening appreciation of the performing arts. Students are required to attend live performances in conjunction with this course and the requirements of the Performing Arts Living/Learning Community. Prereq: Member of the Performing Arts Living/Learning Community.

Private individual musical instruction. Lessons specializing in voice, certain instruments and musical theatre vocal work. Half hour work. Additional instructor fee required. Prereq: Cons. of dept. chair.

PEAR 2964. Performing Arts Practicum. 0.5 cr. hrs.
Learning through practical application of the basic elements of theatrical production. Educates and trains artists of the theatre and provides for its students a foundation of professionalism and dedication to their art within a climate of diversity, discovery and risk. Practical application of stage craft, state properties, costumes, and stage lighting by participation in acting and technical crews. Crew assignments are at the discretion of the faculty. THAR majors are expected to complete 4 semesters of PEAR 2964. Prereq: THAR 1300 and THAR 1320 or cons. of instructor.
Other Communication Courses

Courses

COMM 1050. Communication Pathways. 1 cr. hr.
Provide opportunities for academic and professional development for students in Communication. Topics include student success strategies, finding the right major and minor, internships, networking, career planning, portfolio development, study abroad, etc.

COMM 1100. Contemporary Presentation. 3 cr. hrs.
Principles and extended practice of rhetorical elements of written and oral presentation. Individual work in various essay and oral forms; group presentation; and use of presentation software. Essays of definition, comparison and contrast, process, and summary; oral presentation in introductory, expository, persuasive and ceremonial forms. 3 hrs. lec., disc. Prereq: ENGL 1001.

COMM 1200. Media in Society. 3 cr. hrs.
Surveys the historical, economic and cultural development of the mass media in America. Introduces the theoretic approaches utilized to understand the media’s role in society.

COMM 2100. Introduction to Visual Communication. 3 cr. hrs.
A broad scope introduction to visual communication. Non discipline-oriented focus on the principles and elements of visual communication. Through application of language and principles, students learn to analyze and address 2D and 3D visual communication problems. 3 hrs. lec., disc.

COMM 2500. Introduction to Communication Research Methods. 3 cr. hrs.
Introduces students to the systematic process of asking and answering questions associated with communication inquiry. Various quantitative and qualitative methodologies will be explored which will enable students to design, conduct, interpret and evaluate research more critically. Prereq: CMST 1000 or COMM 1200 and Soph. stdg.

COMM 3800. Media Law. 3 cr. hrs.
Legals/standards/doctrines governing libel, privacy and other areas of law directly affecting the media. Special consideration of legal problems in advertising, broadcast and electronic communication, journalism and public relations. Emphasis on the constitutional protection of freedom of expression and the media. Analysis of how these standards, doctrines and constitutional procedures affect the work of media professionals. Prereq: Jr. stdg.

COMM 3900. Ethical Problems of Mass Communications. 3 cr. hrs.
The practice of journalism and mass communications as ordered by moral principles. Prereq: Jr. stdg. and PHIL 2310.

COMM 4100. Mass Media and the American Family. 3 cr. hrs.
The impact of the mass media on family communication patterns, familial value structures, development of children, and orientation to news media. Examination of news, advertising, and entertainment content from educational, cultural and economic perspectives. Emphasis on empirical social science research which examines relationships between media and families. Prereq: Jr. stdg.

COMM 4200. International Communication. 3 cr. hrs.
The history of the comparison among present structures of national media systems and the role of journalism within them. Principles of international news flow, gatekeeping, impact of technology, and the relationship between developing countries. Exploration of various models of press-government relationships. Prereq: Jr. stdg.

COMM 4300. Survey Research and Reasoning for Communication Professionals. 3 cr. hrs.
Covers how to conduct, understand, interpret and communicate the results of political polls and other forms of sample surveys used in the media. Includes an introduction to data analysis and related reasoning, principles and techniques of sampling, questionnaire construction for various platforms (e.g. online, telephone, mail), the verbal and visual presentation of results for various audiences and ethical consideration. Prereq: Jr. stdg. or cons. of instr.

COMM 4330. Health, Science and Environmental Communication. 3 cr. hrs.
Study of and practice in communication of health, science, environmental, and risk information with the public and other non-experts, especially through mass, specialized and new media. Includes overview of some current issues. Available for graduate credit.

COMM 4400. Mass Communication Theory and Research. 3 cr. hrs.
Theoretical and methodological considerations involved in mass media research. Examines quantitative and qualitative approaches within the context of the media as social institutions. Prereq: COMM 2500; Jr. stdg; or cons. of instr.

COMM 4500. Race and Gender Issues in Mass Media. 3 cr. hrs.
Surveys the past and present relationship between women and racial and ethnic minorities in the United States and the mass media. Specifically, the issues of how women and people of color are portrayed in the news and entertainment media, the role of ownership, employment and access to the media institutions will be studied. Women’s Studies elective. Prereq: Jr. stdg.

COMM 4550. Media and the "Other". 3 cr. hrs.
Analysis of media created for and by a wide array of audiences, especially those outside of what is sometimes called "mainstream" media. The ways in which social and cultural ideas of "us" and "other" are formed, reinforced, and sometimes challenged through the media lens are identified and debated. Students consider and identify the power of media to form and honor (or dishonor) identity and whether it is possible or desirable to produce media that are identity-neutral.
COMM 4600. Media Management. 3 cr. hrs.
Staffing, organization, economics, salaries, law, labor negotiations and community relations as involved in the mass media. Theoretical and practical approaches to the problems of management.

COMM 4650. Cultural Identity, Media and World Religions. 3 cr. hrs.
Framed through a media lens, students evaluate the diversity of ethnic and spiritual beliefs that are part of a multicultural society. Examines manifestations of religion across the media in news, advertising, public relations, etc. Also weighs issues concerning the use of media by religious groups and prejudice toward religion and secularism. Students critically evaluate consumer culture based on personal identities and philosophies embedded in world religions. Prereq: Soph. stndg.

COMM 4700. Media and Politics. 3 cr. hrs.
How the news media cover politics and how politicians deal with news coverage. Emphasis is on recent presidential campaigns, with special attention to ethical issues, the impact of new media, campaign advertising and strategies used by politicians and journalists. Prereq: Jr. stndg. and POSC 2201.

COMM 4750. Media, Technology and Culture. 3 cr. hrs.
Draws on books, films, television shows and other elements of popular culture to consider the historical and conceptual foundations of new media technologies and their impact on contemporary culture.

COMM 4951. Marquette Led Travel and Study Abroad. 3 cr. hrs.
Course taught in an international setting by Marquette professors and where students earn Marquette credit. Study Abroad expenses apply.

COMM 4953. Seminar in Communication. 1-3 cr. hrs.
Special topics of seminar to be announced in the Schedule of Classes. Variable topics.

COMM 4961. Special Institute/Workshop/Project. 0-3 cr. hrs.
0 credit will be SNC/UNC grade assessment; 1-3 credits will be graded.

COMM 4986. Internship in Communication. 0-3 cr. hrs.
Provides students with the opportunity to apply theories, skills, and techniques in communication. Prereq: Cons. of dept. ch.; cons. of associate dean.0 credit will be SNC/UNC grade assessment; 1-3 credits will be S/U grade assessment.

COMM 4995. Independent Study in Communications. 1-3 cr. hrs.
Prereq: Cons. of dept. ch.

COMM 4999. Senior Thesis. 1-3 cr. hrs.
The application of rigorous methodology in developing and writing a thesis under the direction of an adviser. Prereq: Cons. of dept. ch.
College of Education

From the Dean

College of Education website (http://www.marquette.edu/education/index.shtml)

Welcome!

The College of Education takes great pride in preparing outstanding teachers, school leaders, counselors, counseling psychologists, student affairs administrators, and university faculty. Our aim is to develop exemplary human service professionals -- individuals who will “Be The Difference” in their schools, institutions, organizations and communities.

All academic programs in the College of Education are deeply rooted in the tenets of social justice. Our students develop strongly held ideals of care, respect and advocacy for the well-being of all humankind under the guidance of caring faculty who are exceptional teachers and mentors and prominent scholars.

In addition, our students and faculty engage in a wide range of outreach activities, partnering with our many shareholders in urban, suburban and rural schools and communities, human service agencies and professional organizations. Our outreach efforts include hosting the Hartman Literacy and Learning Center for at-risk readers and directing the Behavior Clinic (at Penfield Children’s Center), which specializes in helping troubled pre-school children. We also exercise community leadership through our work with the Greater Milwaukee Catholic Education Consortium (GMCEC) and our popular Marquette Educator blog.

William Henk, Ed.D.
Dean, College of Education

College Mission Statement

Consistent with Jesuit tradition, the education programs at Marquette University prepare teachers, school counselors, community counselors, counseling psychologists and administrators to demonstrate a commitment to the development of leadership expressed in service to others. This commitment is expressed through the four tenets of Marquette University’s mission: excellence, faith, leadership and service. The commitment to excellence is foundational because without excellence our candidates cannot effectively serve others. Our candidates exhibit a deep knowledge and understanding of their disciplines as well as how students learn and develop. They master the requisite skills of their profession as effective communicators whose pedagogy, administration or counseling practice -- in the form of planning, instruction or intervention, assessment and shaping of learning environments -- meet the intellectual, social, emotional, cultural and physical needs of students, in response to their race, social class, gender, ethnicity or ability. They exhibit dispositions that support the development of faith, leadership and professional growth, continually reflect on their practice and their role in society, and consistently attempt to enhance all students’ learning and general well being through service. In all of these endeavors, socially just educators grow in their engagement with critical analysis and advocacy around structural inequities in society and in education and seek to affect change.

Accreditation

The College of Education is a member of the American Association of Colleges for Teacher Education. All programs are accredited by the North Central Association and the state of Wisconsin.

Certification

The State of Wisconsin Department of Public Instruction (DPI) approves the teacher preparation program offered by Marquette University. This approval includes the middle childhood/early adolescence (grades 1-8) sequence, the early adolescence/adolescence (grades 6-12) sequence and the majors and minors described in the following pages. A student who satisfactorily completes an education major (professional course sequence) and an academic major, demonstrates mastery of the College of Education standards as evidenced by satisfactory performance on selected assignments and obtains passing scores on the appropriate Praxis II content area test, can be recommended for certification in Wisconsin. Completion of course work is a necessary but not sufficient condition for certification. The professional judgment of faculty, supervisors, and Teacher Education Program administrators enters into the final decision. A student who is endorsed for certification by Marquette University can complete an online application for licensure via the Wisconsin Educator Licensing Online (ELO) system on the DPI website (http://dpi.wi.gov/tepdli/licensing). A license fee is required and payable at the time of application.

Changes mandated by the Wisconsin Department of Public Instruction are ongoing. These changes may require revision of the programs of study and the certification procedures described on the pages which follow.

A student who plans to teach in a state other than Wisconsin after graduation should recognize that reciprocal certification agreements with other states change from time to time. The student should directly contact the respective state’s department of education to obtain its certification requirements and licensure application procedures. If specific courses are needed for certification other than those required for Wisconsin, students should plan...
their programs of study accordingly. Certification levels available to Marquette students are middle childhood/early adolescence (grades 1-8) and early adolescence/adolescence (grades 6-12).
Degrees Offered

Students who complete the teacher education program at Marquette University graduate with a double major: a major in education and a major in an academic content area. All education students will be assigned to an adviser in the College of Education, as well as to an adviser in their academic content area. The bachelor of science degree is conferred by the College of Education. Students who successfully complete the Comprehensive Honors (p. 47) curriculum may earn a degree of honors bachelor of science.

The degrees of Master of Arts, Master of Education, and Doctor of Philosophy are offered by the College of Education. The college also offers the following certificates: principal, director of instruction, superintendent, middle childhood/early adolescence (grades 1-8) education and early adolescence/adolescence (grades 6-12) education. Details for these programs are contained in the Graduate Bulletin (http://bulletin.marquette.edu/grad).
**Majors and Minors Overview**

**Majors**

The College of Education offers a major in Elementary/Middle Education (ELME), leading to certification for grades 1-8, and a major in Middle/Secondary Education (MISE), leading to certification for grades 6-12.

**Minors**

Students pursuing a major in MISE along with a content major in Economics, History, Political Science, Psychology, or Sociology may also pursue a minor in Broad Field Social Studies for additional licensure. Both ELME and MISE students with second language skills may pursue a licensure minor in Bilingual-Bicultural.
Admission Requirements

Admission to the Professional Program
Admission to the Professional Program occurs during the sophomore year, after completing EDUC 2227 Introduction to Learning and Assessment.

Criteria for Admission:
- Completion of 40 undergraduate credits
- 2.750 cumulative GPA
- Successful completion of Praxis Core Academic Skills for Educators test or equivalent
- Successful completion of EDUC 2227 Introduction to Learning and Assessment, including field experience
- Completion of level 1 Portfolio
- Student completion of dispositional self-assessment
- Review by the Admission and Advancement Committee

Admission to Student Teaching
Application for admission to student teaching must be made the semester before student teaching occurs in the senior year. At the beginning of the semester preceding the student teaching semester, students must attend a Student Teacher Information Session. At this meeting, the Director of Field Placement and Licensure reviews the Student Teaching Handbook and provides other pertinent information. Students must complete student teaching application forms and submit them to the Director on or before the designated due date. Student teaching assignments are made in the Milwaukee area only.

Criteria for Admission to Student Teaching:
- Admission to the Professional Program
- 2.750 cumulative GPA
- 2.750 GPA in major/minor areas of certification
- 2.750 GPA Education sequence
- Successful completion of all courses in major/minor areas and professional education sequence
- Successful completion of all courses in the Education sequence with a final grade of “C” or better
- Successful completion of the appropriate Praxis II content area examination
- Successful completion of Foundations of Reading test (Elementary/Middle majors only)
- Successful completion of performance assessments for Portfolio – Level 2 Assessment
- Approval by major department (EA-A candidates)
- Satisfactory criminal background check
- Documentation of a negative tuberculin skin test, or if results are positive, results of a chest x-ray
- Successful review of the e-portfolio by the Admission and Advancement Committee

Licensure Recommendations
License recommendation occurs at the conclusion of student teaching when candidates make application and are formally endorsed by the College of Education for teacher licensure in the state of Wisconsin.

Criteria for Licensure Recommendations:
- Bachelor of Science degree
- Successful completion of the full semester of student teaching experience including attendance at weekly student teaching seminar
- 2.750 GPA (cumulative, major/minor areas of certification, education sequence)
- Successful completion of Level 3 performance assessments
- Successful completion of Level 3 e-portfolio
- Successful completion of EdTPA
- Submission of the following:
  - Midterm and final evaluations from cooperating teachers
  - Midterm and final evaluations from university supervisors
  - Evaluation of Cooperating Teacher form
  - Evaluation of University Supervisor form
  - Student Teacher Exit Interview Questionnaire
Students should consult the College of Education Undergraduate Handbook located on the EDUC Current Students website (http://www.marquette.edu/education/current_students/educ.shtml) for more information regarding requirements.
Graduation Requirements

Amount and Quality of Work

A candidate for a baccalaureate degree must meet the following graduation requirements to earn a Marquette undergraduate degree:

- 128-143 credits, depending on second major
- 2.750 overall GPA
- 2.750 GPA in ELME or MISE major
- 2.750 GPA in second major

In addition, the college adheres to the University Graduation (p. 68) and Commencement (p. 60) policies in this bulletin.
Degree Requirements

Due to the unique degree requirements specific to each majors in our college, you can find the degree requirement information within the individual major information pages.
Academic Regulations

General Information

Students in the College of Education are expected to comply with the academic requirements and regulations (http://bulletin.marquette.edu/undergrad/academicregulations) listed in the university section of this bulletin and must fulfill the graduation requirements stated in the bulletin in effect the year they entered Marquette.

Students who have interrupted their enrollment for two or more consecutive terms, follow the requirements and regulations listed in the bulletin in effect during the academic year of their return. (Exception is made for students who interrupted enrollment to serve in the Armed Forces.)

It is the responsibility of students to know and fulfill all university, College of Education and major department requirements.

Academic Dismissal/Probation/Academic Alert (CAA)

Academic Dismissal

The College of Education adheres to the University Academic Censure Policy (p. 55).

College Probation

Undergraduate students in the College of Education may be placed on academic probation for the following:

• overall GPA is below 2.600 after the completion of at least two semesters of coursework
• term GPA is below 2.000, regardless of overall GPA or number of semesters completed

College Academic Alert (CAA)

Students admitted to the College of Education are expected to meet college academic standards and maintain good academic standing. Academic performance is monitored carefully by the Teacher Education Academic Review Committee, and students either not maintaining steady progress or not demonstrating adequate achievement will be barred from future registration by a College Academic Alert (CAA) registration hold.

The basis for committee review are:

• grade point average (GPA) deficiency
• inadequate progress
• grades of CD, D, F, I, W, WA, UW or ADW
• the number of semesters on college probation
• the violation of special conditions

Special conditions may be prescribed in writing at the time of the student’s admission, readmission or transfer into the college. Conditions may also be prescribed in writing in the case of a student whose course performance or failure to follow academic advice warrants such action. All students to whom conditions have been specified will be subject to committee review and possible CAA restriction should they fail to fulfill the specified terms. It is possible that a student be barred from registration for academic reasons even though the student’s cumulative GPA exceeds 2.000. Students concerned about their academic progress should consult the college office.

Students placed on CAA status will be notified by letter or email of the committee’s decision and of the appeal process. If a student’s appeal is denied, the student may request to enroll in another college via the process outlined in the University Academic Censure Policy (p. 55), and if accepted, the CAA hold will be removed after admission into the new college.

Unless the CAA is removed via the individual colleges’ appeal process, the student may not register for courses at Marquette and may be dropped from any classes for future terms in which he/she is registered.

Attendance

Because absence from class will prevent a student from getting the full benefit of a course and because in many courses, each student’s involvement contributes to the learning process for all other students in the class, the college has adopted the University Attendance Policy (p. 58) for all of its undergraduate courses.

Background Checks, Drug Testing

A criminal background check is required of each student prior to participation in field work and student teaching. In addition, applicants for Wisconsin state teaching licensure are checked through the Wisconsin Criminal Investigation Bureau. Drug testing may also be required. The results of these checks and/or tests will affect the student’s eligibility to participate in field work and/or student teaching.
Coaching Courses

Students may seek to enhance their job opportunities by enrolling in coaching courses: EDUC 1600 Principles, Problems and Psychology of Coaching and EDUC 1800 Theory and Practice in Coaching Team Sports.

Field Experiences

Education students participate in field experiences at public, private, and parochial schools in the Milwaukee area. The Wisconsin Department of Public Instruction (DPI) requires a minimum of 100 field hours to be completed prior to student teaching. Of these, the College of Education requires that a minimum of 50 hours must be completed in diverse settings with individuals whose backgrounds differ from those of the field students. Although Marquette University’s field experience requirements exceed those mandated by the DPI, students must satisfy Marquette’s requirements. Marquette University’s College of Education has established close, working relationships with several schools in the greater Milwaukee area.

Retention in Program

The Wisconsin Department of Public Instruction requires that students achieve a cumulative 2.750 GPA and a 2.750 GPA in their major, minor, and professional education sequence as well as obtain passing scores on the appropriate Praxis II content area test in order to be approved for student teaching and to be licensed. The College of Education does not accept courses with a grade of CD or lower to meet the requirement in the professional education sequence. Courses with these grades must be repeated. See the University Repeated Courses Policy (p. 72). Anyone with questions related to admission or retention should contact the Office of Teacher Education. For more information see the College of Education Undergraduate Student Handbook located on the EDUC Current Students website (http://www.marquette.edu/education/current_students/educ.shtml).
Facilities
The Ralph C. Hartman Literacy and Learning Center

The Hartman Literacy and Learning Center (http://www.marquette.edu/education/centers_clinics/hlc.shtml) is a facility within the College of Education, which supports undergraduate literacy related programs. The center library houses a children’s literature collection, which is used by College of Education students as well as children participating in the center’s after school tutoring program, collaborations between the university and neighborhood elementary schools. Students enrolled in EDUC 4964 Practicum: Teaching Elementary Level Reading participate by tutoring small groups of children in reading and writing after school. The Hartman Literacy and Learning Center provides faculty and staff to support and conduct research.
Middle Childhood/Early Adolescence Teacher Preparation (Grades 1-8)

Director of Teacher Education: Joan Whipp, Ph.D.

The middle childhood/early adolescence teacher education program leads to a teaching license for grades 1 through 8. Students who select this program must meet the College of Education’s admission and retention requirements and must complete the following components:

1. The University Core of Common Studies (UCCS)
2. An Elementary/Middle Education major, which includes specific state-mandated general education requirements
3. An academic major from the Klingler College of Arts and Sciences or the Diederich College of Communication

Students who intend to complete the teacher education program through the Marquette University College of Education are strongly encouraged to meet with the assistant dean of undergraduate advising and student services in the Office of Teacher Education as early as possible to avoid delays in their program.

Academic Majors

Klingler College of Arts and Sciences

- Science
- English
- French
- German
- History
- Classics
- Mathematics
- Political Science
- Psychology
- Sociology
- Spanish

Diederich College of Communication

- Communication Studies
- Journalism
- Theatre Arts

University Core of Common Studies / Education Core Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit</th>
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</thead>
<tbody>
<tr>
<td>ENGL 1001</td>
<td>Rhetoric and Composition 1</td>
<td>6</td>
</tr>
<tr>
<td>ENGL 1002</td>
<td>Rhetoric and Composition 2</td>
<td></td>
</tr>
<tr>
<td>or COMM 1100</td>
<td>Contemporary Presentation</td>
<td>4</td>
</tr>
<tr>
<td>MATH 2030</td>
<td>Problem Solving and Reasoning for Teachers</td>
<td>7</td>
</tr>
<tr>
<td>MATH 2031</td>
<td>Number Systems and Operations for Elementary Teachers</td>
<td>4</td>
</tr>
<tr>
<td>MATH 2032</td>
<td>Algebra and Geometry for Teachers</td>
<td></td>
</tr>
<tr>
<td>POSC 2201</td>
<td>American Politics</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 1210</td>
<td>Introduction to Schooling in a Diverse Society</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1101</td>
<td>Introduction to American History</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1301</td>
<td>Survey of Latin America</td>
<td></td>
</tr>
<tr>
<td>or HIST 1401</td>
<td>Africa</td>
<td>6</td>
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</table>

Histories of Cultures and Societies (HCS)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 1101</td>
<td>Introduction to American History</td>
<td></td>
</tr>
<tr>
<td>HIST 1301</td>
<td>Survey of Latin America</td>
<td></td>
</tr>
<tr>
<td>or HIST 1401</td>
<td>Africa</td>
<td>6</td>
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</table>
or HIST 1501

Science and Nature (SN) 6-8

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>ARSC 1020</td>
<td>Major Concepts in Modern Science 1</td>
</tr>
<tr>
<td>ARSC 1021</td>
<td>Major Concepts in Modern Science 2</td>
</tr>
</tbody>
</table>

And

Or

Biol 1009  Biology for Non-Science Majors

And

Phys 1009  Earth and Environmental Physics

Human Nature and Ethics (HNE) 6

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phil 1001</td>
<td>Philosophy of Human Nature</td>
</tr>
<tr>
<td>Phil 2310</td>
<td>Theory of Ethics</td>
</tr>
</tbody>
</table>

Theology (T) 6

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theo 1001</td>
<td>Introduction to Theology</td>
</tr>
</tbody>
</table>

One additional approved second-level UCCS T course

Foreign Language 0-8

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
</table>

Total Credit Hours 46-56

Elementary/Middle Education Major

To be eligible for the middle childhood/early adolescence teaching license, students must complete the following courses offered by the College of Education:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edu 1210</td>
<td>Introduction to Schooling in a Diverse Society</td>
<td>3</td>
</tr>
<tr>
<td>Edu 1964</td>
<td>Teaching Elementary Mathematics</td>
<td>1</td>
</tr>
<tr>
<td>Edu 2964</td>
<td>Teaching Middle School Mathematics</td>
<td>1</td>
</tr>
<tr>
<td>Edu 1220</td>
<td>Psychology of Human Development in Children and Adolescents in a Diverse Society</td>
<td>3</td>
</tr>
<tr>
<td>Edu 2227</td>
<td>Introduction to Learning and Assessment</td>
<td>3</td>
</tr>
<tr>
<td>Edu 4347</td>
<td>Teaching Elementary Reading, Language Arts, and Children's Literature 1</td>
<td>4</td>
</tr>
<tr>
<td>Edu 4217</td>
<td>Methods of Teaching Children/Youth with Exceptional Needs</td>
<td>3</td>
</tr>
<tr>
<td>Edu 2330</td>
<td>Integrating the Arts Across the Curriculum</td>
<td>3</td>
</tr>
<tr>
<td>Edu 4240</td>
<td>Critical Inquiry into Contemporary Issues</td>
<td>3</td>
</tr>
<tr>
<td>Edu 4357</td>
<td>Teaching Elementary Reading, Language Arts, and Children's Literature 2</td>
<td>4</td>
</tr>
<tr>
<td>Edu 4297</td>
<td>Teaching in the Middle School</td>
<td>4</td>
</tr>
<tr>
<td>Edu 4317</td>
<td>Teaching Elementary Level Science</td>
<td>3</td>
</tr>
<tr>
<td>Edu 4337</td>
<td>Teaching Elementary Social Studies</td>
<td>3</td>
</tr>
<tr>
<td>Edu 4540</td>
<td>Philosophy of Education</td>
<td>3</td>
</tr>
<tr>
<td>Edu 4964</td>
<td>Practicum: Teaching Elementary Level Reading</td>
<td>4</td>
</tr>
<tr>
<td>Edu 4966</td>
<td>Student Teaching: Elementary/Middle</td>
<td>15</td>
</tr>
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Students must also complete:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>Math 2030</td>
<td>Problem Solving and Reasoning for Teachers</td>
<td>3</td>
</tr>
<tr>
<td>Math 2031</td>
<td>Number Systems and Operations for Elementary Teachers</td>
<td>2</td>
</tr>
<tr>
<td>Math 2032</td>
<td>Algebra and Geometry for Teachers</td>
<td>2</td>
</tr>
</tbody>
</table>

Total Credit Hours 67

Students must check with their advisers in the College of Education with regard to sequence and admission requirements. EDUC 4966 Student Teaching: Elementary/Middle, is the last course to be completed in the program. Students must apply and be approved by the Office of Teacher Education to student teach.
## Typical Program for Middle Childhood/Early Adolescence Majors

### Freshman

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>ARSC 1020 or BIOL 1009 (UCCS (SN))</td>
<td>4</td>
<td>ARSC 1021 or PHYS 1009</td>
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</tr>
<tr>
<td>ENGL 1001 (UCCS (R))</td>
<td>3</td>
<td>ENGL 1002 or COMM 1100 (UCCS (R))</td>
<td>3</td>
</tr>
<tr>
<td>FOLA 1 - Foreign Language 1</td>
<td>4</td>
<td>FOLA 2 - Foreign Language 2</td>
<td>3</td>
</tr>
<tr>
<td>THEO 1001 (UCCS (T))</td>
<td>3</td>
<td>HIST 1101 (UCCS (HCS))</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 1210 (UCCS (DC) requires fieldwork)</td>
<td>3</td>
<td>EDUC 1220</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>17</strong></td>
<td></td>
<td><strong>17</strong></td>
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### Sophomore

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>UCCS (LPA)</td>
<td>3</td>
<td>MATH 2030</td>
<td>3</td>
</tr>
<tr>
<td>HIST 1301, 1401, or 1501</td>
<td>3</td>
<td>PHIL 2310</td>
<td>3</td>
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<tr>
<td>PHIL 1001 (UCCS (HNE))</td>
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<td>POSC 2201 (UCCS (ISB))</td>
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<tr>
<td>Major</td>
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<td>Major</td>
<td>3</td>
</tr>
<tr>
<td>Major</td>
<td>3</td>
<td>Major</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 2227 (requires fieldwork)</td>
<td>3</td>
<td>EDUC 2330</td>
<td>3</td>
</tr>
<tr>
<td>Field Experience I</td>
<td><strong>18</strong></td>
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<td><strong>18</strong></td>
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</table>

### Junior

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 2031</td>
<td>2</td>
<td>MATH 2032</td>
<td>2</td>
</tr>
<tr>
<td>Major</td>
<td>3</td>
<td>Major</td>
<td>3</td>
</tr>
<tr>
<td>Major</td>
<td>3</td>
<td>Major</td>
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<tr>
<td>EDUC 1964</td>
<td>1</td>
<td>EDUC 2964</td>
<td>1</td>
</tr>
<tr>
<td>EDUC 4217 (requires fieldwork)</td>
<td>3</td>
<td>EDUC 4337 (requires fieldwork)</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 4317 (requires fieldwork)</td>
<td>3</td>
<td>EDUC 4297 (requires fieldwork)</td>
<td>4</td>
</tr>
<tr>
<td>EDUC 4347 (requires fieldwork)</td>
<td>4</td>
<td>EDUC 4357 (requires fieldwork)</td>
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<tr>
<td>Field Experience II</td>
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<tr>
<td></td>
<td><strong>19</strong></td>
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<td><strong>20</strong></td>
</tr>
</tbody>
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### Senior

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major</td>
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<td>EDUC 4966</td>
<td>15</td>
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<tr>
<td>Major</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>THEO Second-level (UCCS (T))</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDUC 4240</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDUC 4964 (requires fieldwork)</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDUC 4540</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senior Level Practicum</td>
<td>19</td>
<td>15</td>
<td></td>
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<tr>
<td>------------------------</td>
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</tr>
</tbody>
</table>

Total credit hours: 143

**Note:** Some majors may require more major courses than the number of courses listed.
Early Adolescence/Adolescence Teacher Preparation (Grades 6-12)

Director of Teacher Education: Joan Whipp, Ph.D.

The early adolescence/adolescence teacher education program leads to a teaching license for grades 6 through 12. Students who select this program must meet the College of Education's admission and retention requirements and must complete the following components:

1. The University Core of Common Studies (UCCS).
2. A Middle/Secondary Education major, which includes specific state-mandated education requirements.
3. An academic major from the Klingler College of Arts and Sciences or the Diederich College of Communication.

The approved majors and minors for teaching certification through Marquette have been cooperatively developed by the College of Education and the colleges and departments of the university. All students intending to teach at the early adolescence/adolescence level must complete at least one academic major in addition to their Middle/Secondary Education major.

Students who intend to complete the teacher education program through the Marquette University College of Education are strongly encouraged to meet with the assistant dean of undergraduate advising and student services in the Office of Teacher Education as early as possible to avoid delays in their program.

Academic Majors

Klingler College of Arts and Sciences Academic Majors

- Biology
- Broad Field Science
- Chemistry
- Economics
- English
- French
- German
- History
- Classics
- Mathematics
- Physics
- Political Science
- Psychology
- Sociology
- Spanish

Diederich College of Communication Majors

- Communication Studies
- Journalism
- Theatre Arts

Minors for Certification at the Secondary Level

- Biology
- Broad Field Social Science
- Chemistry
- Communication Studies
- English
- History
- Classics
- Mathematics
- Physics
- Political Science
- Psychology
- Sociology
• Theatre Arts

University Core of Common Studies / Education Core Requirements

Rhetoric (R)  
- ENGL 1001 Rhetoric and Composition 1  
- ENGL 1002 Rhetoric and Composition 2  
  or COMM 1100 Contemporary Presentation

Mathematical Reasoning (MR)  
- Any approved UCCS MR course  

Individual and Social Behavior (ISB)  
- Any approved UCCS ISB course  

Diverse Cultures (DC)  
- EDUC 1210 Introduction to Schooling in a Diverse Society  

Literature and Performing Arts (LPA)  
- Any approved UCCS LPA course  

Histories of Cultures and Societies (HCS)  
- HIST 1001 Growth of Western Civilization to 1715  
  or HIST 1002 Growth of Western Civilization since 1715  
  And  
  - HIST 1301 Survey of Latin America  
    or HIST 1401 Africa  
    or HIST 1501 East Asia

Science and Nature (SN)  
- ARSC 1020 Major Concepts in Modern Science 1  
  And  
  - ARSC 1021 Major Concepts in Modern Science 2  
  Or  
  - BIOL 1009 Biology for Non-Science Majors  
  And  
  - PHYS 1009 Earth and Environmental Physics

Human Nature and Ethics (HNE)  
- PHIL 1001 Philosophy of Human Nature  
- PHIL 2310 Theory of Ethics

Theology (T)  
- THEO 1001 Introduction to Theology  
  One additional approved second-level UCCS T course

Foreign Language  
- Foreign Language competence through the elementary college level (1001 and 1002)  

Fine Arts  
- Wisconsin DPI requirement

Total Credit Hours 45-55

Middle/Secondary Education Major

To be eligible for an early adolescence/adolescence teaching license, students must complete the following courses in the College of Education:

- EDUC 1210 Introduction to Schooling in a Diverse Society 3  
- EDUC 1220 Psychology of Human Development in Children and Adolescents in a Diverse Society 3  
- EDUC 2227 Introduction to Learning and Assessment 3  
- EDUC 4037 Literacy in the Content Areas 3  
- EDUC 4217 Methods of Teaching Children/Youth with Exceptional Needs 3  
- EDUC 4240 Critical Inquiry into Contemporary Issues 3  
- EDUC 4297 Teaching in the Middle School 4
EDUC 4540  Philosophy of Education  3
EDUC 4965  Student Teaching: Middle/Secondary  15
And one advanced methods course in their teaching major/minor.  3
Total Credit Hours  43

Students must check with their advisers in the College of Education in regard to sequence and admission requirements. EDUC 4965 Student Teaching: Middle/Secondary, is the last course to be completed in the program. Students must apply and be approved by the Office of Teacher Education to student teach.

**Typical Program for Early Adolescence/Adolescence Majors**

**Freshman**

<table>
<thead>
<tr>
<th>Term</th>
<th>Hours</th>
<th>Term</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>First</td>
<td></td>
<td>Second</td>
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</tr>
<tr>
<td>ARSC 1020 or BIOL 1009 (UCCS (SN))</td>
<td>4</td>
<td>ARSC 1021 or PHYS 1009</td>
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<tr>
<td>ENGL 1001 (UCCS (R))</td>
<td>3</td>
<td>ENGL 1002 or COMM 1100 (UCCS (R))</td>
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<td>FOLA I - Foreign Language I</td>
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<td>FOLA II - Foreign Language II</td>
<td>4</td>
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<tr>
<td>THEO I UCCS (T)</td>
<td>3</td>
<td>HIST 1301, 1401, or 1501</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 1210 (UCCS (DC) requires fieldwork)</td>
<td>3</td>
<td>EDUC 1220</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>17</td>
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</table>

**Sophomore**

<table>
<thead>
<tr>
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<th>Hours</th>
<th>Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td></td>
<td>Second</td>
<td></td>
</tr>
<tr>
<td>HIST 1001 or 1002 (UCCS (HCS))</td>
<td>3</td>
<td>UCCS (ISB)</td>
<td>3</td>
</tr>
<tr>
<td>MATH UCCS (MR)</td>
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<td>PHIL 1001 (UCCS (HNE))</td>
<td>3</td>
</tr>
<tr>
<td>Major</td>
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<td>Major</td>
<td>3</td>
</tr>
<tr>
<td>Major</td>
<td>3</td>
<td>Major</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 2227 (requires fieldwork)</td>
<td>3</td>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>15</td>
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</table>

**Junior**

<table>
<thead>
<tr>
<th>Term</th>
<th>Hours</th>
<th>Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td></td>
<td>Second</td>
<td></td>
</tr>
<tr>
<td>PHIL 2310 (UCCS (HNE))</td>
<td>3</td>
<td>Literature (UCCS (LPA)) - any approved lit</td>
<td>3</td>
</tr>
<tr>
<td>THEO Second-level (UCCS (T))</td>
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<td>Major</td>
<td>3</td>
</tr>
<tr>
<td>Major</td>
<td>3</td>
<td>Major</td>
<td>3</td>
</tr>
<tr>
<td>Major</td>
<td>3</td>
<td>EDUC 4297 (requires fieldwork)</td>
<td>4</td>
</tr>
<tr>
<td>EDUC 4037 (requires fieldwork)</td>
<td>3</td>
<td>EDUC 4540</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 4217 (requires fieldwork)</td>
<td>3</td>
<td>Junior Level Practicum</td>
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</tr>
<tr>
<td></td>
<td>18</td>
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<td>16</td>
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</table>

**Senior**

<table>
<thead>
<tr>
<th>Term</th>
<th>Hours</th>
<th>Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td></td>
<td>Second</td>
<td></td>
</tr>
<tr>
<td>Fine Arts elective</td>
<td>3</td>
<td>EDUC 4965 (requires fieldwork)</td>
<td>15</td>
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<tr>
<td>Major</td>
<td>3</td>
<td>Major</td>
<td>3</td>
</tr>
<tr>
<td>Major</td>
<td>3</td>
<td>EDUC 4240</td>
<td>3</td>
</tr>
</tbody>
</table>
Advanced Methods (requires fieldwork) 3
Elective, if needed to reach 128 credits
Field Experience III

Total credit hours: 128

**Note:** Some majors may require more major courses than the number of courses listed.

**Broad Field Science Major with Minors in Biology, Chemistry or Physics**

A person with a Broad Field Science license may teach any science class at the early adolescence – adolescence level, up through grade 10, and any basic or fusion science class in grades 11-12 that is not: A) a semester-long discrete course in a science subcategory – e.g. life and environmental science; B) an honors, IB, or advanced placement course; C) part of the college preparatory sequence and/or an elective course with more depth of content than basic courses. To teach a course under the criteria in A, B, or C (above), the candidate must hold a license in that subject area.

Interested students should see the chairs of biology, chemistry, or physics, their advisers, and the College of Education director of undergraduate advising.

Students completing all of the course work earn a broad field science major and a minor in the specific science area of study.

**Required courses for all broad field science majors are:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1001</td>
<td>General Biology 1</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 1002</td>
<td>General Biology 2</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 2001</td>
<td>Principles of Biological Investigation</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1001</td>
<td>General Chemistry 1</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 1002</td>
<td>General Chemistry 2</td>
<td>4</td>
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<tr>
<td>CHEM 2111</td>
<td>Organic Chemistry 1</td>
<td>4</td>
</tr>
<tr>
<td>or CHEM 2113</td>
<td>Organic Chemistry for Majors 1</td>
<td></td>
</tr>
<tr>
<td>PHYS 1001</td>
<td>General Physics 1</td>
<td>4</td>
</tr>
<tr>
<td>or PHYS 1003</td>
<td>General Physics with Introductory Calculus 1</td>
<td></td>
</tr>
<tr>
<td>or PHYS 1013</td>
<td>Classical and Modern Physics with Calculus 1</td>
<td></td>
</tr>
<tr>
<td>PHYS 1002</td>
<td>General Physics 2</td>
<td>4</td>
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<tr>
<td>or PHYS 1004</td>
<td>General Physics with Introductory Calculus 2</td>
<td></td>
</tr>
<tr>
<td>or PHYS 1014</td>
<td>Classical and Modern Physics with Calculus 2</td>
<td></td>
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<tr>
<td>PHYS 1009</td>
<td>Earth and Environmental Physics</td>
<td>3</td>
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<tr>
<td>BIOL 4101</td>
<td>Biochemistry and the Molecular Basis of Biology</td>
<td>3</td>
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</table>

Total Credit Hours 35

**Biology minor for teaching certification requirements:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tr>
<td>CHEM 2112</td>
<td>Organic Chemistry 2</td>
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<tr>
<td>or CHEM 2114</td>
<td>Organic Chemistry for Majors 2</td>
<td></td>
</tr>
<tr>
<td>CHEM 3201</td>
<td>Quantitative Analysis</td>
<td>4</td>
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<tr>
<td>BIOL 2201</td>
<td>Genetics</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 4101</td>
<td>Biochemistry and the Molecular Basis of Biology</td>
<td>3</td>
</tr>
</tbody>
</table>

One additional BIOL course 3

**Chemistry minor for teaching certification requirements:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 2112</td>
<td>Organic Chemistry 2</td>
<td>4</td>
</tr>
<tr>
<td>or CHEM 2114</td>
<td>Organic Chemistry for Majors 2</td>
<td></td>
</tr>
<tr>
<td>CHEM 3201</td>
<td>Quantitative Analysis</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 2112</td>
<td>Organic Chemistry 2</td>
<td>4</td>
</tr>
<tr>
<td>or CHEM 2114</td>
<td>Organic Chemistry for Majors 2</td>
<td></td>
</tr>
<tr>
<td>CHEM 3201</td>
<td>Quantitative Analysis</td>
<td>4</td>
</tr>
</tbody>
</table>
**Early Adolescence/Adolescence Teacher Preparation (Grades 6-12)**

- **MATH 1410** Calculus for the Biological Sciences 3
- **or MATH 1450** Calculus 1
- **BIOL 4101** Biochemistry and the Molecular Basis of Biology 3
- **COSC 1000** Introduction to Computer Science 3

**Total Credit Hours** 17

**Physics minor for teaching certification requirements:**

- **PHYS 2005** Modern Physics: The States of Matter 3
- **PHYS 2005** Modern Physics: The States of Matter 3
- **MATH 1450** Calculus 1 4
- **MATH 1451** Calculus 2 4
- **MATH 2450** Calculus 3 4

**Total Credit Hours** 18

**Broad Field Social Science Minor**

The Interdisciplinary Minor in Broad Field Social Science is open only to students majoring in education with a second major in history, political science (only Concentration I: Politics, according the Political Science section of this bulletin), psychology or sociology. This minor allows students to prepare for the license extension offered by the Wisconsin Department of Public Instruction for Broad Field Social Studies and one additional area of licensure. In order to complete the minor, students must complete five of the required courses (15 credits) and then choose four courses (12 credits) from one of the concentrations. Courses completed for the concentration cannot be in an area that corresponds with the student’s major.

**Required Courses**

- **ECON 1001** Introduction to Economics 3
- **or ECON 1103** Principles of Microeconomics
- **or ECON 1104** Principles of Macroeconomics
- **EDUC 1220** Psychology of Human Development in Children and Adolescents in a Diverse Society 3
- **or PSYC 3101** Developmental Psychology: Conception Through Adolescence
- **HIST 1001** Growth of Western Civilization to 1715 3
- **or HIST 1002** Growth of Western Civilization since 1715
- **POSC 2201** American Politics 3
- **or POSC 2401** Comparative Politics
- **or POSC 2601** International Politics
- **SOCI 1001** Principles of Sociology 3

**Complete one of the following concentrations:** 12

**ECON Concentration**

- **ECON 1103** Principles of Microeconomics
- **ECON 1104** Principles of Macroeconomics

**Two ECON Upper Division Electives**

**HIST Concentration**

- **HIST 1101** Introduction to American History
- **HIST 1301** Survey of Latin America
- **or HIST 1401** Africa
- **or HIST 1501** East Asia

**Two HIST Upper Division Electives**

**POSC Concentration**

**Two of the following:**

- **POSC 2201** American Politics
- **or POSC 2401** Comparative Politics
- **or POSC 2601** International Politics

**And two POSC Upper Division Electives**

**PSYC Concentration**

- **PSYC 1001** General Psychology
A person with a Broad Field Social Studies license may teach any social studies class at the early adolescence-adolescence level, up through grade 10 and any basic or fusion social studies class in grades 11-12 that is not: A) a semester-long discrete course in a social studies subcategory – e.g. psychology; B) an honors, IB, or advanced placement course; C) part of the college preparatory sequence and/or an elective course with more depth of content than basic courses. To teach a course under the criteria in A, B, or C (above), the candidate must hold a license in that subject area.
Bilingual Bicultural Minor

Open to Elementary/Middle Education and Middle/Secondary Education majors seeking Department of Public Instruction licensure for Bilingual-Bicultural.

Required courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUC 4230</td>
<td>Learning and Linguistic Diversity</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 4240</td>
<td>Critical Inquiry into Contemporary Issues</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 4277</td>
<td>Methods of Teaching Bilingual-Bicultural Learners</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 4110</td>
<td>Exploring the English Language</td>
<td>3</td>
</tr>
</tbody>
</table>

Electives - Complete two of the following: (6 credit hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 2301</td>
<td>Language and Culture</td>
</tr>
<tr>
<td>CMST 4130</td>
<td>Communication and Urban Families</td>
</tr>
<tr>
<td>CMST 4400</td>
<td>Cross-Cultural Communication in the United States</td>
</tr>
<tr>
<td>ENGL 4120</td>
<td>Anatomy of English</td>
</tr>
<tr>
<td>SPAN 4120</td>
<td>Spanish Phonetics</td>
</tr>
<tr>
<td>SPAN 4140</td>
<td>Acquisition of Spanish</td>
</tr>
<tr>
<td>SPPA 4610</td>
<td>Multicultural Issues for Speech-Language Pathologists</td>
</tr>
</tbody>
</table>

Total Credit Hours: 18

Students must also demonstrate second language proficiency through either an Oral Performance Interview (OPI) or other approved test and are required to complete EDUC 4967 Student Teaching: Bilingual - Bicultural as the student teaching experience required for the education major.
College of Education Courses

Courses

EDUC 1210. Introduction to Schooling in a Diverse Society. 3 cr. hrs.
Critical and reflective examination of assumptions about schooling in the United States including the impacts of race, ethnicity, class and gender; power and control in school and community contexts; and the concerns, demands, conditions, and rewards of the teaching profession. Field Experiences required.

EDUC 1220. Psychology of Human Development in Children and Adolescents in a Diverse Society. 3 cr. hrs.
Critical examination of physical, social, emotional, moral and cognitive development of children and adolescents, including variables (gender, socioeconomic status, race, ethnicity, language).

EDUC 1500. Principles of Peer Facilitation Among College Students. 1 cr. hr.
Theoretical, research, and applied principles of peer facilitation among college students, includes theories of student development; values clarification; principles of effective communication and methods to encourage an appreciation for individual differences within a diverse student population as applies in a Catholic, Jesuit, urban university. Prereq: Cons. of dept.

EDUC 1600. Principles, Problems and Psychology of Coaching. 2 cr. hrs.
Educational implications of sports. Rules, organization, equipment and ethics. Individual/social psychological attributes of athletes/coaches/ programs. Use of psychology by coaches. Open to all students in the university.

EDUC 1800. Theory and Practice in Coaching Team Sports. 2 cr. hrs.
Principles and problems of coaching team sports. All major team sports are reviewed. Open to all students in the university.

EDUC 1964. Teaching Elementary Mathematics. 1 cr. hr.
Elementary mathematics methods with an emphasis on learning how to uncover, understand, and use children's mathematical thinking as the basis for making instructional decisions. Includes face to face class sessions as well as placement in an elementary field experience one hour per week for ten weeks. Prereq: MATH 2030. Should be taken concurrently with MATH 2031. Admission to the Professional Program.

EDUC 2227. Introduction to Learning and Assessment. 3 cr. hrs.
Application of major theories of learning to instructional planning and assessment. Use of technologies to enhance learning and assessment. Prereq: EDUC 1210; EDUC 1220 or PSYC 3101 or concurrent; College of Education majors.

EDUC 2330. Integrating the Arts Across the Curriculum. 3 cr. hrs.
Use of visual and performance arts (dance, music, film, theater) as well as newer forms of technology and multimedia to enhance learning and instruction across the K-12 curriculum. Prereq: EDUC 2227.

EDUC 2964. Teaching Middle School Mathematics. 1 cr. hr.
Prepares students to teach middle school mathematics through a problem solving approach. Guided participation in a middle school mathematics classroom with practicing teacher and university instructor for forty hours of fieldwork. Prereq: This course should be taken concurrently with MATH 2032 and EDUC 4287. Prereq for Middle Childhood(Grades 1-8)Candidates: MATH 2031.

EDUC 4007. Teaching Middle/Secondary Social Science. 3 cr. hrs.
Application of teaching methods to social studies in middle and high schools. Field experience required. Prereq: EDUC 2227; Admission to the Professional Program in the College of Education.

EDUC 4017. Teaching Middle/Secondary Science. 3 cr. hrs.
Application of methods to teach inquiry-based science in the physical sciences, physics, biology, chemistry and environmental sciences at the middle/secondary level. Includes planning, preparation of materials, assessment, and use of technology aligned with National Science Education Standards and OSHA safety requirements. Field experience required. Prereq: EDUC 2227; Admission to the Professional Program in the College of Education.

EDUC 4027. Teaching English in the Secondary School. 3 cr. hrs.
An investigation of the role of the teacher, the student, and the curricular methods, procedures, and materials used in the teaching of language, literature, and composition in the secondary school. A 40-hour field experience in selected area schools is required. Prereq: Jr. stndg. and EDUC 2227; admission to the Professional Program.

EDUC 4037. Literacy in the Content Areas. 3 cr. hrs.
Interrelationship of reading, writing, speaking and listening as learning skills in the content areas. Included are methods and materials the teacher can use in the classroom setting to improve literacy skills in all content areas and integrate literature across the curriculum. Field experience required. Prereq: Admission to the Professional Program in the College of Education.

EDUC 4067. Strategies in Religious Education. 3 cr. hrs.
Application of current catechetical theory and educational strategies to the teaching of religion. Development of curriculum objectives and assessments. Analysis of instructional materials and other resources for teaching religion. Open to all upper division students in the university.

EDUC 4100. Foundations of Catholic Education. 3 cr. hrs.
Traces the history and philosophy of Catholic education in the United States, with particular emphasis on the identity, mission and culture of Catholic schools as interpreted by generations of Church leaders and scholars. Prepares elementary and secondary pre-service teachers to apply educational theory to practice in the Catholic school settings.
EDUC 4217. Methods of Teaching Children/Youth with Exceptional Needs. 3 cr. hrs.
Design to provide teacher candidates with knowledge of and opportunities to apply research-based differentiated instructional and behavioral management methods and adaptations for students with a variety of special needs. In addition to course work, 20 hours of field experience is required. Focuses on how to implement universal design strategies, RTI, and PBIS in the regular classroom setting. Prereq: EDUC 1220 or PSYC 3101.

EDUC 4230. Learning and Linguistic Diversity. 3 cr. hrs.
Covers three bodies of knowledge regarding language: basic principles of sociolinguistics, the nature of learning a second language or a second dialect, and theories for teaching speakers of languages and dialects other than Standard English (e.g., bilingual education and/or English as a second language instruction). Each of these bodies of knowledge is contextualized in students' learning experiences and in teachers' classroom practices.

EDUC 4240. Critical Inquiry into Contemporary Issues. 3 cr. hrs.
Examines key policies that influence equality of opportunities in K-12 schools. Prereq: Jr. stndg. for non-College of Education majors; Jr. stndg. and EDUC 1210 for College of Education majors.

EDUC 4277. Methods of Teaching Bilingual-Bicultural Learners. 3 cr. hrs.
Study, application, and practice of methods of delivering bilingual/bicultural instruction. Focuses on first and second language learning strategies and culturally responsive teaching methods that reflect the language and culture of students living in bilingual/bicultural contexts. Field experience required. Prereq: EDUC 2227; Admission to the Professional Program in the College of Education.

EDUC 4297. Teaching in the Middle School. 4 cr. hrs.
Foundations, methods, and strategies for teaching at the middle school level. Lab required. Field experience required. Prereq: EDUC 1220 and EDUC 2227; Admission to the Professional Program in the College of Education.

EDUC 4317. Teaching Elementary Level Science. 3 cr. hrs.
Curriculum development and instructional methods for teaching inquiry-based science at the primary and upper elementary level. Includes preparation of materials, assessment, use of technology and field experiences. Field experience required. Prereq: EDUC 2227; Admission to the Professional Program in the College of Education.

EDUC 4337. Teaching Elementary Social Studies. 3 cr. hrs.
Curriculum development, instructional strategies and techniques for teaching elementary social studies with emphasis on primary research skills. Includes preparation of materials, assessment and micro-teaching. Prereq: EDUC 2227; Admission to the Professional Program in the College of Education.

EDUC 4347. Teaching Elementary Reading, Language Arts, and Children's Literature 1. 4 cr. hrs.
Teaching reading, language arts, and children's literature from a developmental perspective to diverse lower elementary learners. Emphasis on developing the relationship between the three literacy areas. Field experience required. Prereq: Admission to the Professional Program in the College of Education.

EDUC 4357. Teaching Elementary Reading, Language Arts, and Children's Literature 2. 4 cr. hrs.
Teaching reading, language arts, and children's literature from a developmental perspective to diverse upper elementary learners. Emphasis on developing the relationship between the three literacy areas and how social factors influence students' literacy learning. Field experience required. Prereq: EDUC 4347; Admission to the Professional Program in the College of Education.

EDUC 4377. Methods of Teaching Bilingual-Bicultural Learners. 3 cr. hrs.
Study, application, and practice of methods of delivering bilingual/bicultural instruction. Focuses on first and second language learning strategies and culturally responsive teaching methods that reflect the language and culture of students living in bilingual/bicultural contexts. Field experience required.

EDUC 4380. Practicum: Teaching Middle/Secondary Social Studies. 4 cr. hrs.
Supervised experience in the teaching of social studies emphasizing the teaching of middle and secondary social studies. Prereq: Consent of dept. ch.; Admission to the Professional Program in the College of Education.

EDUC 4382. Practicum: Teaching Elementary Social Studies. 4 cr. hrs.
Supervised experience in the teaching of social studies emphasizing the teaching of elementary social studies. Prereq: Consent of dept. ch.; Admission to the Professional Program in the College of Education.

EDUC 4384. Practicum: Teaching Middle/Secondary Science. 4 cr. hrs.
Supervised experience in the teaching of science emphasizing the teaching of middle and secondary science. Prereq: Consent of dept. ch.; Admission to the Professional Program in the College of Education.

EDUC 4386. Practicum: Teaching Elementary Science. 4 cr. hrs.
Supervised experience in the teaching of science emphasizing the teaching of elementary science. Prereq: Consent of dept. ch.; Admission to the Professional Program in the College of Education.

EDUC 4400. Practicum: Teaching Middle/Secondary Foreign Language. 6 cr. hrs.
Supervised experience in the teaching of foreign language emphasizing the teaching of middle and secondary foreign language. Prereq: Consent of dept. ch.; Admission to the Professional Program in the College of Education.
EDUC 4971. Noyce Teaching 1. 1-12 cr. hrs.
Introduces Noyce Scholars to the wide variety of exceptional needs of children and adolescents and the application of major theories of learning to instructional planning and assessment. Students will also study the interrelationship of reading, writing, speaking and listening as learning skills in the content areas. Field experiences will be integrated within the course as it is taught within an urban high school setting. Open only to Noyce Scholars.

EDUC 4972. Noyce Teaching 2. 1-12 cr. hrs.
Students learn the foundations, methods and strategies for teaching in their academic discipline at both the middle school and high school level. Field experiences are integrated within the course as it is taught within urban school settings. Open only to Noyce Scholars. Prereq: EDUC 4971; successful completion of the Praxis I.

EDUC 4995. Independent Study in Education. 1-4 cr. hrs.
Readings on a particular problem or subject of interest to the student. A paper must be completed for each problem studied. Prereq: Cons. of dept. ch.
Welcome!

For over a century, the Marquette University Opus College of Engineering, has pursued excellence and leadership in engineering education, research and service to others. To address today’s global challenges and create a better world for the future, engineers must be well grounded in engineering and science principles underpinned by a strong foundation in the humanities, ethics, leadership and a desire for lifelong learning. The Opus College of Engineering strives to provide a student-centered, active learning environment, fostering curiosity, creativity, and a quest for discovery and innovation. We are recognized and renowned for leadership in the education of the whole person — *cura personalis* — as students and faculty work side-by-side to improve the quality of life across the globe. State-of-the-art engineering facilities allow students to explore and address global challenges in advanced manufacturing, clean water, health and human performance, secure and renewable energy, safe and efficient infrastructure, advances in engineering education pedagogy and many other exciting areas of engineering opportunities. In the spirit of the Jesuit tradition of faithful service, the Opus College of Engineering provides many service learning opportunities and offers one of the finest industry cooperative education programs in the country.

Kristina M. Ropella, Ph.D.
Opus Dean, Opus College of Engineering

College Mission Statement

The mission of the Marquette University Opus College of Engineering is to excel in four critical areas:

- To prepare all students for successful careers based on a strong moral and ethical foundation
- To advance the state of the art in engineering
- To serve our professional and technical communities
- To contribute to our global society

These statements reflect the essential nature of the college. The motivation of the college centers about its desire to emphasize to the engineering community the intrinsic value of humankind and of the individuals who comprise it. This motivation flows directly from the fact that the college is an integral part of a Catholic, Jesuit university.

The Opus College of Engineering is a member of the American Society for Engineering Education.
Degrees Offered

Marquette University confers the degree of bachelor of science in biomedical, civil, construction engineering, computer, electrical or mechanical engineering on those students who have satisfactorily completed one of the prescribed curricula in the majors within the departments of Biomedical Engineering, Civil, Construction and Environmental Engineering, Electrical and Computer Engineering, and Mechanical Engineering. Students who successfully complete the Comprehensive Honors (p. 47) curriculum may earn a degree of honors bachelor of science. Engineering students have the opportunity to earn a minor in another engineering field as well as in many other non-engineering areas.

The master of science degree is conferred upon recommendation by the Graduate School for candidates in biomedical, civil, electrical and computer, and mechanical engineering, and for candidates in health care technologies management. The master of engineering (M.E.) degree is conferred for candidates in biomedical engineering and mechanical engineering. The doctoral degree is conferred for candidates in biomedical, civil, electrical and computer, and mechanical engineering. Four certificates are offered in electrical engineering. Details on the master’s, doctoral and certificate programs are contained in the Graduate Bulletin (http://bulletin.marquette.edu/grad).

Accreditation

The Biomedical Engineering, BSBE program is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org/.

The Civil Engineering, BSCE program is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org/.

The Construction Engineering and Management, BSCEMA program is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org/.

The Computer Engineering, BSCO program is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org/.

The Electrical Engineering, BSEE program is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org/.

The Mechanical Engineering, BSME program is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org/.
Majors and Minors Overview

The Opus College of Engineering is made up of four departments which offer the following majors and minors:

- the Department of Biomedical Engineering offers majors in biocomputing, bioelectronics and biomechanics and the minor in biomedical engineering
- the Department of Civil, Construction and Environmental Engineering offers majors in civil engineering, construction engineering, and environmental engineering and minors in civil engineering and environmental engineering
- the Department of Electrical and Computer Engineering offers majors in computer engineering and electrical engineering and minors in computer engineering and electrical engineering
- the Department of Mechanical Engineering offers a major in mechanical engineering and a minor in mechanical engineering

Concentrations in engineering leadership and global engineering are available for all the above engineering majors.

The Opus College of Engineering offers the minor in engineering ethics and values.
Admissions

Admission Requirements

**Freshman Admission:** Freshman applicants to the Opus College of Engineering are expected to fulfill the admission requirements listed in the university section of this bulletin.

**Transfer Student (Advanced Standing) Admission:** Applicants who have been enrolled or registered in an institution of higher learning since high school graduation, including Marquette University, need a minimum grade average of 2.500 (based on a four-point system) in previous college work as well as a minimum grade average of 2.500 (based on a four-point system) in mathematics and science coursework as a minimum of consideration. An applicant’s entire academic performance will be evaluated in making an admission decision.

Articulation Agreements

The Opus College of Engineering maintains formal agreements with various colleges for student transfer into selected engineering degree programs and for the transfer of advanced standing credits. The following institutions have engaged the Opus College of Engineering to develop a structure for articulation agreements.

<table>
<thead>
<tr>
<th>School</th>
<th>Location</th>
<th>Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fox Valley Technical College</td>
<td>Appleton, WI</td>
<td>Biomedical Engineering, Electrical Engineering</td>
</tr>
<tr>
<td>Waukesha County Technical College</td>
<td>Waukesha, WI</td>
<td>Electrical Engineering, Mechanical Engineering</td>
</tr>
<tr>
<td>Gateway Technical College</td>
<td>Racine, WI</td>
<td>Biomedical Engineering, Electrical Engineering</td>
</tr>
<tr>
<td>Creighton University</td>
<td>Omaha, NE</td>
<td>Pre-Engineering</td>
</tr>
<tr>
<td>Spring Hill College</td>
<td>Mobile, AL</td>
<td>Dual Degree Program</td>
</tr>
</tbody>
</table>

For more information contact the Engineering Academic Advising Center (http://www.marquette.edu/engineering/academic-advising-center).
Graduation Requirements

A degree of Bachelor of Science in Biomedical Engineering, Bachelor of Science in Civil Engineering, Bachelor of Science in Construction Engineering, Bachelor of Science in Computer Engineering, Bachelor of Science in Electrical Engineering or Bachelor of Science in Mechanical Engineering may be conferred on students who successfully complete the curriculum prescribed for the degree, and who have satisfied the following requirements:

1. The Opus College of Engineering graduates students three times each year (May, August, and December).

2. Students who plan to graduate must apply for a degree through the submission of an Application for Graduation no later than the deadline posted in the Academic Calendar (http://www.marquette.edu/calendar).

3. Graduation requirements include:
   - Minimum of 131-135 earned credit hours, depending on the major chosen.
   - Minimum of 60 Marquette credit hours are required to earn a Marquette undergraduate degree.
   - The final 30 credits needed to complete a Marquette undergraduate degree must be earned as Marquette credits, unless those credits are earned in an approved study abroad program.
   - A minimum of 32 upper-division Marquette credits are required to earn a Marquette undergraduate degree.
   - A minimum of 15 Marquette credits in the major are required to earn a Marquette undergraduate degree.
   - Minimum 2.000 GPA in all Marquette work.
   - Minimum 2.000 GPA in all Opus College of Engineering courses.
   - Completion of all required courses and an approved elective program.

4. Students are cautioned to enter their last term with a clear understanding that they are satisfying all degree requirements. Students should view their Academic Advisement (AA) Graduation Checklist in CheckMarq. If any requirements appear to as - Not Satisfied, the Engineering Academic Advising Center (http://www.marquette.edu/engineering/academic-advising-center) may be consulted to resolve any concerns.

5. All curricular modifications must be accompanied by approved Curriculum Substitution and/or Allowance Request forms, which are available through the Engineering Academic Advising Center (http://www.marquette.edu/engineering/academic-advising-center) website.

6. All degree requirements must be completed on schedule and according to deadlines established in the Academic Calendar. Incomplete grades and late exams will delay graduation for at least one term.

7. A Senior Year Course Plan Review (SY-CPR) form should be completed by the student and his/her department. Students shall submit the form no later than May 1 in the year preceding their final year of their studies. Forms are available through the Engineering Academic Advising Center (http://www.marquette.edu/engineering/academic-advising-center) website. Its intention is to make sure the student’s program of study is on track and to allow for possible alterations to be made to the student’s registration in a timely manner.

8. Students are cautioned against failure in the senior semester. Failure to meet any degree requirement will delay graduation for at least one term.

9. A final check of each student’s degree requirements will be made by the student’s department and the Director of Student Studies and Records during their last semester and the students will be notified if they fail to meet any requirements. However, this may be too late to adjust semester course loads.

10. In addition, the Opus College of Engineering adheres to the University Graduation Requirements Policy (p. 68) and the University Commencement Policy (p. 60).
Degree Requirements

University Core of Common Studies (UCCS) and College of Engineering Curricular Requirements

The Opus College of Engineering curricula amplify and deepen the University Core of Common Studies (UCCS) requirements, which are fully described in the University Core of Common Studies section in this bulletin. The implementation of the UCCS within each major is explicitly detailed in each department’s bulletin section.

The following footnotes are referenced in the department curriculum for each of the various majors:

b University Core course

c The Core Electives must satisfy UCCS requirements in the following four Knowledge Areas: Diverse Cultures, Histories of Cultures and Societies, Individual and Social Behavior, and Literature/Performing Arts. See the university bulletin section on University Core of Common Studies for lists of acceptable courses.

d If the previous Core Electives span all four Knowledge Areas (as listed in the previous footnote), a three-credit free elective may be chosen. This situation may exist if one of the student’s core electives is a “dual-application” core course, as described in the section on the University Core of Common Studies.

e The Theology Elective must be selected from the list of acceptable UCCS courses in the Theology Knowledge Area. See the university bulletin section on University Core of Common Studies.

f The UCCS Rhetoric Knowledge Area is satisfied by ENGL 1001 Rhetoric and Composition 1, and ENGL 1002 Rhetoric and Composition 2 or COMM 1100 Contemporary Presentation.

Courses that satisfy both the UCCS and the Opus College of Engineering curricula are outlined below:

<table>
<thead>
<tr>
<th>Rhetoric (R)</th>
<th>6</th>
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</thead>
<tbody>
<tr>
<td>ENGL 1001</td>
<td>Rhetoric and Composition 1</td>
</tr>
<tr>
<td>ENGL 1002</td>
<td>Rhetoric and Composition 2</td>
</tr>
<tr>
<td>or COMM 1100</td>
<td>Contemporary Presentation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mathematical Reasoning (MR)</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1450</td>
<td>Calculus 1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Individual and Social Behavior (ISB)</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any approved UCCS ISB course.</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Diverse Cultures (DC)</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any approved UCCS DC course.</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Literature and Performing Arts (LPA)</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any approved UCCS LPA course.</td>
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</table>

<table>
<thead>
<tr>
<th>Histories of Cultures and Societies (HCS)</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any approved UCCS HCS course.</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Science and Nature (SN)</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 1001</td>
<td>General Chemistry 1</td>
</tr>
<tr>
<td>PHYS 1003</td>
<td>General Physics with Introductory Calculus 1</td>
</tr>
<tr>
<td>PHYS 1004</td>
<td>General Physics with Introductory Calculus 2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Human Nature and Ethics (HNE)</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 1001</td>
<td>Philosophy of Human Nature</td>
</tr>
<tr>
<td>PHIL 2310</td>
<td>Theory of Ethics</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Theology (T)</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>THEO 1001</td>
<td>Introduction to Theology</td>
</tr>
</tbody>
</table>

| Any additional approved second-level UCCS T course. |   |

Total Credit Hours 46

New courses are approved for the UCCS each term. For a regularly, updated list of approved UCCS courses, consult the Core of Common Studies website (http://www.marquette.edu/core).
In addition, all candidates for an engineering baccalaureate degree must complete requirements for one of the majors as indicated on their respective pages of this Bulletin.

**Department of Biomedical Engineering**
- Biocomputing
- Bioelectronics
- Biomechanics

**Department of Civil, Construction and Environmental Engineering**
- Civil Engineering
- Construction Engineering
- Environmental Engineering

**Department of Electrical and Computer Engineering**
- Computer Engineering
- Electrical Engineering

**Department of Mechanical Engineering**
- Mechanical Engineering
Academic Regulations

Students in the Opus College of Engineering are expected to comply with the academic requirements and regulations listed in the university section of this bulletin, along with all official college regulations. For Opus College of Engineering policies, refer to this section of this bulletin.

Academic Integrity

The Opus College of Engineering recognizes that any form or degree of academic dishonesty challenges the principles of truth and honesty, which are among the most important foundation principles of Marquette University. Consequently, the college treats matters of academic dishonesty as serious violations of academic trust and penalizes all students found to engage in such behavior. The reduction of academic dishonesty within the Opus College of Engineering must be a cooperative enterprise of faculty, student and administrators.

Refer to the University Academic Integrity Policy (p. 50) in this bulletin.

Academic Dismissal/Probation/College Academic Alert (CAA)

Academic Dismissal

The Opus College of Engineering adheres to the University Academic Censure Policy (p. 55) in this bulletin.

Academic Probation

A student may be placed on Academic Probation for several reasons:

- Admission to the Opus College of Engineering subject to academic probation
- Failure to achieve satisfactory academic progress
- Reinstatement under Academic Probation subsequent to Academic Dismissal or College Academic Alert decisions.

The typical terms of Academic Probation are:

- Enroll in a maximum 15 semester-hours at Marquette University.
- Receive no more than one W or AU grade.
- Receive no grades of CD, D, F, I, UW, or WA.
- Receive no excessive absence reports.
- Meet monthly with his/her academic adviser.
- Meet with an adviser in the Office of Student Educational Services.
- Activate and monitor his/her Marquette email account.
- Set up an appointment to meet with the Director of Academic Advising the week following the posting of mid-term grades. Failure to do this may result in a delay in registering for the following semester.

If a student fails to meet the conditions of Academic Probation, there are two possible outcomes:

- The student will be subject to Academic Dismissal if his/her cumulative GPA is below 2.000. The student may appeal this decision.
- The student will be subject to the placement of a College Academic Alert hold, which will restrict the student from enrollment in classes at Marquette University for future terms. The student may appeal this decision.

If the appeal is successful, the student will continue on Academic Probation for one additional semester.

The goal of the above policy is to monitor all our students at the end of each semester to identify possible problems (both academic and non-academic) and to ensure that all our students are given every opportunity to continue to make progress toward the completion of their degree programs.

College Academic Alert (CAA)

Students admitted to the Opus College of Engineering are expected to meet college academic standards and maintain good academic standing. Academic performance is monitored carefully by the Committee on Scholastic Actions, and students either not maintaining steady progress or not demonstrating adequate achievement will be barred from future registration by a CAA registration hold.

The bases for committee review are:

- grade point average (GPA) deficiency
- inadequate progress
- grades of CD, D, F, I, W, WA, UW or ADW
- the number of semesters on college probation
• the violation of special conditions

Special conditions may be prescribed in writing at the time of the student’s admission, readmission or transfer into the college. Conditions may also be prescribed in writing in the case of a student whose course performance or failure to follow academic advice warrants such action. All students to whom conditions have been specified will be subject to committee review and possible CAA restriction should they fail to fulfill the specified terms. It is possible that a student be barred from registration for academic reasons even though the student’s cumulative GPA exceeds 2.000. Students concerned about their academic progress should consult the Engineering Academic Advising Center.

Students placed on College Academic Alert status will be notified by letter or email of the committee’s decision and of the appeal process. If a student’s appeal is denied, the student may request to enroll in another college via the process outlined in the University Academic Censure Policy (p. 55), and if accepted, the CAA hold will be removed after admission into the new college.

Unless the CAA is removed via the individual colleges’ appeal process, the student may not register for courses at Marquette and may be dropped from any classes for future terms in which he/she is registered.

Academic Load

The academic load of a student is measured by credit hours assigned to each course. The typical engineering program varies from 15 to 19 credit hours per term.

A Credit Overload Request form for permission to exceed 20 credit hours must be submitted for approval prior to registration to the Engineering Academic Advising Center. The form is available on Marquette Central academic forms website. (http://www.marquette.edu/mucentral/registrar/policy_forms.shtml)

AFROTC, AROTC and NROTC students may be required by their program to carry in excess of 19 hours and may do so if their academic performance is satisfactory.

Students in summer sessions must petition for credit loads in excess of eight hours in each session or 16 hours for the entire summer term.

Attendance

Because absence from class will prevent a student from getting the full benefit of a course and because in many courses, each student’s involvement contributes to the learning process for all other students in the class, the college has adopted the University Attendance Policy for all of its undergraduate courses.

Absence from Final Exams, Incomplete (I) Grade

Generally, students who fail to take final examinations in any course will automatically be assigned an F grade. Exceptions: Students who because of verified illness and/or a crisis emergency and who notify the course instructor and the Office of Academic Affairs of the circumstances within 48 hours prior to the exam, may be given an I grade and an extension to retake the examination with prior approval of the instructor. Such I grades are given only through the Office of Academic Affairs and only if the student’s prior course performance merits this extra consideration.

Generally, students who have failed to complete a small but important course assignment would find this deficiency reflected in a lower grade assignment in the course. Exceptions: Students who obtain prior instructor permission and who merit the opportunity to make up the deficiency because of the circumstances beyond the control of the student causing the deficiency may be assigned an incomplete (I) grade.

All temporary grades must be removed by the calendar dates specified in the University Bulletin and Academic Calendar or they shall revert to F grades.

Background Checks, Drug Testing

Some degrees, majors and/or courses may require a student to submit to a criminal background check and/or drug testing. The results of those checks and/or tests may affect the student’s eligibility to continue in that degree, major and/or course.

Course and Grade Limitations

The Opus College of Engineering has established the following policies regarding grades, the use of the Course Repeat option, and the useful lifetime of courses.

Limit on the use of Course Repeat Option

Since the institution of the punitive F in May of 1991, the University has implemented the use of the Substitute Repeat Option whereby a repeated course grade will be used in the computation of the GPA and the student will receive degree credit only once.

The Opus College of Engineering endorses the use of the Course Repeat Option as a means to improve a student’s GPA but limits its use to a maximum of five instances during the engineering program. Due to federal regulations students may repeat a course in which a passing grade has been earned only once to improve the grade. CheckMarq automatically checks to see if a student is repeating a course. If a student attempts to enroll in a course that would exceed the federal limit, CheckMarq will restrict the student from enrolling. The student may submit the Repeat Course Permission...
Limit on the number of W, UW, and WA grades a student can receive in all courses

Students are allowed to earn a maximum of five grades of W and a maximum of three grades of UW and/or WA.

Limit on the number of grades of F which can appear on a student’s transcript

Students are allowed to earn a maximum of five grades of F during their engineering program. Grades of F which are subsequently replaced by the use of the Course Repeat Option count toward this total. Thus, a maximum of five F grades can appear on the student’s transcript (whether or not they enter into the calculation of the GPA). However, only a maximum of 3 repeats are allowed for any one course in which F grades were earned.

Statute of Limitation on Opus College of Engineering Courses

Due to the rapidly developing nature of all engineering disciplines, the technical content of an engineering course has a finite lifetime after which the material may become outdated and no longer serve as a foundation for a current engineering degree nor as an appropriate prerequisite for advanced courses. With this in mind, the Opus College of Engineering places a statute of limitations of no more than eight years on all Opus College of Engineering courses. In many cases, it may be deemed by the appropriate department that certain courses have a lifetime well below the eight year maximum.

The implication of this statute of limitations for engineering courses is for students who have been out of school for an extended period of time and wish to reapply to Marquette to finish their degree program and for students who have been studying on a part-time basis and whose program has extended over many years. Courses that have exceeded the statute of limitations will need to be repeated, subject to the Course Repeat policy.

Exceptions and/or Allowances

As with all policies and procedures the aim is to help provide the structure needed by some students to complete their engineering degree programs in a timely manner and to maintain the quality of our programs by awarding degrees to only those students whom we would be proud to proclaim as Marquette Engineering graduates.

Advanced Credit and Transfer Credit from Other Programs

Normally, transfer (advanced standing) evaluations from other colleges and universities are made by the Office of Academic Affairs at the time of admission from information made available on official university transcripts or from supplementary information (grade reports) when the transcripts are not yet available, however, without the official transcript, all evaluations are conditional. This evaluation usually indicates which courses required at Marquette are satisfied by transfer (advanced standing) credits. This evaluation may be completed in cooperation with the Director of Student Studies and Records and appropriate department representatives.

Transfer credit records are shown on the student’s record and these credits plus the remaining credits prescribed by the chair/adviser must meet the degree requirements set forth in the Degree Requirements Policy and Procedure.

Students transferring from one college to another at Marquette are informed which previously completed courses transfer into their new degree program. Their chair/adviser shall identify remaining degree requirements for the permanent advising file. Only credit will transfer, not grades.

Any subsequent addition or change in student advanced standing/transfer credit will be entered on the student’s record.

Advanced Standing (Transfer) Admissions Guidelines

Well-defined admissions standards are approved for freshman applicants to the Opus College of Engineering. These have proved to be an effective evaluation method for prospective students seeking admission to the Opus College of Engineering.

In addition to the University Transfer Credit Policy (p. 20), as described in the Admissions section of this bulletin, the following additional guidelines are applied, recognizing that exceptions can be made by the Assistant Dean for Academic Affairs of the College of Engineering.

• Transfer students from ABET accredited engineering programs: GPA of 2.500 or better with math and science grades of at least 2.500.
• Transfer students from schools with approved articulation agreements programs with Marquette University or approved pre-engineering programs: GPA of 2.50 or better with math and science grades of at least 2.500.
• Transfer students from other colleges at Marquette: GPA of 2.500 or better with math and science grades of at least 2.500.
• Transfer students from junior and 2-year colleges: GPA of 2.750 or better with math and science grades of at least 3.000.
• Transfer students from technical programs offering other than a baccalaureate degree: GPA of 3.000 or better and at least 3.000 in math and science courses. Admittance will be on a probationary basis until a minimum of 24 semester hours have been completed at Marquette. Exceptions may be made for institutions where established articulation agreements exist.
• International students admitted through consultation with the Office of International Education (OIE). Transfer credits will normally be awarded as recommended by the OIE Director. In some cases, credit will not be awarded, but courses may be waived as appropriate. Exceptions can be made by the Associate Dean for Academic Affairs of the Opus College of Engineering.

**Curriculum Substitution and/or Allowance Petition**

Occasional exceptions from the prescribed curriculum are permitted with student petition and approval. Such petitions are initiated by the student through the submission of a completed Curriculum Substitution and/or Allowance Request form in the Engineering college office. The basis for the request must be reasonable and documented. A copy of the approved petition is placed in the student’s file; a second copy is made available to the student through the Office of Academic Affairs.

**Dean’s List**

Engineering students will be recognized by the dean of the college as having achieved the distinction of dean’s list for the respective semester if they: complete 12 or more credits, have a semester GPA of at least 3.500 and did not receive any grades of I, ADW, WA, F, U or UNC for the semester.

**Degree Designations, Majors and Minors**

The Opus College of Engineering offers the following Undergraduate degrees:
Bachelor of Science in Biomedical Engineering, Bachelor of Science in Civil Engineering, Bachelor of Science in Construction Engineering, Bachelor of Science in Computer Engineering, Bachelor of Science in Electrical Engineering, and Bachelor of Science in Mechanical Engineering. This is the degree designation that will appear on the diploma.

Students in Biomedical Engineering may elect a major in Biocomputing (BIOC), Bioelectronics (BIOE) or Biomechanics (BIOM). Students in Civil Engineering may elect a major in either Civil Engineering (CIEN) or Environmental Engineering (ENEN); a major in Construction Engineering (CEMA) is available for students pursuing that degree. Students may choose a major in Electrical Engineering (ELEN) or Computer Engineering (COEN). The major designation will appear on the student’s official transcript and the diploma.

Students may also elect to pursue a minor program in any of the above areas other than their major. The college will identify minors (i.e. Mathematics, Business Administration) which have been completed, if the candidate for a degree requests, by filing the Minor Declaration form, that the minor(s) be identified on the student’s official transcript. This minor designation refers only to those that are identified by the various departments and colleges as published in this bulletin.

The request for minor designation will be included on the degree application form to be completed at the beginning of the final semester in school by the deadline appearing in the Academic Calendar, although the curriculum planning to meet this objective must be carefully coordinated beforehand. Minor Declaration forms are available in the Marquette Central academic forms website (http://www.marquette.edu/mucentral/registrar/policy_forms.shtml).

**Degree Requirements**

All engineering students must successfully complete the curriculum prescribed in the Undergraduate Bulletin by the college at the time they are admitted or readmitted as degree candidates. This includes the requirements of the minimum number of degree hours earned, all required courses and an approved elective program, a C (2.000) average in all Marquette credits applied toward the degree, and a C (2.000) average in all Opus College of Engineering courses. A minimum of 60 credits must be taken at Marquette University. The final 30 credits must be taken at Marquette University or in an approved study abroad program unless given prior approval from the Office of the Provost. The 32 credit hours of upper division course work must be taken at Marquette University. At least 15 credit hours of course work in the major must be completed at Marquette University.

The following conditions apply under special circumstances:

1. If all degree credit is earned in continuous study in engineering at Marquette, the fulfillment of all degree requirements is normally straightforward. Students making an inter-college curriculum change will have credits earned in a previous curriculum allocated to the new curriculum by the Office of Academic Affairs through consultations with the appropriate department chair or his/her designate.

2. Students who are readmitted to their program after an absence of two or more consecutive terms, are obliged to follow the curriculum in effect at the time of readmission or more directly they must complete the courses prescribed by their department at the time of readmission. Normally, this will be defined in concert with the Director of Student Studies and Records in consultation with department chair or his/her designate.

3. Transfer students coming into engineering degree programs will have their previous credits evaluated and applied toward the specific engineering degree they are pursuing, at the time of admission.

4. A student may elect to repeat courses at Marquette using the Course Repeat (p. 72) policy. The repeated course grade will be used in the computation of the GPA. The first grade will be removed from the GPA. The original grade will remain on the student’s record. Students must complete and submit a Request to Repeat an Undergraduate Course form. Note: For Opus College of Engineering students, the Course Repeat cannot be used more than five times throughout their career.

5. Credit/No Credit (CR/NC), Satisfactory/Unsatisfactory (S/U) grades do not affect the students GPAs, only degree hours earned. The same rule applies to credit added through Advanced Placement programs, Credit by Examination and CLEP exams.
6. Any variation from standard degree requirements must be accompanied by approved Curriculum Substitution and/or Allowance Request forms, which are available on the Engineering Academic Advising Center (http://www.marquette.edu/engineering/academic-advising-center) website.

**Discrimination**

Marquette University does not discriminate on the basis of race, color, religion, sex, national origin or handicap in its educational programs or activities including employment and admissions. Federal laws prohibit such discrimination.

**Electives**

The following are general definitions for determining the category in which an elective is placed.

**University Core of Common Studies (UCCS) Electives**

Students are required to take courses in nine knowledge areas which are grouped into three categories as shown below. Full details on UCCS requirements can be found on the UCCS Core website (http://www.marquette.edu/core).

- **Examining the World:**
  - Rhetoric: 6 credit hours
  - Mathematical Reasoning: 3 credit hours

- **Engaging the World:**
  - Individual and Social Behavior: 3 credit hours
  - Diverse Cultures: 3 credit hours
  - Literature/Performing Arts: 3 credit hours
  - Histories of Cultures and Societies: 3 credit hours

- **Evaluating the World:**
  - Science and Nature: 3 credit hours
  - Human Nature and Ethics: 6 credit hours
  - Theology: 6 credit hours

 Students pursuing an engineering major will, through the courses required in their major, satisfy the following five knowledge areas: Rhetoric, Mathematical Reasoning, Science and Nature, Human Nature and Ethics, and three of the requisite six credits in Theology.

The other four knowledge areas and the additional Theology requirement must be satisfied through the selection of appropriate electives. The knowledge areas of Individual and Social Behavior (ISB), Diverse Cultures (DC), History of Cultures and Societies (HCS), and Literature/Performing Arts (LPA) are known as the core electives. For an updated list of courses in each of the knowledge areas, please refer to the list maintained on the UCCS website (http://www.marquette.edu/core-of-common-studies).

The four-year plans for the BIOC, BIOE, BIOM, CEMA, CIEN, and ENEN majors specify three core electives. This is because the four-year plans assume that one of the three core electives will be a Dual-Application course. If a student in one of these programs does not complete a dual-application course to satisfy core requirements, a fourth core elective will be required and degree Refer to the University Core of Common Studies section of this Bulletin for information about dual application courses.

**Technical Electives**

Any course in which tool or skill information makes up the prime substances: e.g., surveying, industrial organization, accounting, business law, as approved for their major. For further details on appropriate technical electives refer to the Undergraduate Bulletin for the particular major.

**Credit/No Credit (CR/NC) Grading Option**

Courses taken under CR/NC Option may not be required courses or courses within the student’s specified major. In other words, department electives or any required course in a student’s major may not be taken by students in that department under CR/NC provisions.

Only one such pass-fail course can be taken each semester, with a maximum of four total for graduation. Co-op credit does not count toward this total.

For more information, see the university policy in this bulletin or visit the Marquette Central website (http://www.marquette.edu/mucentral/registrar/policy_cr_nc_option.shtml).

**Grade Appeals**

Any student may consult the instructor about the grades he/she receives for work done. The exercise of this right neither requires a fixed procedure nor is it subject to procedural conditions. Grades that may be contested under these procedures are any final grades, that is, any grade received upon the completion of a semester. Normally no formal procedure of appeal will be given consideration if the documents are submitted later than the final day
officially scheduled for the removal of incompletes, approximately four weeks after the beginning of the regular academic semester immediately following the term in which the grade was assigned.

1. The student must first consult with the instructor to determine the reasons for the grade. When there are special circumstances, the chair of the department may waive the consultation with the instructor.

2. When the student is not satisfied with the reasons given by the instructor, he may present his case in writing to the chair of the department. The student should present all evidence of his performance and may request that all other pertinent materials be supplied by the instructor.

3. When the chair has examined the appeal and after consultation with the instructor, he/she will:
   1. inform the student that no further departmental action is to be taken, or
   2. call a committee to review the appeal.

4. The chair will appoint a committee of three regular members of the department. The chair may appoint himself/herself to such a committee.

5. The committee may proceed from written evidence or may consult the instructor and/or the student according to its judgment.

6. The committee shall give one of three decisions:
   1. that the grade given will remain.
   2. that the instructor reconsider the grade in light of what the committee discovered and that the instructor’s reconsidered grade will stand.
   3. that the committee recommends a change of grade to the Associate Dean for Academic Affairs of the college.

7. The decision of the committee shall be the final action inside the department and any appeal beyond the department is made to the dean of the college which offered the course.

Military Duty

The Opus College of Engineering has implemented the following policy which has been approved by the Office of the Provost and the Business Office regarding the activation of students to serve on active military service.

1. Up to the mid-term of a semester - a grade of W will be assigned for all courses being taken and a full tuition refund will be made.

2. Between the mid-term and the last day to withdraw with a W grade - W grades will be assigned, no tuition refund will be made but the student will be permitted to retake the courses upon return to Marquette from military service without tuition charge.

3. During the last two weeks of the semester -
   1. With the consent of the instructor and the student, letter grades may be assigned based on the student’s performance in the courses.
   2. A second option, based on the judgment of the instructors and agreed to by the student an I grade may be assigned. The student would then have to complete these courses during the first semester after returning to Marquette from military service to receive a grade. No refund will be made. The student could also decide upon returning to Marquette to retake the entire course/s without tuition charge.
   3. The final option is to assign W grades with no refund given. The student would be permitted to retake the courses upon returning to Marquette without a tuition charge.

The student has the responsibility of contacting the college office to inform them of the situation and if possible, the length of time that he/she will be gone. Because the student will ordinarily have only 24-48 hours to complete arrangements before reporting for duty, it will be the responsibility of the college office to insure that the student's instructors, the offices of the Bursar, the Student Financial Aid and the Registrar are informed of the grade/refund decision in each individual case.

Learning Disabilities Services

The Opus College of Engineering also cooperates with Marquette and the Coordinator of Disability Services in upholding the following statement:

In the spirit of Marquette’s commitment to cura personalis -- care for the whole person -- Marquette offers university-wide services for students with learning disabilities (LD). LD services include referrals for diagnostic testing, tracking of the academic progress of students with learning disabilities, a Student Guide providing basic directions for students with learning disabilities, and further information and practical advice for faculty and advisers.

The Office of Academic Affairs will coordinate with the Office of Disability Services (ODS) any actions taken, accommodations allowed, or services provided to a given student. If an instructor is contacted by a student who wishes that his/her disability be accommodated, the instructor should contact the Associate Dean for Academic Affairs for proper verification. Normally the instructor will be contacted by the associate dean and/or ODS and informed of learning disabled students possible difficulties on an individual case by case basis.

Basic information about learning disabilities can be obtained from the Office of Disability Services website (http://www.marquette.edu/oses) or contacting the office at 414-288-1645.

Faculty and advisers are urged to inform themselves about learning disabilities, to be alert to warning signs of learning disabilities in their advisees, and to refer any student suspected or known to be learning disabled to the Office of Disability Services for further assistance.
Repeating Courses
A student may repeat any course he/she has taken subject to college and university limitations. The motive may be to satisfy the requirement of a better grade, or to gain a better working knowledge of the topic. Some departments may require that a specific grade level be achieved prior to enrolling in successive course work.

Under the Course Repeat policy, students may repeat courses before graduation. The latest repeated course grade will be used in the computation of the GPA and the student will receive degree credit only once.

Advisers should be aware of the Course Repeat policy and recommend it to their advisees if it would be in a student’s best interest to engage this privilege rather than suffer the punitive consequences of a low grade. These consequences can be in loss of college standing, loss of eligibility for financial aid including scholarships and grants, and others.

Note: For Opus College of Engineering students, the Course Repeat Option cannot be used more than five times throughout their career. As per University policy, a student may repeat a course which has earned a passing grade only once. See the University Repeated Courses Policy (p. 72) for more information.

Senior Year Course Plan Review
It is the responsibility of students to know the requirements for their chosen major and minor as specified in the Undergraduate Bulletin and to keep track of their progress toward degree completion. Although it is assumed that each student and adviser keeps an accurate record of the degree progress of all advisees, one check point in particular becomes a matter of college policy.

Each student is required to submit to the Engineering Academic Advising Center a "Senior Year Course Plan Review" no later than May 1 in the year preceding his/her final academic year. This form is available on the college website (http://www.marquette.edu/engineering).

Sexual Harassment
The Opus College of Engineering shall adhere and cooperate with the following University Statement of Policy.

As Marquette University is committed to maintaining an environment in which the dignity and worth of each member of its community are respected, it is a policy of the University that sexual harassment of students and employees will not be tolerated and will be subject to appropriate disciplinary action.

Sexual harassment is a form of sex discrimination. Sexual harassment by or of either sex is prohibited by state and federal anti-discrimination law. It is defined as any unwelcome sexual advances, requests for sexual favors, and other verbal and physical conduct of a sexual nature. In the University context, it includes instances when such conduct is indicated to be a term or condition of an individual’s academic or employment experience, used as a basis for academic and employment decisions, interferes with an individual’s academic or employment performance, or creates an intimidating, hostile, or offensive academic or employment environment.

Even consensual relationships may lead to or derive from potentially exploitative circumstances. Any exploitation of the trust inherent in Marquette’s institutional context is abhorred. Of course, non-exploitative attachments also can develop in such relationships. But given the potential for exploitation or favoritism by even the well-meaning, the individual faculty or staff person carries the burden to disengage from, or otherwise neutralize, any relationships which hold potential for exploitation or favoritism.

This applies whether the relationship involves students or staff colleagues. Anyone finding him/herself in such a situation should seek guidance and assistance as needed from University personnel, with the objective of neutralizing any exploitative potential. Failure to neutralize any such potential of any such relationship can constitute grounds for disciplinary actions up to and including termination for all classifications of University employee.

It shall be a violation of University policy for anyone, student, faculty or staff, to engage in any form of sexual harassment or to retaliate against a person who has initiated an inquiry or complaint.

Any student with a complaint should contact the Dean of Students or his/her academic dean or director.

Any employee with a complaint concerning students or employees should contact his/her immediate supervisor. If the complaint is with the supervisor, the employee should contact the supervisor’s immediate superior.

Any student or employee may also contact the Director of Affirmative Action for counseling and assistance.

The right to confidentially of any party involved, including the complainant and the accused, will be respected insofar as it does not interfere with the University’s obligation to investigate allegations of misconduct and to take corrective action where appropriate.

Simultaneous Enrollment in Two Academic Programs
Credit for courses pursued at another educational institution while simultaneously enrolled at Marquette (concurrent registration) will not be allowed unless specifically authorized by the dean.
Expanding on this policy declaration the following justifications and qualifications are added:

The Opus College of Engineering believes it is academically essential to know and monitor the aggregate academic load of all degree students and to guard against situations that adversely affect the overall student performance.

The college will permit simultaneous registration providing:

1. an equivalent course is not available at Marquette, and
2. the student has prior written permission regarding course selection from his/her adviser and has successfully petitioned the Associate Dean for Academic Affairs prior to the start of the classes.

Student action outside of these policy guidelines may jeopardize transfer credit allowance.

**Undergraduate Independent Study**

Provisions exist on a limited basis for junior and senior students to engage in independent study under the approved direction of a faculty member. Students wishing to avail themselves of this option should obtain the faculty director's approval as well as the department chairman's concurrence. "Independent Study Reading and Research Contract" forms for such course approval are available through the Engineering Academic Advising Center (http://www.marquette.edu/engineering/academic-advising-center) page of the college website.

The independent study program is primarily intended to provide enrichment. However, it may be utilized on a limited and approved basis to complete deficiencies when no other course of action is available.

A 3.000 or higher GPA is normally required to participate in the program. Documentation on the contract's satisfactory fulfillment should be on file in the department office and with the college office of academic affairs.

**Other Opus College of Engineering Policies**

For additional information on Opus College of Engineering policies, refer to the college website (http://www.marquette.edu/engineering/students.shtml).
Special Programs

The Cooperative Education Program

The Cooperative Education Program (co-op) was established at Marquette University in 1919. The program combines in-the-field work experience with the academic program degree requirements for Opus College of Engineering students. Students in this program alternate periods of academic semesters with periods of employment in industry. The industry work experience is technical in nature and provides the opportunity for the student to apply their engineering knowledge and skills. The objective is balanced training; the combination of theory and practical work experience during the early years of professional development. In addition to the formal co-op program, undergraduates may also gain experience through summer internships.

Co-op employment is competitive and available for all engineering majors. All students employed in the co-op program earn a significant hourly salary; this offsets the cost of tuition and living expenses for those students who participate. Students who complete the minimum requirement of three work terms will earn enough academic credit to fulfill an engineering technical elective for their program degree requirements. Most engineering students participate in the co-op and/or internship program prior to graduation.

Student participants have said that the program helps them to clarify their career goals, increase their performance and engagement in the classroom by using their knowledge of industry, form their professional network, and open doors to secure full-time employment once they earn their degree. Students also develop the maturity, poise, communication skills and confidence needed to thrive in a business environment.

Enrollment and participation in the Co-op Program requires that:

1. The student is a full-time, degree-seeking student in the Opus College of Engineering at Marquette University.
2. The student is making satisfactory progress toward his/her engineering degree and has completed their sophomore-level course work.
3. Students must maintain a minimum GPA of 2.000 or greater to be eligible for and to remain enrolled in the co-op program.
4. The student has taken and passed GEEN 2952 Professional Development for Engineers.
5. The student is able to obtain a co-op job offer from an employer who is approved by the College's Industry Relations Office.
6. The student reports the employment offer to the Opus College of Engineering's Industry Relations Office and follows the co-op enrollment procedure, co-op course registration requirements and satisfies the requirements to earn credit for their work term.
7. The employer, the student and the student's academic adviser agree to a work/school plan that satisfies all degree requirements and the completion of at least three work terms.
8. International students must work with Marquette University’s Office of International Education to complete the required employment processes prior to their first day of employment as a co-op employee.

Since the cooperative education program is considered an integral part of a student’s education, the co-op student is a full-time student at Marquette University; whether he/she is in school or at work. When the co-op student is at work, he/she is under the company’s direct supervision. The student is subject to the rules of the company which may include background checks and/or drug screening. Wages are paid directly to the student. The university does not employ the student but cooperates with industry in arranging such employment.

The Les Aspin Biomedical Internships

The Department of Biomedical Engineering in conjunction with the Les Aspin Center for Government at Marquette University offers internships in medical regulatory and public policy issues. The Les Aspin Biomedical Engineering Internships began in Spring 1997 with qualified biomedical engineering undergraduates traveling to Washington, D.C. The venue for the engineering internships is Capitol Hill, the Food and Drug Administration or private industry located in the Washington, D.C., area. In addition to participating in the internship experience, the students take Marquette University classes at the Les Aspin Center for Government, located a few blocks from Capitol Hill, and reside nearby in Marquette-owned, furnished apartments. This program is unique in providing undergraduate experience in research and regulatory issues.

Study Abroad Programs

Engineering students may study abroad with a Marquette-affiliated program, a Marquette-exchange program, a Marquette summer or intersession program or a non-Marquette program. Students are urged to contact the office of the assistant dean for academic affairs as early as possible for details. See also, this bulletin under Study Abroad Programs. The Office of International Education Study Abroad Resource Center is located in the Holthusen Hall, 4th Floor. For additional information, see the Study Abroad website (http://www.marquette.edu/abroad). Also see Concentration in Global Engineering in the Concentrations and Minors (p. 558) section of this bulletin.

Five-year Combined B.S./M.S. Programs

Each of the departments in the Opus College of Engineering at Marquette University offers programs, which allow highly qualified students to complete a bachelor of science and master of science degree in five calendar years (six years for students enrolled in the Cooperative Education Program). By
increasing course loads slightly in the junior year and/or by taking courses in the summer of the junior and/or senior years, qualified students may be
able to complete the B.S. degree on schedule in four years and the M.S. degree at the end of five calendar years.

Students intending to pursue one of these programs should begin planning at the end of the sophomore year. Formal application to the program takes
place during the second term of the junior year. See individual departments for details.
Student Organizations

Engineering Student Council

Engineering students are eligible for membership in the Engineering Student Council, composed of the elected officers and one member of the governing board of each activity, fraternal, honorary and professional organization within the Opus College of Engineering.

Honor Societies

Engineering students are eligible for membership in the following engineering honor societies: Tau Beta Pi, all-engineering; Chi Epsilon, civil engineering; Eta Kappa Nu, electrical engineering; Pi Tau Sigma, mechanical engineering; Alpha Eta Mu Beta, biomedical engineering; and Upsilon Pi Epsilon, computer engineering. Each year, these societies award membership keys to men and women exhibiting high promise of success.

Professional Fraternities/Sororities

Students in the Opus College of Engineering are eligible to join the following professional fraternities on campus: Sigma Phi Delta, international professional engineering fraternity; Triangle, national fraternity for engineers, architects, and scientists; Alpha Omega Epsilon, professional engineering sorority; and Engineering Knights of St. Patrick, engineering service society.

Professional Societies

Student chapters have been established by the American Society of Civil Engineers, Builders Coalition of MU: Student Chapter of Associated General Contractors of America, the Institute of Electrical and Electronics Engineers, the American Society of Mechanical Engineers, Association of Computing Machinery, the Society of Automotive Engineers, National Society of Black Engineers, Engineers Without Borders, the Society of Hispanic Professional Engineers, the Society of Women Engineers, the Institute of Transportation Engineers, American Society for Quality Control, the Biomedical Engineering Society, the Solar Energy Society and the Society of Manufacturing Engineers.
Department of Biomedical Engineering

Interim Department Chair: Lars E. Olson, Ph.D.

Department of Biomedical Engineering website (http://www.marquette.edu/engineering/biomedical)

The Department of Biomedical Engineering offers curriculum that leads to a bachelor of science degree in biomedical engineering. Within this one degree, there are three major options: Biocomputing, Bioelectronics, and Biomechanics.

The boards of trustees of Marquette University and Medical College of Wisconsin have approved the creation of the Marquette and MCW Department of Biomedical Engineering which will bring together the engineering education and research expertise of Marquette and the medical research, technology and clinical expertise of MCW to provide an inclusive education model for the next generation of engineers, scientists and physicians. The new department will officially launch on July 1, 2016. Click here (http://mcw.marquette.edu) for link to joint department website with more information.

Mission

The Department of Biomedical Engineering is a dedicated team committed to the Jesuit tradition of the pursuit of truth. We develop leaders and problem solvers skilled at applying engineering, science and design principles to improve health in the service of humanity by:

- Discovering and disseminating new knowledge.
- Guiding students to meaningful and ethical professional and personal lives.
- Fostering interdisciplinary and collaborative research and education through academic and industrial alliances.
- Continuing innovative leadership in education, research and industrial relationships.
- Inspiring faculty and students to serve others.

Studies in biomedical engineering incorporate courses in biology, chemistry, mathematics, computing and engineering. These courses, in combination, emphasize the interdisciplinary elements of biomedical engineering not presently offered in the more traditional departments of engineering. A solid foundation in the mathematical, physical and life sciences is necessary for the engineer to function effectively in a medically or biologically oriented problem solving environment. In this environment, the engineer needs to be able to communicate with physicians, to describe and model complex biological systems, to collect and analyze experimental or clinical data, to understand the capabilities and limitations of sophisticated instrumentation and to understand the principles of design.

There are three majors in the biomedical engineering curriculum: biocomputing, bioelectronics and biomechanics. The bioelectronics major includes rigorous training in electrical engineering within the interdisciplinary framework of the curriculum. Such training, which includes courses in electric circuits and analog and digital electronics, supports interests focused on the measurement of bioelectric signals and biomedical instrumentation design. In the senior year, the culmination of the training features intensive bioelectric instrument design and computer laboratories emphasizing modern bioelectric applications. In addition, a senior year capstone design course sequence places the student in a multidisciplinary design team situation to solve an actual industrial bioelectric engineering design problem.

The biomechanics major includes rigorous training in mechanical engineering within the interdisciplinary framework of the curriculum. Such training, which includes courses in materials and solid mechanics, supports interests focused on the application of biomechanics and biomaterials. In the senior year, the culmination of the training features intensive biomedical instrument design and computer laboratories emphasizing modern biomechanical applications. In addition, a senior-year capstone design course sequence places the student in a multidisciplinary design team situation to solve an actual industrial biomechanical or biomaterial design problem.

The biocomputer engineering curriculum integrates computer engineering and the life sciences, with a solid foundation in mathematics, physics, chemistry and engineering methods. The new curriculum combines foundational computer engineering knowledge with biocomputer engineering applications, integrating biology, physiology, medicine, biomedical software design, biosignal processing, bioinstrumentation. In the senior year, the training culminates with a comprehensive, biocomputer engineering, design laboratory experience that incorporates engineers from industry and emphasizes medical device design and methods for biomedical informatics. In addition, a senior capstone design course places students in a multidisciplinary team working with industry to solve biocomputer design problems.

All majors in biomedical engineering have been designed to be compatible with other programs offered by the Opus College of Engineering. Each major fulfills the requirements of the University Core of Common Studies. The biomechanical and bioelectronics majors require 134 credits for graduation. The biocomputing major requires 135 credits for graduation. Students can earn an optional minor in either electrical or mechanical engineering as well as biology, chemistry, business administration or others. In addition, the majors retain many of the core courses of the initial two years and allow the student to elect the co-op/internship program. Since the majors satisfy the entrance requirements of many professional schools, the student can, usually without additional preparation, pursue studies in medical school, dental school, schools of veterinary medicine, law school and graduate schools in biomedical engineering or traditional areas of engineering.

The Department of Biomedical Engineering operates biomedical image and signal processing laboratories, biocomputer, bioelectronic and biomechanical design laboratories, and students have access to computer, electrical and mechanical engineering laboratories as well as the college and university computer facilities. In addition, collaborative programs exist between Marquette University, the Medical College of Wisconsin, the Milwaukee County Medical Complex, Froedtert Memorial Lutheran Hospital, and the Zablocki Veterans Administration Medical Center. These proximate
collaborative research programs, some active for three decades, provide a uniquely enhanced laboratory experience that has significantly contributed to the success of biomedical engineering at Marquette.

**Educational Objectives**

To provide an educational program that will prepare graduates to:

- Participate as a technical contributor and member of a design and/or development team.
- Communicate effectively with individuals and teams with a wide variety of backgrounds.
- Pursue professional or graduate degrees or employment in the biomedical industry.
- Understand the legal, ethical, economic and regulatory requirements of medical device design and biomedical engineering research.
- Define, solve and implement solutions to a problem.
- Progress in developing leadership skills.
- Identify limitations in their own knowledge base and skills and engage in lifelong learning.

**Non-Biomedical Engineering Minors**

Biomedical engineering students can earn minors in a wide variety of areas including computer engineering, electrical engineering, mechanical engineering, biology and chemistry. Interested students should consult with their academic adviser and refer to the appropriate section of the Undergraduate Bulletin for specific minor requirements. Students wishing to achieve a minor in a non-engineering minor should follow the guidelines listed in the “Concentrations and Minors” section of the Opus College of Engineering bulletin.

**Five Year B.S./M.S. Program**

This program allows students to receive a bachelor of science degree and a master of science degree in biomedical engineering in five years. Students with grade point averages (3.500 or above) apply to the program during their junior year. They begin their thesis research the summer between their junior and senior years. Their research laboratory experience continues the summer between their senior and fifth years and throughout their fifth year, culminating in the preparation of a written thesis and defense.

**Biocomputing Major**

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### Sophomore

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### Hours

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### Junior

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**Total credit hours:** 18

### Senior

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**Total credit hours:** 18

**Total credit hours: 132**

For footnotes b, c, d, e, f refer to the Opus College of Engineering section of this bulletin for details related to these footnotes.

1. Biomedical Engineering Electives — The following is a list of electives typically taken by biomedical engineering students. This list is not inclusive. A total of 6 credit hours of BIEN Electives are required. Other possible electives include upper division courses in MATH, BIOL, PHYS, CHEM, EECE, MEEN, COEN and related subject areas. These courses can be taken if approved by the adviser, department chair and associate dean through a course substitution form. Medical school bound students are strongly encouraged to take CHEM 2111 Organic Chemistry 1, CHEM 2112 Organic Chemistry 2 and BIOL 4101 Biochemistry and the Molecular Basis of Biology as electives.

- BIEN 4230 Intelligent Biosystems 3
- BIEN 4400 Transport Phenomena 3
- BIEN 4410 Applied Finite Element Analysis 3
- BIEN 4420 Biomaterials Science and Engineering 3
- BIEN 4500 Medical Imaging Physics 3
- BIEN 4510 Image Processing for the Biomedical Sciences 3
- BIEN 4600 Neural Engineering 3
- BIEN 4610 Introduction to Rehabilitation Robotics 3
- BIEN 4620 Rehabilitation Science and Engineering 3
- BIEN 4630 Rehabilitation Engineering: Prosthetics, Orthotics, Seating and Positioning 3
- BIEN 4640 Bioengineering of Living Actuators 3
- BIEN 4710 Analysis of Physiological Models 3
- BIEN 4720 Cardiopulmonary Mechanics 3
- BIEN 4931 Topics in Biomedical Engineering 1-3
- BIEN 4995 Independent Study in Biomedical Engineering (GPA>3.0) 1-4
- ELEN 3110 Electromagnetic Fields 1 3
- ELEN 3120 Electromagnetic Fields 2 3
- ELEN 3025 Electrical Instrumentation Laboratory 2
- ELEN 3035 Analog Electronics Laboratory 2
- EECE 2710 Introduction to Computer Hardware and Software 3
COEN 4650  Introduction to Algorithms  3
COEN 4620  Modern Programming Practices  3
COEN 4810  Database Applications  3
CEEN 2130  Mechanics of Materials  3
MEEN 3310  Thermodynamics 1  3
MEEN 3330  Fundamentals of Heat Transfer  3
MEEN 3250  Design of Machine Elements 1  4
MEEN 4240  Polymers and Polymer Composites  3
MEEN 4420  Failure Analysis  3
BIOL 4101  Biochemistry and the Molecular Basis of Biology  3
BIOL 3702  Experimental Physiology  3
CHEM 2111  Organic Chemistry 1  4
CHEM 2112  Organic Chemistry 2  4
MATH 2450  Calculus 3  4
MATH 4630  Mathematical Modeling and Analysis  3

2. Students who place out of MATH 1450 Calculus 1 through advanced placement are encouraged to take MATH 1451 Calculus 2 and MATH 2450 Calculus 3 in place of MATH 1450 Calculus 1 and MATH 1455 Calculus 2 for Biomedical and Civil Engineers.

**Note:** The three Core electives specified in this program assume that one of these Core electives is a Dual Application core course. If a Dual Application Core elective is not taken, an additional Core elective is required and the total credit hours increases to 135.

### Bioelectronics Major

#### Freshman

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16 16

#### Sophomore

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17 18

#### Junior

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Total credit hours: 132

For footnotes b, c, d, e, f refer to the Opus College of Engineering section of this bulletin for details related to these footnotes.

1. Biomedical Engineering Electives — The following is a list of electives typically taken by biomedical engineering students. This list is not inclusive. A total of 9 credit hours of BIEN Electives are required. Other possible electives include upper division courses in MATH, BIOL, PHYS, CHEM, EECE, MEEN, COEN and related subject areas. These courses can be taken if approved by the adviser, department chair and associate dean through a course substitution form. Medical school bound students are strongly encouraged to take CHEM 2111 Organic Chemistry 1, CHEM 2112 Organic Chemistry 2 and BIOL 4101 Biochemistry and the Molecular Basis of Biology as electives.

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<td>Intelligent Biosystems</td>
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<td>Applied Finite Element Analysis</td>
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<td>BIEN 4420</td>
<td>Biomaterials Science and Engineering</td>
<td>3</td>
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<td>BIEN 4500</td>
<td>Medical Imaging Physics</td>
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<td>BIEN 4931</td>
<td>Topics in Biomedical Engineering</td>
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MEEN 4240  Polymers and Polymer Composites  3  
MEEN 4420  Failure Analysis  3  
BIOL 3702  Experimental Physiology  3  
BIOL 4101  Biochemistry and the Molecular Basis of Biology  3  
CHEM 2111  Organic Chemistry 1  4  
CHEM 2112  Organic Chemistry 2  4  
MATH 2450  Calculus 3  4  
MATH 4630  Mathematical Modeling and Analysis  3  

2. Students who place out of MATH 1450 Calculus 1 through advanced placement are encouraged to take MATH 1451 Calculus 2 and MATH 2450 Calculus 3 in place of MATH 1450 Calculus 1 and MATH 1455 Calculus 2 for Biomedical and Civil Engineers. MATH 2450 Calculus 3 will count as a BIEN elective.

Note: The three Core electives specified in this program assume that one of these Core electives is a Dual Application core course. If a Dual Application Core elective is not taken, an additional Core elective is required and the total credit hours increases to 135.

**Biomechanics Major**

**Freshman**

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**Sophomore**

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**Junior**

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### Department of Biomedical Engineering

#### Senior

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| Total Credit Hours: 132 |

For footnotes b, c, d, e, f refer to the Opus College of Engineering section of this bulletin for details related to these footnotes.

1. Biomedical Engineering Electives — The following is a list of electives typically taken by biomedical engineering students. This list is not inclusive. A total of 9 credit hours of BIEN Electives are required. Other possible electives include upper division courses in MATH, BIOL, PHYS, CHEM, EECE, MEEN, COEN and related subject areas. These courses can be taken if approved by the adviser, department chair and associate dean through a course substitution form. Medical school bound students are strongly encouraged to take CHEM 2111 Organic Chemistry 1, CHEM 2112 Organic Chemistry 2 and BIOL 4101 Biochemistry and the Molecular Basis of Biology as electives.

| BIEN 4220 | Embedded Biomedical Instrumentation | 3 |
| BIEN 4230 | Intelligent Biosystems | 3 |
| BIEN 4410 | Applied Finite Element Analysis | 3 |
| BIEN 4420 | Biomaterials Science and Engineering | 3 |
| BIEN 4500 | Medical Imaging Physics | 3 |
| BIEN 4510 | Image Processing for the Biomedical Sciences | 3 |
| BIEN 4600 | Neural Engineering | 3 |
| BIEN 4610 | Introduction to Rehabilitation Robotics | 3 |
| BIEN 4620 | Rehabilitation Science and Engineering | 3 |
| BIEN 4630 | Rehabilitation Engineering: Prosthetics, Orthotics, Seating and Positioning | 3 |
| BIEN 4640 | Bioengineering of Living Actuators | 3 |
| BIEN 4710 | Analysis of Physiological Models | 3 |
| BIEN 4720 | Cardiopulmonary Mechanics | 3 |
| BIEN 4931 | Topics in Biomedical Engineering | 1-3 |
| BIEN 4995 | Independent Study in Biomedical Engineering (GPA>3.0) | 1-4 |
| MEEN 3330 | Fundamentals of Heat Transfer | 3 |
| MEEN 3250 | Design of Machine Elements 1 | 4 |
| MEEN 4240 | Polymers and Polymer Composites | 3 |
| MEEN 4420 | Failure Analysis | 3 |
| COEN 4620 | Modern Programming Practices | 3 |
| COEN 4650 | Introduction to Algorithms | 3 |
| COEN 4810 | Database Applications | 3 |
| ELEN 3110 | Electromagnetic Fields 1 | 3 |
| ELEN 3120 | Electromagnetic Fields 2 | 3 |
| ELEN 3025 | Electrical Instrumentation Laboratory | 2 |
| ELEN 3035 | Analog Electronics Laboratory | 2 |
| EECE 2710 | Introduction to Computer Hardware and Software | 3 |
| BIOL 3702 | Experimental Physiology | 3 |
| BIOL 4101 | Biochemistry and the Molecular Basis of Biology | 3 |
| CHEM 2111 | Organic Chemistry 1 | 4 |
| CHEM 2112 | Organic Chemistry 2 | 4 |
| MATH 2450 | Calculus 3 | 4 |
MATH 4630  Mathematical Modeling and Analysis  3

2. Students who place out of MATH 1450 Calculus 1 through advanced placement are encouraged to take MATH 1451 Calculus 2 and MATH 2450 Calculus 3 in place of MATH 1450 Calculus 1 and MATH 1455 Calculus 2 for Biomedical and Civil Engineers.

3. Mechanical Engineering Electives - Students may choose from the following list of courses. If not used as an Mechanical Engineering elective, any of these courses may be used as a Biomedical Engineering Elective.

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<td>MEEN 3250</td>
<td>Design of Machine Elements 1</td>
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<tr>
<td>MEEN 3260</td>
<td>Numerical Methods of Mechanical Systems</td>
<td>3</td>
</tr>
<tr>
<td>MEEN 3460</td>
<td>Materials Selection in Mechanical Design</td>
<td>3</td>
</tr>
<tr>
<td>MEEN 4220</td>
<td>Intermediate Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>MEEN 4230</td>
<td>Intermediate Mechanics of Materials</td>
<td>3</td>
</tr>
<tr>
<td>MEEN 4240</td>
<td>Polymers and Polymer Composites</td>
<td>3</td>
</tr>
<tr>
<td>MEEN 4330</td>
<td>Optics, Lasers and Spectroscopy in Engineering</td>
<td>3</td>
</tr>
</tbody>
</table>

Note: The three Core electives specified in this program assume that one of these Core electives is a Dual Application core course. If a Dual Application Core elective is not taken, an additional Core elective is required and the total credit hours increases to 135.

Biomedical Engineering Minor

The Department of Biomedical Engineering offers a minor in biomedical engineering to all undergraduate students in the university except those students in biomedical engineering. Completion of the minor will be noted on the student’s transcript if the following requirements are met: Twenty-two hours consisting of:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIEN 2300</td>
<td>Biomedical Circuits and Electronics</td>
<td>4</td>
</tr>
<tr>
<td>BIEN 3200</td>
<td>Computer Applications in Biomedical Engineering</td>
<td>3</td>
</tr>
<tr>
<td>BIEN 3300</td>
<td>Signals and Systems for Biomedical Engineering</td>
<td>3</td>
</tr>
<tr>
<td>BIEN 4320</td>
<td>Biomedical Instrumentation Design</td>
<td>3</td>
</tr>
<tr>
<td>BIEN 4400</td>
<td>Transport Phenomena</td>
<td>3</td>
</tr>
<tr>
<td>BIEN 4700</td>
<td>Systems Physiology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 1001</td>
<td>General Biology 1</td>
<td>3</td>
</tr>
<tr>
<td>or equivalent</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Credit Hours 22

At least half of these credit hours must be taken at Marquette University.

Courses

BIEN 1100. Introduction to Biomedical Engineering Methods 1. 2 cr. hrs.
Introduction to biomedical engineering design and problem solving using. Key elements include physiologic signals and data acquisition, instrumentation, graphics, measurement and error, teamwork and decision-making. Problem-solving elements will be applied to real-world biomedical problems introduced by practicing biomedical engineers as well as faculty.

BIEN 1110. Introduction to Biomedical Engineering Methods 2. 2 cr. hrs.
Continuation of BIEN 1100. Key elements include modeling, fluid mechanics, rehabilitation engineering, and entrepreneurship. Problem-solving and design elements are applied to real-world biomedical problems introduced by practicing biomedical engineers as well as faculty. Prereq: BIEN 1100.

BIEN 1120. Introduction to Computing for Biomedical Engineers. 2 cr. hrs.
Introductory hands-on experience in computer programming, MATLAB, and Solid Modeling and CAD for biomedical engineers. Involves learning linear programming in C and creating flow-charts to solve biomedical applications. Computing topics will include syntax, data types, control flow and algorithm development. Biomedical applications include analyzing physiological signals, biological event detection, and biomechanical analysis. Students learn how to use MATLAB to solve biomedical applications. Solid modeling and CAD will be studied in the context of biomedical engineering design. Laptop required.

BIEN 2100. Statistics for Biomedical Engineering. 1 cr. hr.
Numerical and graphical summary of biomedical data and the use of statistics in problem solving for a variety of case studies in biomedical research, medical device design and clinical trials. Prereq: MATH 1450.

BIEN 2300. Biomedical Circuits and Electronics. 4 cr. hrs.
An experience in electrical circuits (AC and DC), electronic devices (Junction, Transistor, Operational, Amplifier) bridges, digital circuits and Boolean implementation, combinational and sequential logic, memories. Use of P-Spice software. Analysis and design. Prereq: PHYS 1004 or PHYS 1014.
BIEN 2400. Medical Device Design Constraints. 1 cr. hr.
Students learn about legal, ethical, regulatory, economic, environmental, cultural, and social constraints that affect the design of medical devices. Students identify relevant, applicable design constraints and understand the impact of these constraints on the design process and the project schedule. Prereq: Soph. stndg. BIEN major, or cons. of instr.

BIEN 3200. Computer Applications in Biomedical Engineering. 3 cr. hrs.
Design and implement computer techniques for the acquisition and analysis of biomedical data and the modeling of physiologic phenomena. Emphasis on physiological data acquisition, statistical description of physiological data, time domain and frequency domain methods for physiological signal conditioning and processing and numerical methods for quantitative interpretation of physiological data using C programming language. Prereq: BIEN 1120 or equiv.

BIEN 3300. Signals and Systems for Biomedical Engineering. 3 cr. hrs.
Mathematical models of continuous-time signals and systems are studied. The time domain viewpoint is developed for linear time invariant systems using the impulse response and convolution integral. The frequency domain viewpoint is also explored through the Fourier Series and Fourier Transform. Basic filtering concepts including simple design problems are covered. Application of the Laplace transform to block diagrams, linear feedback and stability including Bode plots are discussed. The sampling theorem, the z-transform and the Discrete Fourier Transform are introduced. Examples of electrical, mechanical and biomedical signals and systems are used extensively throughout the course. 3 hrs. lec. Prereq: One of the following: ELEN 2020 with minimum grade of C and MATH 2451; or BIEN 2300 with minimum grade of C and MATH 2451; or ELEN 2020 with minimum grade of C and MATH 2455; or BIEN 2300 with minimum grade of C and MATH 2455. BIEN 1120 or concurrent enrollment.

BIEN 3310. Control Systems for Biomedical Engineering. 3 cr. hrs.
Provides an introduction to the principles of control systems theory for biomedical engineers. Mathematical techniques to characterize and design control systems will be studied in the context of physiological, bioelectrical, biochemical and biomechanical systems. Topics include frequency and time-domain modeling of physiological control systems, feedback, stability, steady-state error, design, root-locus, state-space techniques, and nonlinear control. Simulation using MATLAB and Simulink will be used to provide hands-on experience in the design of biomedical control systems. Prereq: BIEN 3300.

BIEN 3400. Clinical Issues in Biomedical Engineering Design. 1 cr. hr.
Develops clinical literacy in areas including medical terminology, working with medical professionals, professional conduct in the clinical environment, operating room workflow, and the technical needs of surgeons, nurses, dentists, and others. Students observe procedures in the clinical environment and learn to listen, ask questions, and identify problems, unmet needs and opportunities for new product development. Students participate in field trips to obtain hands-on experience with various medical and dental devices. A project proposal for a new medical device or technology is required at the end of the course. Prereq: BIEN major and jr. stndg; or cons. of instr.

BIEN 3991. Co-op Work Period 1. 0 cr. hrs.
Registration for approved cooperative education program work assignments is required of all co-op students. Grading and credits are accomplished in the accompanying following term when registered for courses numbered 3991, 3992, etc. Fee. SNC/UNC grade assessment.

BIEN 3992. Co-op Grading Period 1. 1 cr. hr.
Grading for preceding co-op work assignments is accomplished by review of Employer Evaluation Forms, Work Exit Reports, and other materials as required during each term in school following a work period. A nominal fee is charged for registration for Work Periods. No tuition is charged for Grading Periods. S/U grade assessment.

BIEN 3993. Co-op Work Period 2. 0 cr. hrs.
Registration for approved cooperative education program work assignments is required of all co-op students. Grading and credits are accomplished in the accompanying following term when registered for courses numbered 3993, 3994 etc. Fee. SNC/UNC grade assessment.

BIEN 3994. Co-op Grading Period 2. 1 cr. hr.
Grading for preceding co-op work assignments is accomplished by review of Employer Evaluation Forms, Work Exit Reports, and other materials as required during each term in school following a work period. A nominal fee is charged for registration for Work Periods. No tuition is charged for Grading Periods. S/U grade assessment.

BIEN 4220. Embedded Biomedical Instrumentation. 3 cr. hrs.
Fundamentals of digital circuit design and analysis and the application to embedded biomedical instrumentation. Topics include microprocessor principles and programming and system design constraints for medical electronics. Laboratory will provide applications of concepts introduced in class. Prereq: BIEN 2300.

BIEN 4230. Intelligent Biosystems. 3 cr. hrs.
Use of emerging tools in systems biology and soft computing to explore how biosystems with highly distributed “intelligence” are designed to adapt to self- and environmentally-induced perturbations. Students obtain a basic understanding of key soft computing tools and use fuzzy expert system models. Applications to smart healthcare monitoring and future product design will be explored. Prereq: Jr. stndg. and BIEN 4700.

BIEN 4280. Biocomputers Design Lab 1. 3 cr. hrs.
Hands-on experience in software design and validation, microprocessors, computer architecture, real-time computing, embedded software, graphical user interface and networking. An emphasis on medical devices with embedded software and hardware. Prereq: BIEN 2300, BIEN 4220, BIEN 3300, and BIEN 3200.

BIEN 4290. Biocomputers Design Lab 2. 3 cr. hrs.
Continuation of BIEN 4280 with emphasis on high performance computing in workstation environments. Prereq: BIEN 4280.
BIEN 4320. Biomedical Instrumentation Design. 3 cr. hrs.
Problems in instrumentation relating to physiological measurements in the laboratory and clinic. Electronic devices for stimulus as well as measurement of physiological quantities. Design of actual instruments. Features include mechanical design, accessory design and safety requirements. Prereq: BIEN 2300 and BIEN 3300; or ELEN 3030 and BIEN 3300.

BIEN 4380. Bioelectronics Design Lab 1. 3 cr. hrs.
Understanding the principles of operation, safe operating procedures and methods of medical instrument selection. Design of experiments to measure physiological parameters. Typical experiments include: electrical safety; myography; force measurement; operational amplifier characterization; active filter; respiration monitoring. Actual medical instruments used under approximate clinical conditions. Report writing. 2 hrs. lec., 3 hrs. lab. Prereq: EECE 2015, EECE 2035, ELEN 3030.

BIEN 4390. Bioelectronics Design Lab 2. 3 cr. hrs.
Design of circuits used in research and clinical instrumentation. Experiments include the design, fabrication and evaluation of specific circuits. Typical projects include circuits used for: patient isolation from electrical hazard, measurement of heart rate, multiplexing and demultiplexing and analog to digital conversion. Design projects incorporating microprocessors are also included. Students required to submit reports. 2 hrs. lec., 3 hrs. lab. Prereq: BIEN 4380 and EECE 3015.

BIEN 4400. Transport Phenomena. 3 cr. hrs.
Applications of mass, momentum, and mechanical energy balances to biomedical fluid systems. Study of physiological phenomena with an emphasis on cardiovascular systems and blood rheology. Prereq: Jr. stndg. and PHYS 1003, or cons. of instr.

BIEN 4410. Applied Finite Element Analysis. 3 cr. hrs.
Introduces the finite element solution method for linear, static problems. Includes calculation of element stiffness matrices, assembly of global stiffness matrices, exposure to various finite element solution methods, and numerical integration. Emphasizes structural mechanics, and also discusses heat transfer and fluid mechanics applications in finite element analysis. Computer assignments include development of finite element code (FORTRAN or C) and also use of commercial finite element software (ANSYS and/or MARC). Prereq: Sr. stndg., BIEN 1110 and CEEN 2130; or Sr. stndg., CEEN 2130, and GEEN 1220.

BIEN 4420. Biomaterials Science and Engineering. 3 cr. hrs.
Designed to introduce the uses of materials in the human body for the purposes of healing, correcting deformities and restoring lost function. The science aspect of the course encompasses topics including: characterization of material properties, biocompatibility and past and current uses of materials for novel devices that are both biocompatible and functional for the life of the implanted device. Projects allow students to focus and gain knowledge in an area of biomaterials engineering in which they are interested. Prereq: MEEN 2460 or cons. of instr.

BIEN 4480. Biomechanics Design Lab 1. 3 cr. hrs.
Intended for those students pursuing the Biomedical Engineering Biomechanics option. The application of principles of engineering mechanics, data acquisition and basic electronics in the design and utilization of biomechanical instrumentation. Principles of transduction, mechanics, sampling theory, strain, temperature, and flow measurement as applied to biomechanical systems. A background in data acquisition, electrical safety, operational amplifier and bridge circuits, and measurements is provided. Experiments investigate biomechanics of the musculoskeletal and cardiovascular systems and include design content. Report writing. 2 hrs. lec., 3 hrs. lab. Prereq: BIEN 2300, MEEN 2120, and CEEN 2130.

BIEN 4490. Biomechanics Design Lab 2. 3 cr. hrs.
Provides students with experience in the design and implementation of appropriate experimental procedures to analyze biomechanical problems. Students will become familiar with various types of advanced transducers which will be used in conjunction with data acquisition workstations to obtain thermal, flow, strain, and related physiological data from biomechanical systems. Topics include mechanical properties of active muscle; analysis of human motion; postural stability; thermal regulation; cardiovascular mechanics; stress distribution in skeletal system; and comparison of static and dynamic biomechanical responses to load. 2 hrs. lec., 3 hrs. lab. Prereq: BIEN 4480.

BIEN 4500. Medical Imaging Physics. 3 cr. hrs.
Students learn how light, X-rays, radiopharmaceuticals, ultrasound, magnetic fields, and other energy probes are generated and how they interact with tissues and detectors to produce useful image contrast. Practical issues such as beam generation, dose limitations, patient motion, spatial resolution and dynamic range limitations, and cost-effectiveness will be addressed. Emphasis is placed upon diagnostic radiological imaging physics, including the planar X-ray, digital subtraction angiography mammography, computed tomography, nuclear medicine, ultrasound, and magnetic resonance imaging modalities. Prereq: PHYS 1004 or PHYS 1014.

BIEN 4510. Image Processing for the Biomedical Sciences. 3 cr. hrs.
This course serves as an introduction to biomedical image processing. Topics explored included the human visual system, spatial sampling and digitization, image transforms, spatial filtering, Fourier analysis, image enhancement and restoration, nonlinear and adaptive filters, color image processing, geometrical operations and morphological filtering, image coding and compression image segmentation, feature extraction and object classification. Applications in diagnostic medicine, biology and biomedical research are emphasized and presented as illustrative examples. Prereq: MATH 1450 and MATH 1451 or MATH 1455; knowledge of C programming; or cons. of instr.

BIEN 4600. Neural Engineering. 3 cr. hrs.
Basic principles of neural engineering, properties of excitable tissues, quantitative models used to examine the mechanisms of natural and artificial stimulation. Basic concepts for the design of neuromechanical devices for sensory, motor and therapeutic applications. Design issues including electrode type, biomaterials, tissue response to stimulating electrodes and stimulus parameters for electrical stimulation and artificial control. Examples of how engineering interfaces with neural tissue show increasing promise in the rehabilitation of individuals of neural impairment. Prereq: PHYS 1004 or PHYS 1014.
BIEN 4610. Introduction to Rehabilitation Robotics. 3 cr. hrs.
Prepresents the fundamentals of robotics as it is applied to rehabilitation engineering. Specific topics include: the fundamentals of analysis and design of robot manipulators with examples and mini-projects taken from rehabilitation applications pertaining to robotic therapy devices and personal assistants. Additional topics include: overview of rehabilitation robotics field, human-centered design of rehabilitation robots issues and challenges, robot configurations, rigid motions and homogeneous transformations, Denavit-Hartenberg representation, robot kinematics, and inverse kinematics, Euler-Lagrange equations, trajectory generation, sensors, actuators, independent joint control, force control and safety. Prereq: Jr. stndg.

BIEN 4620. Rehabilitation Science and Engineering. 3 cr. hrs.
Introduces rehabilitation science as the study of tissue and functional change, including: overview of key human sensory modalities and neuromotor systems in the context of functional capabilities and human performance metrics; review of spontaneous recovery mechanisms in response to various types of tissue trauma; review of roles of genetics and gene transcription networks in pathology and functional recovery prognosis; and the concept of rehabilitative assessment and therapeutic interventions as an optimization problem. Also focuses on the use of assistive technology to enhance access to independent living and to optimize the delivery of rehabilitative healthcare services. Includes rehabilitation biomechanics of physical interfaces, use of access and usabiliy engineering in product design and innovative assessment and intervention strategies for neurorehabilitation. Prereq: BIEN 2300 or equiv.

BIEN 4630. Rehabilitation Engineering: Prosthetics, Orthotics, Seating and Positioning. 3 cr. hrs.
Prepresents an overview of biomedical engineering as it applies to Rehabilitation Engineering, specifically, the design and prescription of prosthetic limbs, orthotic devices, and seating and positioning systems. Topics include: medical terminology, musculoskeletal anatomy, muscle mechanics, soft tissue mechanics, gait/locomotion, amputation surgery, lower extremity prosthetics, lower extremity orthotics, hand function, electromyography, upper extremity prosthetics, upper extremity orthotics, seating and positioning, and assistive devices. Prereq: MEEN 2120 or CEEN 2122.

BIEN 4640. Bioengineering of Living Actuators. 3 cr. hrs.
Overview of muscle tissue as a living actuator from the perspective of engineering design, systems biology, muscle modeling and adaptive control. Prereq: BIEN 4700, BIEN 3300.

BIEN 4700. Systems Physiology. 3 cr. hrs.
Analyses of the underlying physiologic and bioengineering aspects of the major cell and organ systems of the human from an engineer's point of view. Classic physiologic approaches used to introduce topics including cell functions, nervous system, nerve, muscle, heart, circulation, respiratory system, kidney, reproduction and biomechanics. Design problems including models of cell-organ-system function and problems in biomechanics illuminate topics covered. Computer techniques and relevant instrumentation are incorporated. Experts on related topics are invited to speak as they are available. Prereq: BIOL 1001 and BIOL 1002 and Jr. stndg.

BIEN 4710. Analysis of Physiological Models. 3 cr. hrs.
Development of continuous (compartmental), and distributed-in-space-and-time mathematical models of physiological systems and molecular events. Analytical and numerical methods for solving differential equations of the initial and boundary value types. Simulation of model response, and estimation of model parameters using linear and nonlinear regression analysis. Prereq: Jr. stndg. and MATH 2451; or Jr. stndg. and MATH 2455.

BIEN 4720. Cardiopulmonary Mechanics. 3 cr. hrs.
Examination of the physiological behavior of the cardiovascular and pulmonary systems from an engineering perspective. Emphasis is on understanding the mechanical basis of physiologic phenomena via experimental models. Prereq: BIEN 4700, which must be taken concurrently, or equiv.; and BIEN 4400, which must be taken concurrently, or equiv.; or cons. of instr.

BIEN 4920. Principles of Design. 3 cr. hrs.
Course content focuses on a structured product design and development process that includes project definition, customer needs identification, product specification, concept generation, and concept selection. Course also focuses on issues related to teamwork, project management, and effective communication. Student team design projects culminate in the development of a technically and economically viable concept and a proposal for future development of this concept (done in the second semester of this two-course sequence). 2 hrs. lec., 2 hrs. lab. Prereq: Sr. stndg.; co-op students, Jr. stndg. Cross-listed with COEN 4920, ELEN 4920 and MEEN 4920.

BIEN 4931. Topics in Biomedical Engineering. 1-3 cr. hrs.
Course content announced prior to each term. Students may enroll in the course more than once because subject matter changes. Possible topics include biomechanics, experimental methods, neuroanatomy, telemetry, etc. Prereq: Jr. stndg.

BIEN 4991. Co-op Work Period 3. 0 cr. yrs.
Registration for approved cooperative education program work assignments is required of all co-op students. Grading and credits are accomplished in the accompanying following term when registered for courses numbered 4991, 4992, etc. Fee. SNC/UNC grade assessment.

BIEN 4992. Co-op Grading Period 3. 1 cr. hr.
Grading for preceding co-op work assignments is accomplished by review of Employer Evaluation Forms, Work Exit Reports, and other materials as required during each term in school following a work period. A nominal fee is charged for registration for Work Periods. No tuition is charged for Grading Periods. S/U grade assessment.

BIEN 4993. Co-op Work Period 4. 0 cr. yrs.
Registration for approved cooperative education program work assignments is required of all co-op students. Grading and credits are accomplished in the accompanying following term when registered for courses numbered 4993, 4994, etc. Fee. SNC/UNC grade assessment.
BIEN 4994. Co-op Grading Period 4. 1 cr. hr.
Grading for preceding co-op work assignments is accomplished by review of Employer Evaluation Forms, Work Exit Reports, and other materials as required during each term in school following a work period. A nominal fee is charged for registration for Work Periods. No tuition is charged for Grading Periods. S/U grade assessment.

BIEN 4995. Independent Study in Biomedical Engineering. 1-4 cr. hrs.
Undergraduate independent study project of either a theoretical or experimental nature. Prereq: Jr. stndg., 3.000 GPA, cons. of instr., and cons. of dept. ch.; or sr. stndg., 3.000 GPA, cons. of instr., and cons. of dept. ch.

BIEN 4998. Senior Design Project. 3 cr. hrs.
Course focuses on detailed design, prototyping, and testing design concepts. Course includes topics directly relevant to student design projects and careers in the engineering profession. Student team design projects culminate in a final report that documents the performance and details (engineering drawings and/or documentation) of their final design. 2 hrs. lec., 2 hrs. lab. Prereq: BIEN 4920. Cross-listed with COEN 4998, ELEN 4998 and MEEN 4998.

BIEN 4999. Senior Thesis within the Department of Biomedical Engineering. 3 cr. hrs.
Preparation of a thesis by approved students to gain experience in the type of critical research and analysis that an advanced degree requires. The associated extended project is designed to enhance research and communication skills leading to a high quality manuscript that could be submitted for peer-reviewed journal publication. Prereq: MU GPA greater than or equal to 3.5, BIEN 4995, cons. of dept. ch.
Department of Civil, Construction and Environmental Engineering

Chairperson: Christopher M. Foley, PhD, PE, FASCE

The department of civil, construction and environmental engineering offers curricula that lead to a bachelor of science degree in civil engineering or a bachelor of science degree in construction engineering. Students that pursue a bachelor of science degree in civil engineering may select from civil engineering or environmental engineering majors. Students who pursue a bachelor of science degree in construction engineering select the construction engineering major.

Civil, construction and environmental engineering is the art and science used in the creation of the infrastructure critical to our everyday life: airports, buildings, bridges, dams, harbors, highways, irrigation systems, transportation systems, wastewater treatment systems, and water supply systems. Civil, construction and environmental engineers are also stewards of the land, its resources and environment. Modern society depends on this contribution from these engineers, whose education is systematically developed from a strong background in mathematics and the physical and engineering sciences. The civil, construction and environmental engineer must relate to society and be aware of how the engineering principles can be applied for the benefit of others through sustainable infrastructure solutions.

Mission

The mission of the department of civil, construction and environmental engineering is to educate students in the Catholic, Jesuit tradition. These students will be competent in their technical fields, appreciate the moral and ethical impact of their professional work and continue their professional development throughout their careers. The students and faculty of the department will advance the state of technical and scientific knowledge through research and provide service to civic and professional communities.

Areas of Study

Civil, construction and environmental engineering is a very broad profession. The breadth of courses offered in the department is well-suited to allow specialization in one of the major divisions of this branch of engineering: Construction Engineering (CNEN); Environmental and Water Resources Engineering (ENWR); Structural Engineering and Structural Mechanics (SESM); and Transportation Engineering and Materials (TEMA). However, it is not necessary to make a commitment to only one area of concentration while in the undergraduate college. The curriculum at Marquette permits students to prepare themselves in civil engineering and construction engineering by completing the courses which provide the necessary fundamentals and the opportunity to select elective courses to acquire additional depth in one or more of the areas of specialization. All of the electives which the department offers are open to students with the required prerequisites. Selection of the courses for a general program requires careful planning between the student and an academic adviser. Students in the civil engineering and construction engineering degree programs are able to complete elective courses in a chosen area or areas of specialization.

Non-Civil or Non-Construction Engineering Majors or Minors

Students in the civil engineering curriculum who are interested in obtaining a major or minor in any other area outside the civil or construction engineering degree programs should consult the Opus College of Engineering Office of Undergraduate Affairs and their faculty mentor (adviser) during their freshman or sophomore year to plan their schedules to meet their particular objectives. Students wishing to earn a non-engineering minor should follow the guidelines listed in the “Concentrations and Minors” section of the Opus College of Engineering bulletin.

Five-Year B.S./M.S. Program

The department offers a five-year combined B.S./M.S. program. This program enables students to earn both their bachelor of science degree in civil engineering or construction engineering, and a master of science degree in civil engineering in just five years (or six with completion of a co-op). Students currently enrolled in an undergraduate degree program in the department of civil, construction and environmental engineering at Marquette University (with a GPA of 3.500 or above) may apply for admission to this five-year program during their junior year. Students must submit an application to the Marquette University Graduate School, indicate their interest in the five-year BS/MS program, and meet all other admission criteria as stated in the Application Requirements section of the Graduate Bulletin.

In addition to completing their undergraduate degree requirements, students take master’s level courses during their senior year. (Note that no course is permitted to satisfy both the undergraduate and graduate degree requirements in the five-year BS/MS degree program in the department of civil, construction and environmental engineering.) The remaining master’s level course work is taken during the student’s fifth year. Students are strongly encouraged to pursue Plan A (thesis option), in which work on the thesis research should begin during the summer between the junior and senior years. Students continue to gain research experience during the summer between senior and fifth years, continuing throughout the fifth year and culminating in preparation of a written thesis and defense. Combined BS/MS programs following Plan B (course work option) may also be designed. See the Graduate Bulletin for further details.
Program Educational Objectives - Civil engineering degree

To carry out the mission of the college of engineering and the mission of the department described previously, the department of civil, construction and environmental engineering has established the following educational objectives for its undergraduate civil engineering degree program. Students graduating with the Bachelor of Science degree in civil engineering will:

• successfully enter the civil engineering profession as practicing engineers in diverse civil engineering related areas that include structural engineering and structural mechanics, transportation engineering and materials, environmental and water resources engineering, construction engineering; or other related and/or emerging fields.
• engage in life-long learning through: pursuit of graduate education and research in structural engineering and structural mechanics, construction engineering, transportation engineering and materials, environmental and water resources engineering; and/or professional development.
• pursue professional licensure and certification.
• serve and become leaders in their professional and civic communities.

Civil engineering is the art and science used in the construction of facilities which people need in their environment — land, water and air. Airports, buildings, bridges, dams, harbors, highways, irrigation systems, transportation systems, sewerage and water supply systems are examples of the types of facilities which are the responsibility of the civil engineer.

Since the beginning of civilization, people have been building with the use of engineering principles. Modern society depends on this contribution from the civil engineer, whose education is systematically developed from a strong background in mathematics and the physical and engineering sciences. The civil engineer must relate to society and fellow men and women and be aware of how the engineering principles can be applied for the benefit of others.

Civil engineers are also stewards of the land, its resources and environment. Many civil engineers are involved in activities such as watershed and environmental planning, sustainable resource development and environmental protection.

The civil engineering degree program develops the analysis and design capabilities of the student in the study of structures and systems. The application of computers and pertinent software is used throughout the major. A broad educational program can be selected or some specialization is possible through advised elective course selection. The environmental engineering major within the civil engineering degree provides the student with a fundamental background in civil engineering and specialization in the field of environmental engineering.

The construction engineering degree provides the student with general engineering skills and the management and finance background for entry into the field of construction engineering.

The curriculum provides the graduate with the necessary education to begin a professional career without further formal education, while also affording those students who enter graduate studies the preparation to further their education in a field of specialization.

Areas of Study

The breadth of courses offered is well-suited to allow specialization in one of the major divisions of this branch of engineering. However, it is not necessary to make a commitment to only one area of concentration while in the undergraduate college. The curriculum at Marquette permits students to prepare themselves in civil engineering and construction engineering by completing the courses which provide the necessary fundamentals and the opportunity to select elective courses to acquire additional educational depth in one or more of the areas of specialization. All of the electives which the department offers are open to students who satisfy the required prerequisites. Selection of the courses for a general program requires careful planning between the student and an academic adviser. Students in the civil engineering and construction engineering and management degree programs have the option to select technical elective courses in the following areas.

General Civil Engineering (CE)

The diverse needs of people and society for many types of constructed facilities give a broad range to civil engineering and construction engineering practice. The following listing of courses are considered general civil engineering technical electives that cross boundaries of the civil, construction and environmental engineering professions.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>CEEN 4310</td>
<td>Geographical Information Systems in Engineering and Planning</td>
<td>3</td>
</tr>
<tr>
<td>CEEN 4320</td>
<td>Engineering Decisions Under Uncertainty</td>
<td>3</td>
</tr>
<tr>
<td>CEEN 4340</td>
<td>Urban Planning for Civil Engineers (Design)</td>
<td>3</td>
</tr>
<tr>
<td>CEEN 4350</td>
<td>Law for Engineers</td>
<td>3</td>
</tr>
<tr>
<td>CEEN 4715</td>
<td>Sustainable Engineering (Design)</td>
<td>3</td>
</tr>
</tbody>
</table>

Construction Engineering (CNEN)

Construction projects of all types require management as well as the traditional engineering skills. Those students who want to focus more on construction engineering and management may prefer to pursue a bachelor of science degree in construction engineering and management. Students
interested in specializing in construction engineering and management while still earning a degree in civil engineering may select courses from the following list as their technical electives.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNEN 3860</td>
<td>Construction Materials and Methods</td>
<td>3</td>
</tr>
<tr>
<td>CNEN 4815</td>
<td>Mechanical and Electrical Systems for Buildings</td>
<td>3</td>
</tr>
<tr>
<td>CNEN 4820</td>
<td>Construction Operations and Productivity</td>
<td>3</td>
</tr>
<tr>
<td>CNEN 4825</td>
<td>E-Business in the Construction Industry</td>
<td>3</td>
</tr>
<tr>
<td>CNEN 4830</td>
<td>Construction Planning, Scheduling, and Control (Design)</td>
<td>3</td>
</tr>
<tr>
<td>CNEN 4840</td>
<td>Construction Cost Analysis and Estimating</td>
<td>3</td>
</tr>
<tr>
<td>CNEN 4845</td>
<td>Construction Equipment and Methods (Design)</td>
<td>3</td>
</tr>
</tbody>
</table>

**Environmental and water resources ENGINEERING (ENWR)**

The environmental and water resources engineering area deals with the control and improvement of human surroundings using principles developed in civil engineering. The environmental/water resources engineer is responsible for conceiving and designing systems for water supply, waste water treatment and disposal, air pollution control, solid and hazardous waste management and design of water resources systems. Those students that wish to focus more on environmental and water resources engineering may prefer to pursue a major in environmental engineering within the civil engineering degree program. Students interested in specializing in environmental engineering while earning a degree in civil engineering may select courses from the following list as their technical electives.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEEN 4230</td>
<td>Urban Hydrology and Stormwater Management (Design)</td>
<td>3</td>
</tr>
<tr>
<td>CEEN 4515</td>
<td>Environmental Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>CEEN 4520</td>
<td>Industrial Wastewater Management (Design)</td>
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</tr>
<tr>
<td>CEEN 4525</td>
<td>Treatment Plant Design and Operation (Design)</td>
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</tr>
<tr>
<td>CEEN 4530</td>
<td>Hazardous and Industrial Waste Management</td>
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</tr>
<tr>
<td>CEEN 4535</td>
<td>Environmental Engineering Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>CEEN 4715</td>
<td>Sustainable Engineering (Design)</td>
<td>3</td>
</tr>
</tbody>
</table>

**Structural Engineering and Structural Mechanics (SESM)**

The structural engineering and structural mechanics area focuses on the planning, analysis, design and construction of various types of structures including buildings, bridges, miscellaneous structures (e.g. amusement park rides, sign supports, earth retaining structures) and foundations for these systems. Students will learn to analyze and design structures in structural steel and reinforced concrete. They will also learn to analyze and design foundations for structures. Students interested in specializing in structural engineering and structural mechanics may select courses from the following list as their technical electives.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
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</thead>
<tbody>
<tr>
<td>CEEN 4145</td>
<td>Advanced Strength and Applied Stress Analysis</td>
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<td>CEEN 4411</td>
<td>Matrix Structural Analysis</td>
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<td>CEEN 4431</td>
<td>Advanced Structural Steel Design (Design)</td>
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<td>CEEN 4441</td>
<td>Advanced Reinforced Concrete Design (Design)</td>
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<tr>
<td>CEEN 4450</td>
<td>Bridge Design (Design)</td>
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</tr>
<tr>
<td>CEEN 4460</td>
<td>Foundation Engineering (Design)</td>
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</tbody>
</table>

**Transportation Engineering and Materials (TEMA)**

The transportation engineering and materials area focuses on engineering analysis and design of urban streets, highways, intersections, interchanges, interstate highways and airports. This area of study also focuses on pavement engineering and the materials used in the construction of roadways along with traffic engineering (e.g. design, operations and traffic management). Students interested in specializing in transportation engineering and materials may select courses from the following list as their technical electives.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEEN 4615</td>
<td>Highway Planning and Design (Design)</td>
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<td>CEEN 4630</td>
<td>Airport Planning and Design (Design)</td>
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<tr>
<td>CEEN 4640</td>
<td>Traffic Characteristics and Design (Design)</td>
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<td>CEEN 4650</td>
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<tr>
<td>CEEN 4660</td>
<td>Pavement Management</td>
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## Civil Engineering Major

### Freshman

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<th>Second Term</th>
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<td>CHEM 1002</td>
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<td>ENGL 1001</td>
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<td>THEO 1001 or Core Elective&lt;sup&gt;1&lt;/sup&gt;</td>
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### Sophomore

<table>
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<tbody>
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<td>CEEN 2130</td>
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<td>CEEN 2110</td>
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### Junior

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<td>CEEN 3510</td>
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### Senior

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<tr>
<td>CEEN 3430</td>
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<td>CEEN 4997</td>
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<tr>
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<td>CEEN Technical Elective (Design)</td>
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<tr>
<td>CEEN Technical Elective (Design)</td>
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<td>Second Level Theology&lt;sup&gt;4&lt;/sup&gt;</td>
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</table>

Total credit hours: 131

<sup>1</sup> Elective core courses must satisfy UCCS requirements in the following four Knowledge Areas: Diverse Cultures (DC), Histories of Cultures and Societies (HCS), Individual and Social Behavior (ISB), and Literature/Performing Arts (LPA). The three elective core courses specified in this program assume that one of the core courses is a dual application core course. If a dual application core course is not taken, an additional elective core course is required and the total credit hours is increased to 134. See the university bulletin section on University Core of Common Studies for lists of acceptable elective core courses and dual application core courses.

A basic science elective in addition to the CHEM and PHYS courses outlined above must be selected in areas such as biology, geology and meteorology, subject to approval by the CCEE Department.

The second level Theology course must be selected from the list of acceptable UCCS courses in the Theology Knowledge Area. See the university bulletin section on University Core of Common Studies for a list of acceptable second level Theology courses.

Technical Elective Requirements

All civil engineering majors must complete 12 credits of technical electives from the courses listed previously under the areas of study. A minimum of 6 credits of civil engineering design is required and must be selected from those courses designated as design (Design).

Program Educational Objectives - Construction Engineering degree

To carry out the mission of the college of engineering and the department described previously, the department of civil, construction and environmental Engineering has established the following educational objectives for the construction Engineering degree program. Students graduating with the Bachelor of Science in construction engineering will:

- develop an appreciation for religious, moral, ethical and human values.
- be able to apply the fundamentals of science and mathematics to engineering analysis and design.
- have a foundation for understanding the application of construction engineering obtained through opportunities to experience the construction engineering profession through the co-operative engineering program, service learning, summer internships and/or hands-on experience in laboratory courses.
- communicate effectively in written, graphical and oral form.
- be prepared to be leaders through opportunities to exhibit leadership and develop team-building skills.
- have a commitment to lifelong learning.

Construction Engineering Major

Within the Department of Civil, Construction and Environmental Engineering students may also choose the bachelor of science degree program in construction engineering.

### Freshman

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>CHEM 1001 b</td>
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<td>CHEM 1002 b</td>
<td>4</td>
</tr>
<tr>
<td>MATH 1450 b</td>
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<td>ENGL 1001</td>
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<td>ENGL 1002</td>
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<td>ECON 1001 b, 1</td>
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### Sophomore

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>PHYS 1003 b</td>
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### Junior

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEEN 3160</td>
<td>3</td>
<td>CEEN 3320</td>
<td>3</td>
</tr>
</tbody>
</table>
MATH 4720 3 CNEN 4815 3
Math and Science Elective$^3$ 3 FINA 3001 3
CEEN 3410 3 CEEN 4350 3
CNEN 3860 3 PHIL 1001 3
Technical Elective 3 Core Elective 3
18 18

Senior

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CNEN 4830</td>
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<td>CEEN 4997</td>
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</tr>
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<td>CNEN 4845</td>
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<td>CNEN 4840</td>
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<td>CEEN Technical Elective (Design)</td>
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<td>THEO elective</td>
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<td>THEO 1001$^b$</td>
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<td>PHIL 2310</td>
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<tr>
<td>Technical Elective</td>
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<td>Technical Elective (Co-op Requirement)</td>
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</tbody>
</table>

Total credit hours: 134

1 For footnotes b, c, d, e refer to the College of Engineering section of this bulletin for details related to these footnotes. As ECON 1001 Introduction to Economics meets the Core Individual and Social Behavior knowledge area, remaining Core electives should be taken in the remaining areas. The three Core electives$^c$ in this program assume that one Core elective is a Dual application Core course. If a Dual application Core elective is not taken, an additional Core elective is required and the total credit hours increase to 137.

2 Note that co-op is required for the Construction Engineering program. One academic credit is awarded for each co-op work term completed, three of which can be used as a technical elective toward degree requirements.

3 A math elective and science elective in addition to the CHEM and PHYS courses outlined above in areas such as advanced mathematics, biology, geology and meteorology must be selected subject to approval by the adviser, department chair and academic advising center.

Technical Electives:
All Construction Engineering majors must complete 12 credits of technical electives from the courses listed below. A minimum of 6 credits of design is required and must be selected from the courses designated as design (Design).

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEEN 3430</td>
<td>Structural Steel Design (Design)</td>
<td>3</td>
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<tr>
<td>CEEN 3440</td>
<td>Reinforced Concrete Design (Design)</td>
<td>3</td>
</tr>
<tr>
<td>CEEN 3510</td>
<td>Environmental Engineering</td>
<td>3</td>
</tr>
<tr>
<td>CEEN 3610</td>
<td>Transportation Engineering</td>
<td>3</td>
</tr>
<tr>
<td>CEEN 4310</td>
<td>Geographical Information Systems in Engineering and Planning</td>
<td>3</td>
</tr>
<tr>
<td>CEEN 4320</td>
<td>Engineering Decisions Under Uncertainty</td>
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<td>CEEN 4340</td>
<td>Urban Planning for Civil Engineers (Design)</td>
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<td>CEEN 4411</td>
<td>Matrix Structural Analysis</td>
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<td>CEEN 4441</td>
<td>Advanced Reinforced Concrete Design (Design)</td>
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<td>CEEN 4650</td>
<td>Pavement Design (Design)</td>
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</tr>
<tr>
<td>CEEN 4715</td>
<td>Sustainable Engineering (Design)</td>
<td>3</td>
</tr>
</tbody>
</table>

Environmental Engineering Major

In addition to the Civil Engineering major described above, students may elect to specialize in environmental engineering and obtain a major in that discipline. The major in Environmental Engineering provides a solid foundation in civil engineering as well as more comprehensive study in the area related to the environment.
### Freshman

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
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</thead>
<tbody>
<tr>
<td>CEEN 1200</td>
<td>3</td>
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### Sophomore

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### Junior

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### Senior

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Total credit hours: 131

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Elective core courses must satisfy UCCS requirements in the following four Knowledge Areas: Diverse Cultures (DC), Histories of Cultures and Societies (HCS), Individual and Social Behavior (ISB), and Literature/Performing Arts (LPA). The three Elective core courses specified in this program assume that one of the core courses is a dual application core course. If a dual application core course is not taken, an additional elective core course is required and the total credit hours is increased to 134. See the university bulletin section on University Core of Common Studies for lists of acceptable elective core courses and dual application core courses.
2. Either CEEN 3430 - Structural Steel Design or CEEN 3440 – Reinforced Concrete Design
3. Acceptable environmental technical electives are subject to approval by the CCEE Department
4. Participation in CEEN 4953 – Environmental Seminar is required during either the first or second term of the senior year.
5. The second level theology course must be selected from the list of acceptable UCCS courses in the Theology Knowledge Area. See the university bulletin section on University Core of Common Studies for a list of acceptable second level Theology courses

Environmental Electives

All environmental engineering majors must complete 12 credits of technical electives from the environmental engineering (ENEN) area of study. A minimum of 6 credits of environmental engineering design is required and must be selected from those ENEN courses designated as having design content (Design).

Civil Engineering Minor

The Department of Civil and Environmental Engineering offers a minor in civil engineering to all undergraduate students in the university except those students in civil or environmental engineering. Completion of the minor will be noted on the student's transcript if the following requirements are met:

Twenty-seven hours including required courses:

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEEN 2110 - Statics</td>
<td>3</td>
</tr>
<tr>
<td>CEEN 2130 - Mechanics of Materials</td>
<td>3</td>
</tr>
<tr>
<td>CEEN 3150 - Mechanics of Fluids</td>
<td>3</td>
</tr>
<tr>
<td>CEEN 3320 - Civil Engineering Materials</td>
<td>3</td>
</tr>
<tr>
<td>Twelve additional hours from the following:</td>
<td>12</td>
</tr>
<tr>
<td>CEEN 2315 - Introduction to Building Information Modeling</td>
<td></td>
</tr>
<tr>
<td>CEEN 3160 - Geotechnical Engineering</td>
<td></td>
</tr>
<tr>
<td>CEEN 3410 - Structural Analysis</td>
<td></td>
</tr>
<tr>
<td>CEEN 3510 - Environmental Engineering</td>
<td></td>
</tr>
<tr>
<td>CEEN 3610 - Transportation Engineering</td>
<td></td>
</tr>
<tr>
<td>CNEN 3810 - Introduction to Construction Management</td>
<td></td>
</tr>
<tr>
<td>Additional needed credits from any upper-division CEEN course.</td>
<td>3</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td>27</td>
</tr>
</tbody>
</table>

The program, as a whole, must have departmental approval and be completed with a C average. At least half of these credit hours must be taken at Marquette University.

Environmental Engineering Minor

The Department of Civil and Environmental Engineering offers a minor in environmental engineering to all undergraduate students in the university except those students in civil or environmental engineering. Completion of the minor will be noted on the student’s transcript if the following requirements are met:

Twenty-four hours including required courses:

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEEN 2110 - Statics</td>
<td>3</td>
</tr>
<tr>
<td>CEEN 2120 - Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 1001 - General Biology 1</td>
<td>3</td>
</tr>
<tr>
<td>or CHEM 2111 - Organic Chemistry 1</td>
<td></td>
</tr>
<tr>
<td>CEEN 3150 - Mechanics of Fluids</td>
<td>3</td>
</tr>
<tr>
<td>CEEN 3510 - Environmental Engineering</td>
<td>3</td>
</tr>
<tr>
<td>Nine additional hours from the following courses:</td>
<td>9</td>
</tr>
<tr>
<td>CEEN 3210 - Hydraulic Engineering</td>
<td></td>
</tr>
<tr>
<td>CEEN 4230 - Urban Hydrology and Stormwater Management</td>
<td></td>
</tr>
<tr>
<td>CEEN 4515 - Environmental Chemistry</td>
<td></td>
</tr>
<tr>
<td>CEEN 4520 - Industrial Wastewater Management</td>
<td></td>
</tr>
<tr>
<td>CEEN 4525 - Treatment Plant Design and Operation</td>
<td></td>
</tr>
<tr>
<td>CEEN 4530 - Hazardous and Industrial Waste Management</td>
<td></td>
</tr>
</tbody>
</table>
The program, as a whole, must have departmental approval and be completed with a C average. At least half of these credit hours must be taken at Marquette University.

Civil Environmental Engineer Courses

CEEN 1200. Introduction to Infrastructure. 3 cr. hrs.
Introduction to civil, construction and environmental engineering with emphasis on civilian infrastructure and the built environment. Introduction to the natural environment and environmental infrastructure, structural infrastructure and construction, transportation infrastructure, civil engineering history and heritage and civil infrastructure systems. Discussion of planning and energy, sustainability, environmental, economic, ethics and security considerations in relation to civilian infrastructure. Introduction to analysis and design as they pertain to infrastructure and the built environment.

CEEN 1210. Introduction to Computing, Analysis, Design and Communication. 3 cr. hrs.
Introduction to computational tools, graphical communication tools and economic analysis principles as they relate to civil, construction and environmental engineering. Introduction to sketching as a means with which to convey and communication of ideas and workflow. Algorithm development and graphical display of engineering ideas and information in commercially available programs and programming environments. Implementation of infrastructure engineering analysis and design concepts and procedures from CEEN 1200 using commercially available programs and programming environments. Prereq: CEEN 1200 or GEEN 1200.

CEEN 2110. Statics. 3 cr. hrs.

CEEN 2120. Dynamics. 3 cr. hrs.

CEEN 2130. Mechanics of Materials. 3 cr. hrs.

CEEN 2310. Elementary Surveying. 3 cr. hrs.
Fundamental concepts and theory of engineering measurements; adjustment and use of instruments; computations; errors; measurement of distance, difference in elevation, angles and directions; route surveying, construction surveys. Probability concepts and statistical analysis of field data. 2 hrs. lec., 3 hrs. lab. Prereq; Soph. stndg. and CIEN or CEMA major.

CEEN 2315. Introduction to Building Information Modeling. 3 cr. hrs.
Introduces the student to parametric modeling of building infrastructure system and Building Information Modeling (BIM). Emphasis on building terminology and technology experienced through generation of models for building systems and using commercial software for BIM (e.g. Autodesk Revit products). Students learn fundamentals of construction sequencing, building terminology and building system modeling principles. Students learn the process of querying BIM databases of information for building plan generation, quantity take offs, and other engineering-related processes. Prereq: CEEN 1210.

CEEN 2320. Introduction to Civil Infrastructure, Geo-Spatial and Environmental Modeling. 3 cr. hrs.
Introduction of parametric and geo-spatial modeling and its uses in civil, construction and environmental engineering applications to civilian infrastructure. Activities will focus on Geospatial Information Systems (GIS), civil site modeling, road infrastructure modeling, bridge modeling, watersheds modeling/mapping and the use of surveying data in the layout of civil infrastructure. Students learn construction sequencing, infrastructure systems terminology and modeling principles as they relate to civil infrastructure. Prereq: CEEN 2315.

CEEN 3150. Mechanics of Fluids. 3 cr. hrs.
Fundamental conservation laws of mass, momentum, and energy. Properties of fluids, hydrostatics, flow of real fluids in closed and open systems, dynamic similarity, dimensional analysis, compressible flow, and potential fluid flow. Same as MEEN 3320.

CEEN 3160. Geotechnical Engineering. 3 cr. hrs.
Fundamental properties and engineering characteristics of soil as a particulate mass aggregate are studied. The formation and the development of soil deposits, the physical and hydraulic properties and the methods of predicting the stress-strain behavior of soils for engineering applications are examined. Laboratory experiments are conducted and reports are required. 2 hrs. lec., 1.25 hrs. lab. Prereq: Jr. stndg. and CIEN, ENEN or CNEN major.

CEEN 3170. Introduction to Geology. 3 cr. hrs.
Covers the nature and properties of the materials which make up the earth, the process by which they are formed and the distribution of these materials throughout the earth. Examines the processes of volcanism, glaciation, stream erosion and weathering and studies how earth's materials are formed, altered transported and deformed.
CEEN 3210. Hydraulic Engineering. 3 cr. hrs.
Fundamentals and applications of hydrostatics and hydrodynamics including pressurized pipe flow and pipeline network design, open channel flow, and sewer design, pump selection and flow measurement. Laboratory assignments and demonstrations. 2 hrs. lec., 1.25 hrs. lab. Prereq: MEEN 3320 which, may be taken concurrently.

CEEN 3320. Civil Engineering Materials. 3 cr. hrs.
Introduction to the properties and fundamental behavior materials used by civil engineers with emphasis on concrete, asphalt and steel. Lab experiments are used to demonstrate the behavior or materials subjected to various load levels and orientations. Use of spreadsheets and statistical analysis of experimental data are required. 2 hrs. lec., 1.25 hrs. lab. Prereq: Soph. stndg. and CIEN, ENEN or CNEN major.

CEEN 3410. Structural Analysis. 3 cr. hrs.
Determining the loads that act on structures and load combinations. Basic concepts in structural analysis of determinate beams, trusses, and frames. Deflections of determinate beams by moment area and conjugate beam methods. Development of basic virtual work concept to obtain deformations in determinate trusses, beams, and frames. Introduction to the solution of indeterminate structures by using the method of superposition. Influence lines for determinate beams. Prereq: CEEN 2130 or MEEN 2130.

CEEN 3430. Structural Steel Design. 3 cr. hrs.
Introduction to building codes, design standards and design specifications as they relate to the physical behavior and design of steel structures. Design of structural steel members subjected to tensile loading; compression loading (columns); and bending (beams). Design of mechanical fasteners, welds and connecting elements. Analysis and design of members subjected to combined loading (beam-columns). Emphasis on AISC Specifications. Prereq: CEEN 3320 and CEEN 3410.

CEEN 3440. Reinforced Concrete Design. 3 cr. hrs.
Fundamental concepts of reinforced concrete theory and design. Use of current design code for the analysis and design of basic structural members; strength design for flexure, shear and development of reinforcement. Prereq: CEEN 3410 and CEEN 3320.

CEEN 3510. Environmental Engineering. 3 cr. hrs.
Introduction to environmental engineering with a focus on the water environment. Topics include water quality, water resources, water supply, municipal and wastewater systems, air quality, and solid and hazardous waste management. Prereq: Jr. stndg. and CIEN, ENEN or CNEN major.

CEEN 3610. Transportation Engineering. 3 cr. hrs.
Airport airside systems based on FAA guidelines. Road user and vehicle characteristics, applications of equations of motion, geometric design of roadways including horizontal and vertical alignment and cross-sectional elements. Traffic calming. Signalized intersections. Parking lot design. Traffic flow models. Emphasis on explaining technical details in writing. Prereq: Jr. stndg. and CIEN, ENEN or CNEN major.

CEEN 3991. Co-op Work Period 1. 0 cr. hrs.
Registration for approved cooperative education program work assignments is required of all co-op students. Grading and credits are accomplished in the accompanying following term when registered for courses numbered 3991, 3992, etc. Fee. SNC/UNC grade assessment.

CEEN 3992. Co-op Grading Period 1. 1 cr. hr.
Grading for preceding co-op work assignments is accomplished by review of Employer Evaluation Forms, Work Exit Reports, and other materials as required during each term in school following a work period. No tuition is charged for Grading Periods. S/U grade assessment.

CEEN 3993. Co-op Work Period 2. 0 cr. hrs.
Registration for approved cooperative education program work assignments is required of all co-op students. Grading and credits are accomplished in the accompanying following term when registered for courses numbered 3993, 3994 etc. Fee. SNC/UNC grade assessment.

CEEN 3994. Co-op Grading Period 2. 1 cr. hr.
Grading for preceding co-op work assignments is accomplished by review of Employer Evaluation Forms, Work Exit Reports, and other materials as required during each term in school following a work period. No tuition is charged for Grading Periods. S/U grade assessment.

CEEN 4145. Advanced Strength and Applied Stress Analysis. 3 cr. hrs.

CEEN 4230. Urban Hydrology and Stormwater Management. 3 cr. hrs.
Distribution and properties of waters on the earth. Concept of the hydrologic cycle, and basic principles of meteorology, precipitation, streamflow, evapotranspiration, and groundwater flow. Erosion and urban stormwater pollution. Design of urban flood protection and stormwater pollution abatement systems. Prereq: CEEN 3150, or MEEN 3320.

CEEN 4310. Geographical Information Systems in Engineering and Planning. 3 cr. hrs.
Fundamentals of GIS, databases, data management, map projections, representations of spatial attributes, GIS analysis and GIS software systems such as ARC Info, ARC View, Grass. GIS use and expanded capabilities are taught. Case studies including environmental, transportation and economic applications are discussed. Prereq: Sr. stndg. and CIEN, ENEN or CEMA major.

Application of probability and statistics to modeling, analysis and design of civil engineering systems. Topics include: probability theory, decision theory, utility theory and simulation. Prereq: Sr. stndg. and CIEN, ENEN or CNEN major.
CEEN 4340. Urban Planning for Civil Engineers. 3 cr. hrs.
Concepts and principles underlying urban planning and development. Land use, transportation, utility, community facility planning problems, procedures, and techniques. The master plan and implementation devices such as zoning, subdivision control, official mapping, capital budgeting, and urban renewal. Prereq: Sr. stndg. and CIEN, ENEN or CNEN major.

CEEN 4350. Law for Engineers. 3 cr. hrs.
Basic legal principles and awareness of typical legal questions that arise when engineers and law interact. Topics include: American judicial system, law of contracts, forms of association, construction contracts, professional liabilities of engineers and torts. Prereq: Sr. stndg. and CIEN, ENEN or CNEN major.

CEEN 4411. Matrix Structural Analysis. 3 cr. hrs.

CEEN 4431. Advanced Structural Steel Design. 3 cr. hrs.
Continuation of CEEN 3430. Design of plate girders, composite beam and slab systems, composite columns and composite beam-columns, simple connections, moment connections, hollow structural shape (HSS) connections, bracing systems and single and multi-story steel framed building systems. Emphasis on AISC Specifications Prereq: CEEN 3430.

CEEN 4441. Advanced Reinforced Concrete Design. 3 cr. hrs.
Continuation of CEEN 3440. Presenting advanced concrete design applications to reinforced concrete statically indeterminate systems, two-way slabs and columns. Introduction to the philosophy and concepts of prestressed concrete design. Basic principles and procedures for the design and analysis of prestressed members including calculation of pre-stress loss, flexural analysis and design, shear, bond and anchorage requirements, member deflections and cable layouts. Emphasis on ACI code requirements. Prereq: CEEN 3440.

CEEN 4450. Bridge Design. 3 cr. hrs.
Introduction to bridge engineering and construction including: an abbreviated history of bridge construction; bridge types; bridge nomenclature; lessons from failures; design philosophies; and the construction process. Analysis of single-and multi-span bridge superstructures using classical techniques and commercial software. Design of single-span reinforced concrete slab bridges; reinforced concrete bridge decks; and single-span slab-bridges in prestressed concrete. Prereq: CEEN 3430 and CEEN 3440.

CEEN 4460. Foundation Engineering. 3 cr. hrs.
Design of earth retention systems, earthen dams, shallow and deep foundation members subjected to vertical and eccentric loadings. The effects of solid origin and deposition are analyzed in relation to bearing and capacity and settlement of structures. Prereq: CEEN 3160.

CEEN 4515. Environmental Chemistry. 3 cr. hrs.
Chemical stoichiometry, equilibrium, and kinetics relating to natural and engineered environmental systems. Basic concepts from organic and inorganic chemistry including oxidation-reduction reactions, acid-base chemistry, the carbonate system, alkalinity and acidity. Equilibrium and kinetic theories of chemical partitioning among gas, liquid and solid phases governing chemical fate and transport in the environment. Coordination chemistry describing metal-ligand interactions, precipitation and bioavailability of materials. Prereq: Sr. stndg.; CIEN or ENEN major and CHEM 1002.

CEEN 4520. Industrial Wastewater Management. 3 cr. hrs.
Review of federal legislation and state regulations with regard to industrial wastewater management practices. Consideration of industrial process modifications and wastewater treatment options with respect to their effect on industrial user fees. Pretreatment standards and discharge permit requirements. Case studies of specific industrial applications. Prereq: CEEN 3510.

CEEN 4525. Treatment Plant Design and Operation. 3 cr. hrs.
Review of water and wastewater characteristics, drinking water, receiving water and effluent standards. Basic design methodology and operational features of common physical, chemical and biological processes for the treatment of waters and wastewaters. Introduction to the processing and disposal of sludges and other treatment plant residuals. Prereq: CEEN 3510.

CEEN 4530. Hazardous and Industrial Waste Management. 3 cr. hrs.
Overview of hazardous waste management, disposal and soil and ground water remediation. Review of RCRA, CERCLA-SARA, TSCA and Wisconsin's NR 700 and other regulations. Definition of hazardous wastes and characterization of industrial waste stream. Chemical, physical and biological properties of hazardous wastes. Introduction to hazardous waste remediation/treatment methods and technologies. Landfills and the RCRA Land Ban regulations. Site assessments, field investigations and laboratory analytical techniques. Environmental risk assessments, cleanup objectives and waste minimization. Prereq: Sr. stndg.; CIEN or ENEN major.

CEEN 4535. Environmental Engineering Microbiology. 3 cr. hrs.
Includes microbiological and biochemical properties of microorganisms important in environmental engineering practice. General fundamentals of environmental microbiology and their application to drinking water treatment and distribution, water pollution control and natural systems. Prereq: CEEN 3510.
CEEN 4615. Highway Planning and Design. 3 cr. hrs.
Emphasis on highway planning, alternate highway alignments and alternate evaluation. Geometric design of highways including horizontal and vertical alignment, cross-section design. Projects on detailed design of reverse curves (plan and profile views); intersection design; cross-section and earthwork quantities. Legal aspects of engineering. Use of American Association of State Highway and Transportation Officials design guidelines. Prereq: CEEN 3610.

CEEN 4630. Airport Planning and Design. 3 cr. hrs.
Introduction to airport planning and design parameters, aircraft characteristics, payload versus range, runway length requirements, air traffic control, wind analysis, airside capacity and delay, airside separation criteria, terminal analysis and delay, airport access flow and capacity, ramp charts. Economic analysis of facility improvements. Prereq: CEEN 3610.

CEEN 4640. Traffic Characteristics and Design. 3 cr. hrs.
Components of the traffic system: vehicle and road user characteristics, geometric design and traffic controls. Intersection types, cross-section design elements and typical dimensions. Basic variables of traffic flow, observed traffic flow values. Freeway operations. Signalized intersections: flow, capacity, level of service. Projects addressing: intersection existing conditions (traffic, geometry, signalization); approach delay; safety performance; capacity; suggestions for improvements. Use of the Highway Capacity Manual and the Highway Capacity Software. Emphasis on technical report-writing and presentation. Prereq: CEEN 3610.

CEEN 4650. Pavement Design. 3 cr. hrs.
Study of the behavior and properties of highway pavements with emphasis on hot mix asphalt and jointed Portland cement concrete pavement. Pavement thickness designs are developed using current design methods and incorporating subgrade soil properties, traffic forecasts and pavement performance expectations. Use of spreadsheets and computer programs are required. Prereq: CEEN 3160 and CEEN 3610.

CEEN 4660. Pavement Management. 3 cr. hrs.
Study of the performance of pavement systems based on design, traffic and maintenance activities. Methods for evaluating in-service pavements including distress surveys and nondestructive testing are examined. Maintenance strategies are developed and life-cycle cost analysis of these strategies are studied. Prereq: CEEN 3610.

CEEN 4670. Advanced Transportation Materials. 3 cr. hrs.
Advanced study of materials used for constructing transportation facilities, with particular emphasis on subgrade soils, bound and unbound aggregates, hot mix asphalt and Portland cement concrete. Laboratory tests are conducted and analytical models used for characterizing transportation materials are examined. Prereq: CEEN 3320 and CEEN 3160.

CEEN 4710. Engineering Fundamentals Review. 1 cr. hr.
Review of basic science, mathematics, engineering science and economics. S/U grade assessment. Prereq: Sr. stndg. and CIEN or ENEN major.

CEEN 4715. Sustainable Engineering. 3 cr. hrs.
Provides a framework for the theory and practice of sustainable engineering. Introduces the importance and role of technological, social and sustainable systems in the modern world, which is increasingly characterized by integrated human/natural/built complex adaptive systems at local, regional and global scales. Develops critical problem solving approaches, including life-cycle assessment, global awareness, consciousness of patterns in technological evolution, and strategies for addressing environmental, economic and social equity issues in engineering design. Prereq: Sr. stndg. in College of Engineering.

CEEN 4850. FRP in Civil Engineering Infrastructure. 3 cr. hrs.
Introduces Fiber Reinforced Polymer (FRP) material properties, FRP reinforced concrete, FRP prestressed concrete, FRP repaired and retrofitted structures and pure FRP structures. Prereq: CEEN 3440.

CEEN 4931. Topics in Civil Engineering. 1-3 cr. hrs.
Course content announced each term. Prereq: Cons. of instr.

CEEN 4953. Environmental Seminar. 0 cr. hrs.
Topics related to environmental engineering, including subjects such as air pollution, urban hydrology and stormwater management, wastewater treatment and hazardous waste management. SNC/UNC grade assessment.

CEEN 4991. Co-op Work Period 3. 0 cr. hrs.
Registration for approved cooperative education program work assignments is required of all co-op students. Grading and credits are accomplished in the accompanying following term when registered for courses numbered 4991, 4992, etc. Fee. SNC/UNC grade assessment.

CEEN 4992. Co-op Grading Period 3. 1 cr. hr.
Grading for preceding co-op work assignments is accomplished by review of Employer Evaluation Forms, Work Exit Reports, and other materials as required during each term in school following a work period. No tuition is charged for Grading Periods. S/U grade assessment.

CEEN 4993. Co-op Work Period 4. 0 cr. hrs.
Registration for approved cooperative education program work assignments is required of all co-op students. Grading and credits are accomplished in the accompanying following term when registered for courses numbered 4993, 4994 etc. Fee. SNC/UNC grade assessment.

CEEN 4994. Co-op Grading Period 4. 1 cr. hr.
Grading for preceding co-op work assignments is accomplished by review of Employer Evaluation Forms, Work Exit Reports, and other materials as required during each term in school following a work period. No tuition is charged for Grading Periods. S/U grade assessment.
CEEN 4995. Independent Study in Civil and Environmental Engineering. 1-3 cr. hrs.
Undergraduate independent study project of either a theoretical or experimental nature. Prereq: Jr. stdg., 3.000 GPA, cons. of instr., and cons. of dept. ch.

CEEN 4997. Civil Engineering Capstone Design. 4 cr. hrs.
Design of selected civil engineering projects including planning, preliminary analysis and final design. Different projects are selected each year. Students are assigned to project teams with specific tasks under the direction of a faculty course coordinator. Professional engineers from local firms propose projects and act as consultants to each design team. Emphasis is placed on student initiative, responsibility and resourcefulness in an open-ended project. A final written design report and oral presentation are required for each design team. Emphasis on technical communications, professional ethics and engineering practices. 3 hrs. lec., 3 hrs. lab. Prereq: CEEN 3430 or CEEN 3440; CEEN 3510, CEEN 3610, and CNEN 3810 for CIEN and ENEN majors. CNEN 3810, CNEN 4830 and CNEN 4845 for CNEN majors.

Construction Engineering Courses

CNEN 3810. Introduction to Construction Management. 3 cr. hrs.
Construction contracts, contract bonds, construction funding, cash flow analysis, labor productivity and cost. Analytical techniques for project planning and scheduling. Construction safety. Prereq: Soph. stdg for CNEN, CIEN, and ENEN majors. Sr. stdg. for all other majors.

CNEN 3860. Construction Materials and Methods. 3 cr. hrs.

CNEN 3991. Co-op Work Period 1. 0 cr. hrs.
Registration for approved cooperative program work assignments is required for all co-op students. Grading and credits are accomplished in the accompanying following term when registered for courses numbered 3991, 3992. SNC/UNC grade assessment.

CNEN 3992. Co-op Grading Period 1. 1 cr. hr.
Grading for preceding co-op work assignments is accomplished by review of Employer Evaluation Forms, Work Exit Reports and other materials as required during each term in school following a work period. No tuition is charged for Grading Periods. S/U Grade Assessment.

CNEN 3993. Co-op Work Period 2. 0 cr. hrs.
Registration for approved cooperative program work assignments is required for all co-op students. Grading and credits are accomplished in the accompanying following term when registered for courses numbered 3993, 3994. SNC/UNC grade assessment.

CNEN 3994. Co-op Grading Period 2. 1 cr. hr.
Grading for preceding co-op work assignments is accomplished by review of Employer Evaluation Forms, Work Exit Reports and other materials as required during each term in school following a work period. No tuition is charged for Grading Periods. S/U Grade Assessment.

CNEN 4815. Mechanical and Electrical Systems for Buildings. 3 cr. hrs.
Provides basic knowledge of electrical, plumbing and HVAC systems used in residential, commercial and industrial buildings. Studies the advantages and disadvantages of various systems, and how their design and installation integrates into the management of the building process. Particular attention is given to soliciting and managing mechanical and electrical subcontractors. Prereq: CNEN 3810.

CNEN 4820. Construction Operations and Productivity. 3 cr. hrs.
Study of construction operations with emphasis on productivity measurement and enhancement. Application of an integrated approach to planning, analysis and design of construction operations. Application of simulation models and other analytical tools for modeling construction operations. Study of productivity improvement strategies, including lean construction principles. Prereq: Senior standing.

CNEN 4825. E-Business in the Construction Industry. 3 cr. hrs.
Explores the ways in which information technology and its Internet components help to provide competitive advantage for construction companies. Selection/implementation of Web-based project management tools. An investigation of digital technologies in construction industry. Wire/wireless communication, online plan/bid rooms, mobile computing, and video conferencing. Prereq: Senior standing.

CNEN 4830. Construction Planning, Scheduling, and Control. 3 cr. hrs.
A study of principles and techniques used to plan, schedule and control costs on building construction projects. Network and linear scheduling models, resource allocation and time-cost analysis. Develops an appreciation of the resources required in a project and their limitations and introduces the techniques for analyzing and improving their use. Develops an understanding of the correlation between project planning and control and cost estimating and scheduling. Prereq: CNEN 3860.

Study of various cost estimating methods and their applications. Topics include: labor, material, equipment and indirect costs; quantity takeoff; analysis of historical cost data; forecasting and computerized estimating methods. Prereq: CNEN 4845 or cons. of instr.

CNEN 4845. Construction Equipment and Methods. 3 cr. hrs.
Construction equipment and productivity analysis. Design of equipment fleet operations. Design of temporary structures used during construction such as earth retaining structures and concrete formwork systems. Construction equipment safety and safety standards related to earthwork and concrete forming operations. Prereq: CNEN 3810.

CNEN 4931. Topics in Construction Engineering and Management. 1-3 cr. hrs.
Course content announced each term. Prereq: Cons. of instr.
CNEN 4991. Co-op Work Period 3. 0 cr. hrs.
Registration for approved cooperative program work assignments is required for all co-op students. Grading and credits are accomplished in the accompanying following term when registered for courses numbered 4991, 4992. SNC/UNC grade assessment.

CNEN 4992. Co-op Grading Period 3. 1 cr. hr.
Grading for preceding co-op work assignments is accomplished by review of Employer Evaluation Forms, Work Exit Reports and other materials as required during each term in school following a work period. No tuition is charged for Grading Periods. S/U Grade Assessment.

CNEN 4993. Co-op Work Period 4. 0 cr. hrs.
Registration for approved cooperative program work assignments is required for all co-op students. Grading and credits are accomplished in the accompanying following term when registered for courses numbered 4993, 4994. SNC/UNC grade assessment.

CNEN 4994. Co-op Grading Period 4. 1 cr. hr.
Grading for preceding co-op work assignments is accomplished by review of Employer Evaluation Forms, Work Exit Reports and other materials as required during each term in school following a work period. No tuition is charged for Grading Periods. S/U Grade Assessment.

CNEN 4995. Independent Study in Construction Engineering. 1-3 cr. hrs.
Undergraduate independent study project of either a theoretical or experimental nature. Prereq: Jr. stndg., 3.000 GPA, cons. of instr., and cons. of dept. ch.
Department of Electrical and Computer Engineering

Chairperson: Edwin E. Yaz, Ph.D., P.E.

Department of Electrical and Computer Engineering website (http://www.marquette.edu/engineering/electrical_computer)

The Department of Electrical and Computer Engineering offers curricula that lead to a bachelor of science degree in electrical engineering or a bachelor of science degree in computer engineering.

Mission

The Department of Electrical and Computer Engineering embraces the missions of Marquette University and its Opus College of Engineering. The mission of the Department of Electrical and Computer Engineering is to offer its students high-quality, up-to-date, nationally-recognized programs in electrical and computer engineering that prepare them for successful careers. This success is marked by a commitment to lifelong learning and a deep concern for the impact of their work on others; by research that advances the frontiers of technical and scientific knowledge and by service to professional and civic communities.

Engineering is the professional art of applying science and mathematics to the efficient conversion of natural resources and to the manipulation of information for human benefit. The basic concepts in this definition can be expanded, particularly for the electrical or computer engineer, by considering his or her activities. These usually involve 1) the processing and control of energy, 2) the processing and control of information, 3) the processing and control of materials. Certainly any educational experience in electrical engineering or computer engineering should be evaluated for the student in terms of its contribution in one or more of these areas.

However, this is not the only consideration. Equally important is the concept of engineering as a dynamic profession. In terms of the educational process, this means that attention must be directed to preparing the student for types of processing and control, which have not yet been developed or perhaps even discovered. The young engineer must be prepared to cope with devices and systems which will appear years into the future, from the viewpoint of the scientific principles on which the design of these future devices and systems will be based.

There is another important consideration in the practice of electrical and computer engineering. An engineer is called on for many and varied activities but as diversified as these may be, when carefully examined, they lead to this conclusion: Problem-solving is the engineer’s most important activity. From the educator’s viewpoint, this naturally should lead to a planned, conscious effort to develop the young engineer’s problem-solving ability to the limits of his or her God-given talents. In this regard, it is important to note that since engineers’ problems are sometimes creative, sometimes analytic, and sometimes experimental, their educational experience must give practice in each of these areas and in all types of problems. Significant design experience is an essential part of the engineer’s education.

Finally, the engineer is an individual, a citizen who needs to develop a sense of moral and ethical values on a plane consistent with his or her education in other areas. In the educational process, this requires that a good balance be developed between the technical and social-humanistic content.

The electrical engineering and computer engineering curricula at Marquette University are carefully designed to meet the requirements of each student. Opportunities are provided for each student to develop in the direction of personal interests and at a rate corresponding to individual ability. Coherent elective programs are planned with each student consistent with his or her ability and professional goals. Moreover, superior students have the opportunity for independent study and for participation in research activity.

Educational Objectives

The Educational Objectives for the Electrical Engineering and Computer Engineering Programs derive from the Department’s vision for our graduates. Alumni of these programs, particularly those individuals who have completed their undergraduate education within the last two to five years, will be thriving professionals who apply the knowledge, skills, and values gained through their study of Computer or Electrical Engineering at Marquette University.

Specifically, our graduates are:

1. Engaged in solving significant problems in engineering or another field, as employees in the public or private sector, or as students pursuing an advanced or professional degree, or as volunteers.
2. Capably contributing as members of engineering or other problem-solving teams and communicating effectively both within the team and to the team’s clients.
3. Advancing in their professional careers — taking on increasing responsibilities as well as leadership roles.
4. Continually learning, whether in a formal degree program or by participating in professional conferences and continuing education programs.
5. Acting responsibly when making professional and personal decisions — serving as examples to those around them.

Computer Science Minor

Students in Electrical or Computer Engineering may obtain a minor in computer science by following the guidelines listed in the Concentrations and Minors (p. 558) section of the Opus College of Engineering bulletin.
Non-Electrical/Computer Engineering Minors

Students in the electrical engineering curriculum who are interested in obtaining a minor (or major) in any other area should consult with their advisers during their freshman or sophomore year in order to plan their schedules to meet their particular objectives with a minimum amount of overload credits. Students wishing to achieve a non-engineering minor should follow the guidelines listed in the "Concentrations and Minors" section of the Opus College of Engineering bulletin.

Five Year B.S./M.S. Program

This program allows students to receive a bachelor of science degree in either electrical engineering or computer engineering, depending on the student’s undergraduate major, and a master of science degree in electrical engineering in five years. Students with qualifying grade point averages enroll in the program during their junior year. Additional information about this program is available in the most recent Marquette University Graduate Bulletin.

Electrical Engineering

The electrical engineering major provides students with a comprehensive electrical engineering background including course specialties in five broad categories: Electronic Devices and Systems; Signals, Systems & Control; Electromagnetic Fields and Communication; Power and Energy Systems and Computer Hardware and Software.

<table>
<thead>
<tr>
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<th>Hours</th>
<th>Second Term</th>
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<td>ELEN 2040</td>
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</tr>
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<td>EECE 2030(^t)</td>
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<td>PHYS 1004(^b)</td>
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<table>
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<td>ELEN 3020(^t)</td>
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<td>ELEN 3110(^t)</td>
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<td>EE Elective(^t)</td>
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<td></td>
</tr>
<tr>
<td>PHIL 2310(^b)</td>
<td>3</td>
<td>EE Elective(^t)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>THEO 1001 or Core Elective(^b)</td>
<td>3</td>
<td>MATH 4720</td>
<td>3</td>
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<tr>
<td></td>
<td>17</td>
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<td>17</td>
<td></td>
</tr>
</tbody>
</table>
### Areas of Concentration within Electrical Engineering

The Electrical Engineering curriculum has six electives designated as EE electives. At least five of these electives must be courses with an ELEN, EECE or COEN number as listed for the concentration areas. The remaining two electives can be in any technical area. The student, in consultation with his or her adviser, must design the elective program to meet both a breadth requirement and a depth requirement. To meet the breadth requirement, students must choose at least one course from each of at least three of the concentration areas. To meet the depth requirement, at least three courses must be chosen from within a single concentration area. These areas of concentration and the courses in each area are described below.

#### Electronic Devices and Systems

Device Systems is based on the fundamental principles of solid state devices. These fundamentals are applied to the design and application of integrated circuits, nanotechnology, and state of the art devices. The following ELEN courses are available in the Device Systems area:

- **EECE 4410** Integrated Microelectronic Circuits 3
- **ELEN 4470** Advanced VHDL and FPGA Design 3
- **ELEN 4430** Physical Principles of Solid State Devices 3
- **ELEN 4450** Surface Acoustic Wave Devices 3
- **ELEN 4460** Sensor Devices: Theory, Design, and Applications 3
- **ELEN 4490** Developments in Devices 1-3
- **ELEN 4565** Optical Fiber Communications 3

#### Signals, Systems and Controls

Control system engineering develops a general background in automatic controls and systems engineering with a fundamental emphasis on linear feedback systems and applications of computers. Course work in advanced controls, digital systems, and large-scale design is included. The following ELEN and EECE elective courses are available in the Systems and Control area:

- **ELEN 4310** Control Systems 3
- **ELEN 4320** Digital Control Systems 3
- **ELEN 4390** Developments in Control 1-3
- **EECE 4510** Digital Signal Processing 3
- **ELEN 4550** Developments in Signal Processing 1-3
- **ELEN 4560** Introduction to Communication Systems 3
- **ELEN 4565** Optical Fiber Communications 3
ELEN 4590  Developments in Communications  1-3

**Electromagnetic Fields and Communication**

Applied electromagnetics and waves involve high frequency waves as applied to communications and sensing applications. Principles and applications of wireless communications are included. Fiber optics, antennas, modern communication cell systems, analog and digital modulation techniques, and sensor principles and applications are investigated. The following ELEN and EECE elective courses are available in the Electromagnetic Fields and Communication area:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELEN 3120</td>
<td>Electromagnetic Fields 2</td>
<td>3</td>
</tr>
<tr>
<td>ELEN 4130</td>
<td>Antenna Theory and Design</td>
<td>3</td>
</tr>
<tr>
<td>ELEN 4150</td>
<td>Applied Finite Elements in Electromagnetics</td>
<td>3</td>
</tr>
<tr>
<td>EECE 4510</td>
<td>Digital Signal Processing</td>
<td>3</td>
</tr>
<tr>
<td>ELEN 4560</td>
<td>Introduction to Communication Systems</td>
<td>3</td>
</tr>
<tr>
<td>ELEN 4565</td>
<td>Optical Fiber Communications</td>
<td>3</td>
</tr>
<tr>
<td>ELEN 4570</td>
<td>Wireless Communications</td>
<td>3</td>
</tr>
<tr>
<td>ELEN 4190</td>
<td>Developments in Electromagnetics</td>
<td>1-3</td>
</tr>
<tr>
<td>ELEN 4590</td>
<td>Developments in Communications</td>
<td>1-3</td>
</tr>
<tr>
<td>ELEN 4110</td>
<td>Microwave Engineering</td>
<td>3</td>
</tr>
</tbody>
</table>

**Power and Energy Systems**

Power engineering emphasizes the control and conversion of electrical energy. Motors and generators with their associated electronic power controls, power distribution systems and control systems are examined. Modern computer-aided analysis is brought to bear on the design and analysis of power devices and power systems. The following ELEN and EECE elective courses are available in the Power and Energy area:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELEN 3210</td>
<td>Electric Drives</td>
<td>3</td>
</tr>
<tr>
<td>ELEN 4210</td>
<td>Design and Analysis of Electric Motor-Drive Systems</td>
<td>3</td>
</tr>
<tr>
<td>ELEN 4220</td>
<td>Power Electronics for Renewable Energy Systems</td>
<td>3</td>
</tr>
<tr>
<td>ELEN 4230</td>
<td>Renewable and Legacy Electric Energy Systems Analysis</td>
<td>3</td>
</tr>
<tr>
<td>ELEN 4240</td>
<td>Protection and Monitoring of Electric Energy Systems</td>
<td>3</td>
</tr>
<tr>
<td>ELEN 4250</td>
<td>Transients in Electric Energy Systems and Devices</td>
<td>3</td>
</tr>
<tr>
<td>ELEN 4290</td>
<td>Developments in Energy and Power</td>
<td>1-3</td>
</tr>
</tbody>
</table>

**Computer Hardware and Software**

The computer hardware and software concentration provides courses that give a greater exposure to and more in-depth study of computer principles and applications. The emphasis in these courses is on small computers, particularly microcomputer concepts and applications. The following COEN courses are available in the Computer Hardware and Software area:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COEN 4620</td>
<td>Modern Programming Practices</td>
<td>3</td>
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<tr>
<td>COEN 4630</td>
<td>Software Testing</td>
<td>3</td>
</tr>
<tr>
<td>COEN 4710</td>
<td>Computer Hardware</td>
<td>3</td>
</tr>
<tr>
<td>COEN 4720</td>
<td>Embedded Systems Design</td>
<td>3</td>
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<tr>
<td>COEN 4730</td>
<td>Computer Architecture</td>
<td>3</td>
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<tr>
<td>COEN 4810</td>
<td>Database Applications</td>
<td>3</td>
</tr>
<tr>
<td>COEN 4820</td>
<td>Operating Systems and Networking</td>
<td>3</td>
</tr>
<tr>
<td>COEN 4830</td>
<td>Introduction to Computer Graphics</td>
<td>3</td>
</tr>
<tr>
<td>COEN 4840</td>
<td>Computer Security</td>
<td>3</td>
</tr>
<tr>
<td>COEN 4850</td>
<td>Introduction to Intelligent Systems</td>
<td>3</td>
</tr>
<tr>
<td>COEN 4860</td>
<td>Introduction to Neural Networks and Fuzzy Systems</td>
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</tr>
<tr>
<td>COEN 4870</td>
<td>Evolutionary Computation</td>
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<tr>
<td>EECE 4410</td>
<td>Integrated Microelectronic Circuits</td>
<td>3</td>
</tr>
<tr>
<td>EECE 4740</td>
<td>Advanced VHDL and FPGA Design</td>
<td>3</td>
</tr>
</tbody>
</table>

**Preparing for Graduate Study**

The ELEN curriculum provides an excellent foundation for students wishing to pursue graduate studies in most electrical engineering graduate programs.
Computer Engineering Major

In addition to the electrical engineering major outlined above, the Department of Electrical and Computer Engineering offers a curriculum leading to a bachelor of science degree in computer engineering. The computer engineering curriculum provides a solid foundation in electrical engineering fundamentals, as well as a comprehensive study of computer software and hardware systems. Through an ample elective program, students can customize their studies to their individual interests, emphasizing hardware engineering, software engineering, or intelligent systems.

### Freshman

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
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<td>CHEM 1001&lt;sup&gt;b&lt;/sup&gt;</td>
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<td>Core Rhetoric 2&lt;sup&gt;c&lt;/sup&gt;</td>
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<td>EECE 1954</td>
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### Sophomore

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<td>EECE 2035</td>
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### Junior

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### Senior

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<td>COEN 4920</td>
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<td>Core Elective/ Free Elective&lt;sup&gt;c,d&lt;/sup&gt;</td>
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Areas of Concentration within Computer Engineering

The Computer Engineering curriculum has six electives designated as COEN/TECH electives. At least five of these electives must be courses with a COEN number. The remaining elective can be in any technical area. The student, in consultation with his or her adviser, must design the elective program to meet both a breadth requirement and a depth requirement. To meet the breadth requirement, one COEN elective must be in the Hardware area, a second COEN elective must be in the Software area and a third COEN elective must be in the Intelligent Systems area. To meet the depth requirement, a total of three COEN electives must be in one of the following three areas: Hardware, Software and Intelligent Systems. These areas of concentration and the courses in each area are described below.

Hardware

Hardware includes the study of computer architectures, computer chip technology, peripheral devices, signal processing, interface design and the like. The following COEN elective courses are available in the Hardware area:

Breadth or Depth

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>COEN 4730</td>
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<tr>
<td>EECE 4740</td>
<td>Advanced VHDL and FPGA Design</td>
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</tr>
<tr>
<td>COEN 4790</td>
<td>Developments in Computer Hardware</td>
<td>3</td>
</tr>
<tr>
<td>EECE 4410</td>
<td>Integrated Microelectronic Circuits</td>
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Depth Only

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<th>Credits</th>
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<td>ELEN 3030</td>
<td>Analog Electronics</td>
<td>3</td>
</tr>
<tr>
<td>ELEN 3025</td>
<td>Electrical Instrumentation Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>ELEN 3035</td>
<td>Analog Electronics Laboratory</td>
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</tr>
<tr>
<td>EECE 4510</td>
<td>Digital Signal Processing</td>
<td>3</td>
</tr>
<tr>
<td>ELEN 4310</td>
<td>Control Systems</td>
<td>3</td>
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<tr>
<td>ELEN 4560</td>
<td>Introduction to Communication Systems</td>
<td>3</td>
</tr>
<tr>
<td>COSC 4290</td>
<td>Real-Time and Embedded Systems</td>
<td>3</td>
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</table>

Software

Software emphasizes the design of software systems and includes concerns such as the user interface, expansibility and maintainability, efficiency in time and computing resources, software testing, security, etc. The following COEN elective courses are available in the Software area:

Breadth or Depth

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>COEN 4610</td>
<td>Object-Oriented Software Engineering</td>
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<td>COEN 4620</td>
<td>Modern Programming Practices</td>
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</tr>
<tr>
<td>COEN 4630</td>
<td>Software Testing</td>
<td>3</td>
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<tr>
<td>COEN 4690</td>
<td>Developments in Computer Software</td>
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Depth Only

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<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
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<td>COEN 4810</td>
<td>Database Applications</td>
<td>3</td>
</tr>
<tr>
<td>or COSC 4800</td>
<td>Principles of Database Systems</td>
<td>3</td>
</tr>
<tr>
<td>COEN 4830</td>
<td>Introduction to Computer Graphics</td>
<td>3</td>
</tr>
<tr>
<td>COEN 4840</td>
<td>Computer Security</td>
<td>3</td>
</tr>
<tr>
<td>COSC 3410</td>
<td>Programming Languages</td>
<td>3</td>
</tr>
<tr>
<td>COSC 4400</td>
<td>Compiler Construction</td>
<td>3</td>
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<tr>
<td>COSC 4860</td>
<td>Component-Based Software Construction</td>
<td>3</td>
</tr>
<tr>
<td>COSC 4300</td>
<td>Networks and Internets</td>
<td>3</td>
</tr>
</tbody>
</table>
### Intelligent Systems

Intelligent Systems includes the study of artificial intelligence, neural networks, evolutionary computing, design of algorithms, and computer security models. Students wishing to concentrate in this area are encouraged to take ELEN 3020 as one of their non-COEN electives. The following COEN elective courses are available in the Intelligent Systems area:

<table>
<thead>
<tr>
<th>Breadth or Depth</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
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<tr>
<td>COEN 4650</td>
<td>Introduction to Algorithms</td>
<td>3</td>
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<tr>
<td>COEN 4850</td>
<td>Introduction to Intelligent Systems</td>
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<tr>
<td>or COSC 4600</td>
<td>Fundamentals of Artificial Intelligence</td>
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<tr>
<td>COEN 4860</td>
<td>Introduction to Neural Networks and Fuzzy Systems</td>
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<td>COEN 4870</td>
<td>Evolutionary Computation</td>
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<td>Depth Only</td>
<td>COEN 4840</td>
<td>Computer Security</td>
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<td>COSC 4110</td>
<td>Formal Languages and Computability</td>
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<td>COSC 4610</td>
<td>Data Mining</td>
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<td>COSC 3550</td>
<td>Programming Computer Games</td>
<td>3</td>
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### Preparing for Graduate Study

The COEN curriculum provides an excellent foundation for students wishing to pursue graduate studies in most computer engineering, computer science, and electrical engineering graduate programs. However, students who wish to enter the Marquette University graduate program in Electrical Engineering must take ELEN 3020 Linear Systems Analysis as their non-COEN elective in order to meet the entrance requirements.

### Electrical Engineering Minor

The Department of Electrical and Computer Engineering offers a minor in electrical engineering to undergraduate students in the university except those students in electrical engineering. Completion of the minor will be noted on the student’s transcript if the following requirements are met. A minimum of twenty-five hours including:

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<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>EECE 2010</td>
<td>Electric Circuits 1</td>
<td>3</td>
</tr>
<tr>
<td>EECE 2015</td>
<td>Circuits Laboratory 1</td>
<td>1</td>
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<tr>
<td>ELEN 2020</td>
<td>Electric Circuits 2</td>
<td>3</td>
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<tr>
<td>or COEN 2020</td>
<td>Electric Circuits 2</td>
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<tr>
<td>EECE 2030</td>
<td>Digital Electronics</td>
<td>3</td>
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<tr>
<td>EECE 2035</td>
<td>Circuits Laboratory 2</td>
<td>1</td>
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<tr>
<td>EECE 3010</td>
<td>Electronic Devices and Applications</td>
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<tr>
<td>EECE 3015</td>
<td>Digital Electronics Laboratory</td>
<td>2</td>
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<tr>
<td>ELEN 3020</td>
<td>Linear Systems Analysis</td>
<td>3</td>
</tr>
<tr>
<td>or BIEN 3300</td>
<td>Signals and Systems for Biomedical Engineering</td>
<td></td>
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<tr>
<td>ELEN 3110</td>
<td>Electromagnetic Fields 1</td>
<td>3</td>
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<tr>
<td>ELEN or EECE elective</td>
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<td>3</td>
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</tbody>
</table>

Total Credit Hours: 25

At least half of these credit hours must be taken at Marquette University and a grade of C or better must be earned in each course for the minor.

### Computer Engineering Minor

The Department of Electrical and Computer Engineering offers a minor in computer engineering to undergraduate students in the university except those students in computer engineering. Completion of the minor will be noted on the student’s transcript if the following requirements are met. A minimum of twenty-four hours including:

<table>
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<tr>
<td>EECE 2010</td>
<td>Electric Circuits 1</td>
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<tr>
<td>EECE 2015</td>
<td>Circuits Laboratory 1</td>
<td>1</td>
</tr>
<tr>
<td>EECE 2030</td>
<td>Digital Electronics</td>
<td>3</td>
</tr>
<tr>
<td>EECE 2710</td>
<td>Introduction to Computer Hardware and Software</td>
<td>3</td>
</tr>
<tr>
<td>EECE 3010</td>
<td>Electronic Devices and Applications</td>
<td>3</td>
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</tbody>
</table>
At least half of these credit hours must be taken at Marquette University and a grade of C or better must be earned in each course for the minor.

Computer Engineering Courses

**COEN 2020. Electric Circuits.** 3 cr. hrs.

**COEN 2610. Software Methodologies.** 3 cr. hrs.
The first course in software engineering, covering the software life cycle, proper selection of data structures and algorithms, and the availability and choice of programming paradigms for appropriate design and implementation of well-engineered software. An open laboratory and significant programming experiences form an integral part of this course. Prereq: EECE 1610 or COSC 1010.

**COEN 3991. Co-Op Work Period 1.** 0 cr. hrs.
Registration for approved cooperative education program work assignments is required of all co-op students. Grading and credits are accomplished in the accompanying following term when registered for courses numbered 3991, 3992, etc. Fee. SNC/UNC grade assessment.

**COEN 3992. Co-Op Grading Period 1.** 1 cr. hr.
Grading for preceding co-op work assignments is accomplished by review of employer evaluation forms, work exit reports, and other materials as required during each term in school following a work period. No tuition is charged for grading periods. S/U grade assessment.

**COEN 3993. Co-Op Work Period 2.** 0 cr. hrs.
Registration for approved cooperative education program work assignments is required of all co-op students. Grading and credits are accomplished in the accompanying following term when registered for courses numbered 3993, 3994, etc. Fee. SNC/UNC grade assessment.

**COEN 3994. Co-Op Grading Period 2.** 1 cr. hr.
Grading for preceding co-op work assignments is accomplished by review of employer evaluation forms, work exit reports, and other materials as required during each term in school following a work period. No tuition is charged for grading periods. S/U grade assessment.

**COEN 4610. Object-Oriented Software Engineering.** 3 cr. hrs.
Presents advanced software engineering concepts in the context of object-oriented analysis and design. Topics include: concept of object-orientation, UML modeling techniques, use of CASE tools, use-case requirement analysis, modeling with classes, object-oriented design, design patterns, software quality, testing and correctness, software reuse and aspect-oriented software engineering. Prereq: COEN 2610.

**COEN 4620. Modern Programming Practices.** 3 cr. hrs.
Explores advanced topics in computer programming. Topics may include: design patterns, advanced graphical components, software component models such as Java Beans, the Java Security model, Java and databases, servlets, Java Server Pages, and Enterprise Java Beans. Prereq: COSC 2100 or COSC 2010.

**COEN 4630. Software Testing.** 3 cr. hrs.
Examines the relationship of software testing to quality, emphasizing testing techniques and the role of testing in the validation of system requirements. Topics include: module and unit testing, integration, walkthroughs and inspections, verification and validation, preventing and detecting errors, selecting and implementing project metrics, and defining test plans and strategies traced from system requirements. Prereq: EECE 2710, COSC 2100, COSC 2010, or equivalent experience.

**COEN 4650. Introduction to Algorithms.** 3 cr. hrs.
Introduction to the algorithms analysis. Topics to be covered include: the concepts of time and space complexity, advanced data structures, general issues in problem solving methodologies, greedy algorithms, dynamic programming, graph algorithms, AI-related algorithms, and an introduction to NP-completeness theory. Prereq: COSC 2010.

**COEN 4690. Developments in Computer Software.** 3 cr. hrs.
Course content is announced prior to each semester. Students may enroll in the course more than once because subject matter changes. COEN design elective. Prereq: Cons. of instr.

**COEN 4710. Computer Hardware.** 3 cr. hrs.
Overview of computer system design. Cost and performance specification. Design of arithmetic and logic units. Fundamentals of central processor architecture and a comparative study of computer instruction set architectures. Detailed study of microprocessors, including instruction execution timing and other timing considerations. Discussions of memory and I/O devices, including the interfaces to the CPU and I/O transfer techniques. Study of common bus standards. Prereq: EECE 2710 with minimum grade of C and EECE 2030 with minimum grade of C; or COSC 2200 with minimum grade of C and EECE 2030 with minimum grade of C.
COEN 4720. Embedded Systems Design. 3 cr. hrs.
This course introduces students to embedded systems, the types of hardware that can support such systems, and the interfacing used in embedded systems. The course is a combined laboratory and lecture course, which directly applies the embedded systems techniques using hardware description and assembly languages to field programmable gate array technology. Prereq: COEN 4710 and EECE 3015.

COEN 4730. Computer Architecture. 3 cr. hrs.

COEN 4790. Developments in Computer Hardware. 3 cr. hrs.
Course content is announced prior to each semester. Students may enroll in the course more than once because subject matter changes. COEN design elective. Prereq: Cons. of instr.

COEN 4810. Database Applications. 3 cr. hrs.
Presents the design and application of databases. Topics include: models for databases, database query languages, database design methods, methods for storing and retrieving information from a database, database optimizations, transaction processing, and a brief examination of some advanced concepts, including object databases, distributed databases and database security. Prereq: COSC 2100 or COSC 2010 or equiv.

COEN 4820. Operating Systems and Networking. 3 cr. hrs.
Introduces the fundamental concepts of operating systems together with the basics of networking and communications including: memory management, scheduling, concurrent processing, device management, file systems, networking, security, and system performance. Examples are drawn from legacy and modern operating systems. Prereq: COSC 2100 or COSC 2010.

COEN 4830. Introduction to Computer Graphics. 3 cr. hrs.
Introduction to computer graphics algorithm design and implementation; includes considerable actual computer graphics experience. Topics include: point-plocting and line-drawing techniques, two-dimensional curve fitting, two- and three-dimensional graphics, clipping, windowing, hidden line removal, modeling, input-output devices, and other topics as future trends dictate. Prereq: Proficiency in at least one high level computing language.

COEN 4840. Computer Security. 3 cr. hrs.
Introduction to the important issues in computer security, including cryptography, program security, operating system security, database security, and network security. Also discusses the legal, ethical and privacy issues that arise in computer security. Programming projects enable the student to practice implementing many of the security measures discussed in class. Prereq: COSC 2100 or COSC 2010 or equiv.

COEN 4850. Introduction to Intelligent Systems. 3 cr. hrs.
Provides a broad exposure to intelligent systems, including related fields such as artificial and computational intelligence. Topics include: intelligent agents, search, game playing, propositional logic and first-order predicate calculus, uncertainty, learning, communication and perception, and philosophical foundations of intelligent systems. Prereq: COSC 2100, MATH 1450 and MATH 2105.

COEN 4860. Introduction to Neural Networks and Fuzzy Systems. 3 cr. hrs.

COEN 4870. Evolutionary Computation. 3 cr. hrs.
Covers a set of search methods based on the Darwinian principle of survival of the fittest. The methods include genetic algorithms, evolutionary strategies and evolutionary and genetic programming, which have been successfully applied to many different problem domains including optimization, learning, control, and scheduling. Provides students with the background and knowledge to implement various evolutionary computation algorithms, discusses trade-offs between different evolutionary algorithms and other search methods, and discusses issues related to the application and performance evaluation of evolutionary algorithms. Prereq: COSC 2010, MATH 1450 and MATH 2105.

COEN 4890. Developments in Computer Applications. 1-3 cr. hrs.
Course content is announced prior to each term. Students may enroll in the course more than once because subject matter changes. Depending upon the subject matter and the instructor, the class may be taught in traditional lecture format or as a seminar which focuses on readings from the current literature. Possible topics include advanced hardware (MPP, EPIC, VLIW), advanced software (enterprise systems, embedded software, real-time software) and advanced intelligent systems. Prereq: Cons. of instr. or Sr. stndg.

COEN 4920. Principles of Design. 3 cr. hrs.
Course content focuses on a structured product design and development process that includes project definition, customer needs identification, product specification, concept generation, and concept selection. Course also focuses on issues related to teamwork, project management, and effective communication. Student team design projects culminate in the development of a technically and economically viable concept and a proposal for future development of this concept (done in the second semester of this two-course sequence). 2 hrs. lec., 2 hrs. lab. Prereq: Sr. stndg.; Co-op students, Jr. stndg. Cross-listed with BIEN 4920, ELEN 4920 and MEEN 4920.

Registration for approved cooperative education program work assignments is required of all co-op students. Grading and credits are accomplished in the accompanying following term when registered for courses numbered 4991, 4992, etc. Fee. SNC/UNC grade assessment.
COEN 4992. Co-Op Grading Period 3. 1 cr. hr.
Grading for preceding co-op work assignments is accomplished by review of employer evaluation forms, work exit reports, and other materials as required during each term in school following a work period. No tuition is charged for grading periods. S/U grade assessment.

COEN 4993. Co-Op Work Period 4. 0 cr. hrs.
Registration for approved cooperative education program work assignments is required of all co-op students. Grading and credits are accomplished in the accompanying following term when registered for courses numbered 4993, 4994, etc. Fee. SNC/UNC grade assessment.

COEN 4994. Co-Op Grading Period 4. 1 cr. hr.
Grading for preceding co-op work assignments is accomplished by review of employer evaluation forms, work exit reports, and other materials as required during each term in school following a work period. No tuition is charged for grading periods. S/U grade assessment.

COEN 4995. Independent Study in Computer Engineering. 1-4 cr. hrs.
Undergraduate independent study project of either a theoretical or experimental nature. Prereq: Jr. stdng., 3.000 GPA, cons. of instr., and cons. of dept. ch.; or Sr. stdng., 3.000 GPA, cons. of instr., and cons. of dept. ch.

COEN 4998. Senior Design Project. 3 cr. hrs.
Focus on detailed design, prototyping, and testing design concepts. Includes topics directly relevant to student design projects and careers in the engineering profession. Student team design projects culminate in a final report that documents the performance and details (engineering drawings and/or documentation) of their final design. 2 hrs. lec., 2 hrs. lab. Prereq: COEN 4920; Cross-listed with BIEN 4998, ELEN 4998 and MEEN 4998.

Electrical Computer Engineer Courses

EECE 1610. Introduction to Computer Programming. 3 cr. hrs.
Students will be introduced to computer programming with an emphasis on object-oriented programming (OOP) and OOP design methodologies. The students will learn about typical programming constructs including data types, data structures, control structures, data input and output techniques as well as several algorithms used for solving engineering problems. In addition, students will learn to use modern programming tools in an integrated development environment by focusing on developing software solutions to significant engineering problems.

EECE 1953. Freshman Seminar 1. 1 cr. hr.
Introduction to electrical engineering and computer engineering through presentations by faculty, graduate students, upper-class undergraduate students, alumni, and industry representatives. A formal opportunity for first-year COEN, ELCE, and ELEE students to interact with their peers and other members of the EECE Department.

EECE 1954. Freshman Seminar 2. 1 cr. hr.
Continuation of EECE 1953. COEN, ELCE, and ELEE students will have further opportunities to investigate electrical engineering and computer engineering applications through presentations by faculty, graduate students, upper-class undergraduate students, alumni, and industry representatives.

EECE 2010. Electric Circuits 1. 3 cr. hrs.

EECE 2015. Circuits Laboratory 1. 1 cr. hr.
Circuit design, construction and test skills are expanded to include digital circuits and programmable logic devices as well as passive and active filters. Emphasis placed on DC and transient response of circuits. 1 hr. lec., 2 hrs. lab. EECE 2010 must be taken concurrently.

EECE 2030. Digital Electronics. 3 cr. hrs.
Introduces students to the basic principles of digital circuit analysis and design. Topics covered include: Boolean Algebra, number systems, basic logic gates, standard combinational circuits, combinational design, timing diagrams, flip-flops, sequential design, standard sequential circuits and programmable logic devices. Prereq: Soph. stdng.

EECE 2035. Circuits Laboratory 2. 1 cr. hr.
Circuit design, construction and test skills are expanded to include digital circuits and programmable logic devices as well as passive and active filters. Emphasis placed on DC, AC and transient response of circuits containing passive and active devices. 1 hr. lec., 2 hrs. lab. Prereq: EECE 2010 with minimum grade of C, EECE 2015 with minimum grade of C, ELEN 2020 or COEN 2020, either of which may be taken concurrently and EECE 2030, which may be taken concurrently.

EECE 2710. Introduction to Computer Hardware and Software. 3 cr. hrs.
Overview of computer hardware: information representation, the control unit, implementation of instruction sets, memories and storage devices, internal bus organization, the arithmetic/logic unit, the input/output unit, interfacing peripherals. Overview of computer software, operating system components: memory management, input/output, file management, scheduling, resource management. Layered operating system design, programming languages and language translators, application layer design, software tools, and system design and design process. Programming exercises in machine and assembly language and in the JAVA programming language. Prereq: EECE 1610 or COSC 1010.
EECE 3010. Electronic Devices and Applications. 3 cr. hrs.
Electronic components are discussed including semiconducting diodes, bipolar junction transistors, field effect transistors, etc. These devices will be analyzed from their terminal characteristics and their behavior in representative electronic circuits. Applications for devices include simple power supply analysis and design, class A amplifier analysis including transistor biasing and stability analysis, simple digital logic gates, etc. Prereq: EECE 2010 with minimum grade of C.

EECE 3015. Digital Electronics Laboratory. 2 cr. hrs.
Gaining experience in the design, assembly, testing and trouble-shooting of digital electronic circuits. Experiments encompass a wide range of topics such as: basic logic gates, integrated circuit specifications, Boolean algebra implementations, standard combinational circuits, sequential circuit design, standard sequential circuits, programmable logic devices, digital interfacing and microprocessors. 7400 series ICs, PALs, PROMs, and microprocessor devices are used. 1 hr. lec., 3 hrs. lab. Prereq: EECE 2030 with a minimum grade of C and EECE 2710, which may be taken concurrently; or EECE 2030 with a minimum grade of C and BIEN 3200, which may be taken concurrently.

EECE 4410. Integrated Microelectronic Circuits. 3 cr. hrs.
Basic processing technology of integrated circuits, passive components and their parasitic effects, MOS transistors, bipolar transistors and diodes, design of silicon integrated circuits. Emphasis is placed on the design of circuits to meet given requirements. Design Elective. Prereq: EECE 3010 and ELEN 2020.

EECE 4510. Digital Signal Processing. 3 cr. hrs.
Introduction to the theory and practice of discrete-time signals and systems. Concepts covered include: Fourier Transforms, Z-transforms, linear time invariant system analysis in the time and frequency domains, sampling theory and Discrete Fourier Transforms. Application of these concepts includes: digital filter design techniques and the use of Fast Fourier Transforms for efficient frequency domain analysis. Labs and design projects related to specific signal processing applications are used to illustrate the material, including topics such as audio and image processing. Design Elective. Prereq: ELEN 3020 (or BIEN 3300) or consent of instructor.

EECE 4740. Advanced VHDL and FPGA Design. 3 cr. hrs.
Present the background, abstractions, and techniques for advanced digital circuits design and optimization. Emphasis is placed on specification and synthesis using VHDL and on prototyping using FPGAs of complex systems. Such systems represent examples from various application domains, including processors, image and video processing, filtering and other DSPs, and power electronics. Prereq: EECE 2030, ELEN 3015.

EECE 4995. Independent Study in Electrical and Computer Engineering. 1-5 cr. hrs.
Undergraduate independent study project of either a theoretical or experimental nature. Prereq: Jr. stndg., 3.000 GPA, cons. of instr., and cons. of dept. ch.

**Electrical Engineering Courses**

ELEN 2020. Electric Circuits 2. 3 cr. hrs.

ELEN 2040. Engineering Systems. 3 cr. hrs.
Focuses on the modeling and solution of physical systems including translational and rotational mechanical systems, mass balance systems (fluids, chemical), thermal systems and electrical systems. Analytic solution techniques stress the universality of the mathematics for all systems. Computer solutions using MatLab and Simulink are used to further investigate the linear system behavior and to introduce non-linear system behavior. Prereq: EECE 2010 with a minimum grade of C and either MATH 2450 or MATH 1455.

ELEN 3001. Electric Circuits and Machinery. 3 cr. hrs.
Circuit modeling; basic solution methods for d-c and a-c circuits; d-c and a-c machines. Prereq: PHYS 1004 or PHYS 1014. May not be taken for credit by EECE students.

ELEN 3020. Linear Systems Analysis. 3 cr. hrs.
Mathematical models of continuous-time and discrete-time signals and systems are studied in this course. The time domain viewpoint is developed for linear time invariant systems using the impulse response and convolution integral. The frequency domain viewpoint is also explored through the Fourier Series and Fourier Transform. Basic filtering concepts including simple design problems are covered. Application of the Laplace transform to block diagrams, linear feedback, and stability including Bode plots are discussed. The sampling theorem, the z-transform, and the Discrete Fourier Transform are introduced. Examples of electrical, mechanical, and biomedical signals and systems are used extensively throughout the course. Prereq: ELEN 2020 with minimum grade of C and MATH 2451; or ELEN 3002 with minimum grade of C and MATH 2451; or BIEN 2300 with minimum grade of C and MATH 2451; or ELEN 3001 with minimum grade of C and MATH 2451.

ELEN 3025. Electrical Instrumentation Laboratory. 2 cr. hrs.
Focuses on the modeling and solution of physical systems including translational and rotational mechanical systems, mass balance systems (fluids, chemical), thermal systems and electrical systems. Analytic solution techniques stress the universality of the mathematics for all systems. Computer solutions using MatLab and Simulink are used to further investigate the linear system behavior and to introduce non-linear system behavior. Prereq: ELEN 2010 with minimum grade of C and either MATH 2450 or MATH 1455.

ELEN 3030. Analog Electronics. 3 cr. hrs.
Analysis and design of analog electronic circuits. Low and high frequency models for both bipolar and field effect transistors. Design features and operating characteristics of integrated linear circuits with emphasis on operational amplifiers and op-amp circuits. Prereq: EECE 3010 with minimum grade of C and ELEN 2020 with minimum grade of C.
ELEN 3035. Analog Electronics Laboratory. 2 cr. hrs.
Gaining experience in the design, assembly, testing, and trouble-shooting of analog electronic circuits. Experiments encompass a wide range of topics such as: amplifiers, filters, power supplies, power control, oscillators, and communication circuits. Transistors, op-amps, general purpose, and specific purpose devices are used. 1 hr. lec., 3 hrs. lab. Prereq: ELEN 3030 with minimum grade of C and ELEN 3025 with minimum grade of C.

ELEN 3110. Electromagnetic Fields 1. 3 cr. hrs.
Development and use of the point and integral forms of Maxwell's equations for static and quasi-static electric and magnetic fields with emphasis placed on the vector nature of these fields. Includes analytic and computational solutions to field's problems. The wave equation for E.M. fields is derived and discussed. Prereq: ELEN 2020 with minimum grade of C, MATH 2450, and PHYS 1004 or PHYS 1014.

ELEN 3120. Electromagnetic Fields 2. 3 cr. hrs.
Development and use of Wave Equations as derived from Maxwell's equations to explain the propagation of electromagnetic waves. Includes treatment of physical optics, antennas, wave-guides and transmission lines. Prereq: ELEN 3110.

ELEN 3210. Electric Drives. 3 cr. hrs.
Application of electromagnetic field and circuit theory to electromechanical energy conversion systems. Solutions for the magnetic fields, electromagnetic and electrostatic induced forces, and equivalent circuits using conservation of energy principles. Operation of electric machinery from solid-state power switch converters. Prereq: ELEN 3110 with minimum grade of C.

ELEN 3991. Co-op Work Period 1. 0 cr. hrs.
Registration for approved cooperative education program work assignments is required of all co-op students. Grading and credits are accomplished in the accompanying following term when registered for courses numbered 3991,3992, etc. Fee. SNC/UNC grade assessment.

ELEN 3992. Co-op Grading Period 1. 1 cr. hr.
Grading for preceding co-op work assignments is accomplished by review of Employer Evaluation Forms, Work Exit Reports, and other materials as required during each term in school following a work period. No tuition is charged for Grading Periods. S/U grade assessment.

ELEN 3993. Co-op Work Period 2. 0 cr. hrs.
Registration for approved cooperative education program work assignments is required of all co-op students. Grading and credits are accomplished in the accompanying following term when registered for courses numbered 3993, 3994, etc. Fee. SNC/UNC grade assessment.

ELEN 3994. Co-op Grading Period 2. 1 cr. hr.
Grading for preceding co-op work assignments is accomplished by review of Employer Evaluation Forms, Work Exit Reports, and other materials as required during each term in school following a work period. No tuition is charged for Grading Periods. S/U grade assessment.

ELEN 4015. Advanced Electrical Engineering Laboratory. 3 cr. hrs.
Project-based laboratory experience in the design, assembly and testing of advanced electronic and electrical systems. Course content announced prior to each term. Students may enroll in the course more than once because subject matter changes. Depending upon the subject matter and the instructor, the class may be taught in traditional lecture format or as a seminar which focuses on readings from the current literature. Possible topics include laser electronics, optoelectronics and photonics, RF circuit design, SOC design. Prereq: Cons. of instr. or Sr. stndg.

ELEN 4090. Developments in Electronics. 1-3 cr. hrs.
Course content is announced prior to each term. Students may enroll in the course more than once because subject matter changes. Depending upon the subject matter and the instructor, the class may be taught in traditional lecture format or as a seminar which focuses on readings from the current literature. Possible topics include wireless and microwave components and systems, electromagnetic compatibility, radio wave propagation. Prereq: Cons. of instr. or Sr. stndg.

ELEN 4110. Microwave Engineering. 3 cr. hrs.
Studies the fundamentals of microwave engineering. After a review of transmission line theory and the Smith chart, the scattering parameters are developed and used to characterize and design a variety of devices including power dividers/directional couplers, filters, amplifiers, oscillators and mixers. Receiver architectures and system noise are also introduced and developed. Prereq: ELEN 3120 with a minimum grade of C.

ELEN 4130. Antenna Theory and Design. 3 cr. hrs.
Design and use of antennas of varying types, including wire, broadbands, horn, and reflector antennas in transmitting and receiving applications. The application and design of antenna arrays, and an introduction to diffraction theory. DESIGN ELECTIVE. Prereq: ELEN 3120 with a minimum grade of C.

ELEN 4150. Applied Finite Elements in Electromagnetics. 3 cr. hrs.
Introduction to finite element (FE) analysis as applied to linear and static electromagnetic field problems. Review of basic field formulations using Maxwell's electromagnetic field equations, solution of boundary value problems using the finite difference methods, FE formulations, assembly of elemental and global matrices, pre-processing, post-processing. Application of the FE method using one-dimensional and two-dimensional elements, magnetostatic and electrostatic analysis, and the use of commercially available software packages. Prereq: ELEN 3110 or equiv.

ELEN 4190. Developments in Electromagnetics. 1-3 cr. hrs.
Course content is announced prior to each term. Students may enroll in the course more than once because subject matter changes. Depending upon the subject matter and the instructor, the class may be taught in traditional lecture format or as a seminar which focuses on readings from the current literature. Possible topics include wireless and microwave components and systems, electromagnetic compatibility, radio wave propagation. Prereq: Cons. of instr. or Sr. stndg.
ELEN 4210. Design and Analysis of Electric Motor-Drive Systems. 3 cr. hrs.
Principles of design of AC and DC electric machines, in particular design of electric motors in power electronically controlled adjustable speed drives, torque and power to volume analysis under constant volts per hertz torque-speed control. Covers design of AC induction, synchronous, universal and DC conventional as well as brushless DC motors, and low horsepower motors in adjustable speed drives. Covers effects of space and time harmonics on motor design and performance are covered including harmonic abatement for control of torque pulsation. Use of modern modeling techniques throughout. Design elective. Prereq: ELEN 2020, ELEN 3110 and ELEN 3210.


ELEN 4230. Renewable and Legacy Electric Energy Systems Analysis. 3 cr. hrs.
Elements of renewable and legacy electric power systems; fundamental concepts and techniques for design and analysis; per unit system; load flow; economic dispatch; smart grids and load management; steady state and transient power system stability. Design elective. Prereq: ELEN 2020 and ELEN 3200.

ELEN 4240. Protection and Monitoring of Electric Energy Systems. 3 cr. hrs.
Principles of design of relay and sensor systems for detection of faulty operating conditions in electric generators, transformers, power transmission lines, motors and other loads in power systems. Symmetrical components, balanced and unbalanced faults including single and multiple unbalances. Design and hierarchical coordination of protection systems for interconnected generation, transmission and distribution facilities in power systems, which includes integrated generator-transformer-busbar-transmission line-load protection and analysis of operation under fault conditions. Design elective. Prereq: ELEN 2020, ELEN 3110 and ELEN 3210.

ELEN 4250. Transients in Electric Energy Systems and Devices. 3 cr. hrs.
Covers microsecond fast transients in power systems and devices resulting from lightning strokes, switching surges in power systems and devices, as well as impulse surges resulting from pulse width modulation in modern adjustable speed drives, using distributed parameter models and analysis of transmission lines and windings of transformers, generators and motors. Also covers successive reflections, transition points, wavefront flattening techniques and surge arrestor design applications for voltage buildup reduction and control are studied. Includes polyphase multi-velocity multi-conductor system transients. Design elective. Prereq: ELEN 2020 and ELEN 3110.

ELEN 4290. Developments in Energy and Power. 1-3 cr. hrs.
Course content is announced prior to each term. Students may enroll in the course more than once as subject matter changes. May be taught in traditional lecture format or as a seminar which focuses on readings from current literature. Topics may include: electronics for machine and drive systems, electrical transients, faults and diagnostics and protection in power devices and systems, renewable energy systems, smart grids and advanced topics in the electric energy engineering area. Prereq: Cons. of instr. or Sr. stndg.

ELEN 4310. Control Systems. 3 cr. hrs.
Review of continuous-time linear systems. Time-domain system analysis. Time-domain design of lead/lag and PID controllers. Root-Locus technique. Frequency-domain system analysis including Nyquist, Bode, and Nichols analysis and relative stability. Frequency-domain design/lead and PID controllers. DESIGN ELECTIVE. Prereq: ELEN 3020 or BIEN 3300.

ELEN 4320. Digital Control Systems. 3 cr. hrs.
Review of sampling processes, discrete time linear systems analysis and z-transform. Discrete time and sampled data state-variable analysis. Stability analysis, time domain and frequency-domain analysis and design. Analysis, design and computer implementation of digital algorithms and control systems. Design Elective. Prereq: ELEN 3020 or BIEN 3300.

ELEN 4390. Developments in Control. 1-3 cr. hrs.
Course content is announced prior to each term. Students may enroll in the course more than once because subject matter changes. Depending upon the subject matter and the instructor, the class may be taught in traditional lecture format or as a seminar which focuses on readings from the current literature. Possible topics include optimal, adaptive and robust control methods, digital control and nonlinear systems. Prereq: Cons. of instr. or Sr. Stndg.

Fundamental physical principles of solid state devices are presented. The operation of modern semiconductor devices is explained from first principles and these principles are used to extend the students' knowledge of devices used in electronic circuits. Prereq: EECE 3010 with minimum grade of C, ELEN 3110 with minimum grade of C, and PHYS 1004 or PHYS 1014.

ELEN 4450. Surface Acoustic Wave Devices. 3 cr. hrs.
This course is concerned with the theory and applications of surface acoustic wave devices. Major topics covered include: theory of surface and other acoustic wave modes; design, analysis, and performance of interdigital devices; SAW bandpass filters; oscillators and sensors; and applications of SAW devices in wireless communications. Design Elective. Prereq: ELEN 3020 (or BIEN 3300) and ELEN 3110; or cons. of instr.
Sensor classification and transduction principles. Fundamental principles and theory of operation of various types of sensors, based on various technologies which include optical, electrical, acoustical, thermal, magnetic, mechanical and chemical. Analysis of sensor signals. Study of sensor characteristics which include hysteresis, non-linearity, saturation, repeatability, sensitivity, selectivity and resolution. Design and practical implementations of various sensors for scientific, industrial and consumer applications. Design elective. Prereq: Sr. stndg.

ELEN 4490. Developments in Devices. 1-3 cr. hrs.
Course content is announced prior to each term. Students may enroll in the course more than once because subject matter changes. Depending upon the subject matter and the instructor, the class may be taught in traditional lecture format or as a seminar which focuses on readings from the current literature. Possible topics include optoelectronic devices, nano-scale devices, solid-state devices, integrated electronic devices, power devices, electromechanical devices, quantum devices. Prereq: Cons. of instr. or Sr. stndg.

ELEN 4550. Developments in Signal Processing. 1-3 cr. hrs.
Course content is announced prior to each term. Students may enroll in the course more than once because subject matter changes. Depending upon the subject matter and the instructor, the class may be taught in traditional lecture format or as a seminar which focuses on readings from the current literature. Possible topics include filter design, DSP hardware, Nonlinear signal processing and multi-dimensional signal processing. Prereq: Cons. of instr. or Sr. stndg.

ELEN 4560. Introduction to Communication Systems. 3 cr. hrs.
Survey of digital and analog communication systems including signal representation, modulation techniques, transmit and receive network design considerations. Prereq: ELEN 3020 or BIEN 3300.

ELEN 4565. Optical Fiber Communications. 3 cr. hrs.

ELEN 4570. Wireless Communications. 3 cr. hrs.
Fundamentals, analysis and design of cell systems, including trunking theory and grade of service. Large scale and small scale path loss analysis and modeling. Overview of modulation techniques, including amplitude and frequency modulating, and digital modulation techniques. Design Elective. Prereq: ELEN 3020 (or BIEN 3300) and ELEN 3110.

ELEN 4590. Developments in Communications. 1-3 cr. hrs.
Course content is announced prior to each term. Students may enroll in the course more than once because subject matter changes. Depending upon the subject matter and the instructor, the class may be taught in traditional lecture format or as a seminar which focuses on readings from the current literature. Possible topics include digital modulation and detection, coding theory, information theory. Prereq: Cons. of instr. or Sr. stndg.

ELEN 4920. Principles of Design. 3 cr. hrs.
Course content focuses on a structured product design and development process that includes project definition, customer needs identification, product specification, concept generation, and concept selection. Course also focuses on issues related to teamwork, project management, and effective communication. Student team design projects culminate in the development of a technically and economically viable concept and a proposal for future development of this concept (done in the second semester of this two-course sequence). 2 hrs. lec., 2 hrs. lab. Prereq: Sr. stndg.; Co-op students, jr. stndg. Cross-listed with BIEN 4920, COEN 4920 and MEEN 4920.

ELEN 4991. Co-op Work Period 3. 0 cr. hrs.
Registration for approved cooperative education program work assignments is required of all co-op students. Grading and credits are accomplished in the accompanying following term when registered for courses numbered 4991, 4992, etc. Fee. SNC/UNC grade assessment.

ELEN 4992. Co-op Grading Period 3. 1 cr. hr.
Grading for preceding co-op work assignments is accomplished by review of Employer Evaluation Forms, Work Exit Reports, and other materials as required during each term in school following a work period. No tuition is charged for Grading Periods. S/U grade assessment.

ELEN 4993. Co-op Work Period 4. 0 cr. hrs.
Registration for approved cooperative education program work assignments is required of all co-op students. Grading and credits are accomplished in the accompanying following term when registered for courses numbered 4993, 4994, etc. Fee. SNC/UNC grade assessment.

ELEN 4994. Co-op Grading Period 4. 1 cr. hr.
Grading for preceding co-op work assignments is accomplished by review of Employer Evaluation Forms, Work Exit Reports, and other materials as required during each term in school following a work period. No tuition is charged for Grading Periods. S/U grade assessment.

ELEN 4995. Independent Study in Electrical Engineering. 1-4 cr. hrs.
Undergraduate independent study project of either a theoretical or experimental nature. Prereq: Jr. stndg., 3.00 GPA, cons. of instr., and cons. of dept. ch.

ELEN 4998. Senior Design Project. 3 cr. hrs.
Focuses on detailed design, prototyping, and testing design concepts. Includes topics directly relevant to student design projects and careers in the engineering profession. Student team design projects culminate in a final report that documents the performance and details (engineering drawings and/or documentation) of their final design. 2 hrs. lec., 2 hrs. lab. Prereq: ELEN 4920. Cross-listed with BIEN 4998, COEN 4998 and MEEN 4998.
Department of Mechanical Engineering

Chairperson: Kyuil Kim, Ph.D. P.E.
Department of Mechanical Engineering website (http://www.marquette.edu/engineering/mechanical)

Mission

We immerse individuals in an active environment to cultivate broadly educated mechanical engineers who balance theory with practice for advancing knowledge, solving problems, and serving society.

Educational Objectives

Our graduates will:

- Have successful careers.
- Continue their professional development.
- Serve their profession and society.
- Attain leadership roles in their professions and in society.
- Make strong contributions to their professions.

Mechanical engineering is that branch of engineering, which is concerned with mechanical and energy systems, along with the intelligent use of modern materials. Mechanical engineers conceive, plan, design and direct the manufacturing, distribution and operation of a wide variety of devices, machines and systems for energy conversion, environmental control, materials processing, transportation, materials handling and other purposes. The field of mechanical engineering is very broad, and the profession thus provides an ideal base for interdisciplinary activities.

Engineers are constantly challenged to advance and implement modern technologies. This challenge can be met provided that one obtains a sound knowledge of the fundamental principles of the engineering sciences. The mechanical engineering curriculum is designed to provide not only a thorough understanding of the engineering sciences but also of the principles of manufacturing and organization that are used to implement these fundamentals in practical engineering applications.

Integrated with the technical and scientific content of the program is a series of required and elective courses in the humanities, social sciences, theology, philosophy and communication arts. These courses provide the student with an understanding of society and an awareness of his or her social responsibilities.

In order to accommodate the students' professional interests, the department offers electives in a number of areas of study within mechanical engineering. In choosing electives, the student and faculty adviser confer to determine those courses which best meet the needs and interests of the individual student. By carefully selecting technical elective course work, the student can obtain in-depth knowledge in one or possibly two areas of study to compliment the broad, fundamental, required courses.

The mechanical engineering curriculum is outlined below and then followed by a description of the areas of study and the corresponding technical elective courses for each.

Five Year B.S./M.S. Program

This program allows students to receive a bachelor of science degree and a master of science degree in mechanical engineering in as few as five years. Only the thesis option is available with this program. Qualified students (3.500/4.000 GPA) who are enrolled in the Mechanical Engineering Department at Marquette University may apply for admission to this program during their undergraduate junior year. Students must submit an application to the Graduate School, indicate their interest in the five year program, and meet all other admission criteria as stated in the Application Requirements section, including GRE test scores. See Mechanical Engineering section of Graduate School Bulletin for details.

Mechanical Engineering Major

Typical Program for Mechanical Engineering Majors

<table>
<thead>
<tr>
<th>Freshman</th>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
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<tr>
<td>ENGL 1001\textsuperscript{b}</td>
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<td>Core Rhetoric 1002\textsuperscript{d}</td>
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<td>GEEN 1200</td>
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<td>GEEN 1210</td>
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<td>MATH 1450\textsuperscript{b}</td>
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<td>MATH 1451\textsuperscript{b}</td>
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<td>PHYS 1004\textsuperscript{b}</td>
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<td>Core elective  c</td>
<td>Core elective  c</td>
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### Sophomore

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<tbody>
<tr>
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<td>CHEM 1002 b</td>
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<td>ELEN 3001</td>
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<td>MEEN 2120</td>
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<tr>
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<td>3</td>
<td>MEEN 2130</td>
<td>3</td>
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<tr>
<td>MATH 2450</td>
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<td></td>
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</table>

| 17 | 17 |

### Junior

<table>
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<td>3</td>
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<td>MEEN 3310</td>
<td>3</td>
<td>MEEN 3426</td>
<td>3</td>
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<td>MEEN 3443</td>
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<td>MEEN 3460</td>
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<td>PHIL 2310 b</td>
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<tr>
<td>PHIL 1001 b</td>
<td>3</td>
<td></td>
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</table>

| 18 | 17 |

### Senior

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
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<tr>
<td>MEEN 3260</td>
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<td>MEEN 4998</td>
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<tr>
<td>MEEN 3340</td>
<td>3</td>
<td>MEEN elective 1</td>
<td>3</td>
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<tr>
<td>MEEN 4920</td>
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<td>MEEN elective 1</td>
<td>3</td>
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<tr>
<td>MEEN 4590</td>
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<td>THEO elective</td>
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<tr>
<td>MEEN elective 1</td>
<td>3</td>
<td>Core/Free elective  c/d</td>
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<tr>
<td>THEO 1001 b</td>
<td>3</td>
<td></td>
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</tbody>
</table>

| 16 | 15 |

Total credit hours: 134

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### Fundamentals of Engineering (FE) Exam

All mechanical engineering students must take the National Council of Examiners for Engineering and Surveying (NCEES) Fundamentals of Engineering (FE) Exam in order to graduate. Students normally take this exam in their senior year at the same time that they take MEEN4590 Engineering Fundamentals Review, a one credit hour review course designed to prepare them for the exam. Students may take the exam at any of a large number of testing facilities in the USA; however, most take the exam at a testing facility in the Milwaukee area. Taking the exam is the first step that an engineer takes in becoming a licensed Professional Engineer (PE).
### Areas of Study

#### Energy Systems

Economic growth and development is strongly dependent upon the development and conversion of energy resources. Assurance that supplies can meet demands without excessive monetary and environmental costs will depend upon political, economic, and technological decisions. But, in any case, the key to solving the technical problems is engineering the technological development of new and better energy conversion processes and systems. The courses offered in the energy area provide a most up-to-date background for the design of traditional energy systems and for design, research and development of new systems.

Students interested in Energy Systems may select courses from the following list as their MEEN electives:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEEN 4265</td>
<td>Intermediate Finite Element Methods</td>
<td>3</td>
</tr>
<tr>
<td>MEEN 4310</td>
<td>Combustion: Thermochemistry, Kinetics and Applications</td>
<td>3</td>
</tr>
<tr>
<td>MEEN 4330</td>
<td>Optics, Lasers and Spectroscopy in Engineering</td>
<td>3</td>
</tr>
<tr>
<td>MEEN 4350</td>
<td>Transport Phenomena</td>
<td>3</td>
</tr>
<tr>
<td>MEEN 4360</td>
<td>Intermediate Thermodynamics</td>
<td>3</td>
</tr>
<tr>
<td>MEEN 4410</td>
<td>Experimental Design</td>
<td>3</td>
</tr>
<tr>
<td>MEEN 4931</td>
<td>Topics in Mechanical Engineering</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Manufacturing Systems

Manufacturing engineering is that specialty which requires such education and experience to understand, apply, and control engineering procedures and methods of production of industrial commodities and products. It requires the ability to plan the practices of manufacturing, to research and develop the tools, processes, machines, materials and equipment and to integrate the facilities and systems for producing quality products with optimal expenditures. The courses, including manufacturing processes, material processing, manufacturing system and reliability, offered in this area have the aim of preparing the student to face the challenges of rapidly changing technologies present in the modern manufacturing environment.

Students interested in Manufacturing Systems may select courses from the following list as their MEEN electives:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEEN 4220</td>
<td>Intermediate Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>MEEN 4240</td>
<td>Polymers and Polymer Composites</td>
<td>3</td>
</tr>
<tr>
<td>MEEN 4275</td>
<td>Mechatronics</td>
<td>3</td>
</tr>
<tr>
<td>MEEN 4410</td>
<td>Experimental Design</td>
<td>3</td>
</tr>
<tr>
<td>MEEN 4420</td>
<td>Failure Analysis</td>
<td>3</td>
</tr>
<tr>
<td>MEEN 4430</td>
<td>Powder Metallurgy</td>
<td>3</td>
</tr>
<tr>
<td>MEEN 4440</td>
<td>Processing and Forming of Materials</td>
<td>3</td>
</tr>
<tr>
<td>MEEN 4460</td>
<td>Work Measurement and Facilities Design</td>
<td>3</td>
</tr>
<tr>
<td>MEEN 4475</td>
<td>Ergonomics</td>
<td>3</td>
</tr>
<tr>
<td>MEEN 4485</td>
<td>Welding Engineering</td>
<td>3</td>
</tr>
<tr>
<td>MEEN 4931</td>
<td>Topics in Mechanical Engineering</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Mechanical Systems

This area provides the students with the theoretical, computational, and experimental tools that are necessary for the detailed analysis and design of mechanical systems including machine elements such as linkages, gears, and other power transmission components, precision tools and machinery, etc. The courses offered in this area enable the student to understand the rationale and methodology of the overall design process of mechanical systems, proceeding from the conceptualization stage through the detailed design and implementation phases.

Students interested in Mechanical Systems may select courses from the following list as their MEEN electives:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEEN 4220</td>
<td>Intermediate Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>MEEN 4230</td>
<td>Intermediate Mechanics of Materials</td>
<td>3</td>
</tr>
<tr>
<td>MEEN 4240</td>
<td>Polymers and Polymer Composites</td>
<td>3</td>
</tr>
<tr>
<td>MEEN 4245</td>
<td>Fatigue and Fracture Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>MEEN 4250</td>
<td>Design of Machine Elements 2</td>
<td>3</td>
</tr>
<tr>
<td>MEEN 4265</td>
<td>Intermediate Finite Element Methods</td>
<td>3</td>
</tr>
<tr>
<td>MEEN 4270</td>
<td>Physical Systems Modeling</td>
<td>3</td>
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<tr>
<td>MEEN 4275</td>
<td>Mechatronics</td>
<td>3</td>
</tr>
<tr>
<td>MEEN 4410</td>
<td>Experimental Design</td>
<td>3</td>
</tr>
<tr>
<td>MEEN 4420</td>
<td>Failure Analysis</td>
<td>3</td>
</tr>
</tbody>
</table>
MEEN 4450  Mechanical Behavior of Materials  3
MEEN 4570  Biomaterials Science and Engineering  3
MEEN 4931  Topics in Mechanical Engineering  3

Mechanical Engineering Minor

The Department of Mechanical Engineering offers a minor in mechanical engineering to all undergraduate students in the university. The minor is not available to students majoring in mechanical engineering. Completion of the minor will be noted on the student's transcript if the following requirements are met.

At least thirty-one (31) credit hours of undergraduate mechanical engineering or engineering mechanics courses are required for the minor. Requirements include the following:

- MEEN 2110  Statics  3
- MEEN 2120  Dynamics  3
- MEEN 2130  Mechanics of Materials  3
- MEEN 2460  Materials Science  3
- MEEN 3220  Dynamics of Mechanical Systems  3
- MEEN 3250  Design of Machine Elements 1  4
- MEEN 3310  Thermodynamics 1  3
- MEEN 3320  Fluid Mechanics  3
- MEEN 3330  Fundamentals of Heat Transfer  3
- One MEEN elective  3

Total Credit Hours  31

The program, as a whole, must have departmental approval and be completed with a C average. Interested students should consult with the department in order to develop an acceptable program. At least 15 credit hours must be taken at Marquette University.

Minor’s Learning Outcomes:

- Students will be able to identify, formulate, and solve mechanical engineering problems.

Courses

MEEN 2110. Statics. 3 cr. hrs.

MEEN 2120. Dynamics. 3 cr. hrs.

MEEN 2130. Mechanics of Materials. 3 cr. hrs.

MEEN 2460. Materials Science. 3 cr. hrs.
Atomic structure of matter, types of bonding, crystallography, role of imperfections, and ionic diffusion. Electric, magnetic, dielectric, and semiconducting properties. Mechanical properties, corrosion, and phase diagrams. Prereq: CHEM 1001, which may be taken concurrently.

MEEN 2470. Freehand Sketching for Engineers. 1 cr. hr.
Engineering students learn how to sketch with only a #2 wooden pencil on blank white paper to visually communicate their ideas and concepts. No instruments such as rulers and compasses are used, and no visual art talent is required. Students will practice drawing engineered products such as small electrical and mechanical devices, machines, and household products. A final project consists of a set of drawings of an engineered product that demonstrates the student’s ability to draw freehand with the orthographic, isometric, and oblique drawing systems. Course is offered in a 7 week session in a full semester. Students can register for the first 7 week session or the second 7 week session in a semester. Prereq: Engineering student status.
MEEN 3210. Measurements and Controls. 3 cr. hrs.
Fundamentals of measurement/instrumentation systems and control systems. Measurement topics include: sensors, signal conditioners, data acquisition, and transducers for measurement of strain, force, displacement, temperature, flow, pressure, and other engineering parameters. Control system topics include: mathematical modeling of dynamic systems, and analysis and design of systems using sensors, actuators, and controllers. Time-domain and frequency-domain methods for design of feedback control systems. Computer and laboratory exercises using MATLAB and LabVIEW. 2 hrs. lec., 2 hrs. lab. Prereq: MEEN 2210.

MEEN 3220. Dynamics of Mechanical Systems. 3 cr. hrs.
Analytical and computational analysis of the kinematics and kinetics of planar multi-body mechanical systems. Vibration analysis of single degree of freedom systems. Engineering applications including dynamic balancing, vibration absorption and vibration isolation. Prereq: MATH 2451 or MATH 2455; and MEEN 2120.

MEEN 3250. Design of Machine Elements 1. 4 cr. hrs.
Detailed design of structural elements, shafts, gears, bearings, and other machine elements. Laboratory activities which cover the theoretical and experimental analysis of machine elements. 3 hrs. lec., 2 hrs. lab. Prereq: CEEN 2110 or MEEN 2110; and CEEN 2130 or MEEN 2130.

MEEN 3260. Numerical Methods of Mechanical Systems. 3 cr. hrs.
Numerical algorithms (math analysis, optimization, function approximation) for analysis and preliminary design of engineering systems. Development and use of MATLAB functions. Finite element software for solid modeling and analysis of elastic systems. 3 hrs. lec., 1 hr. lab. Prereq: MEEN 3220 and CEEN 2130 or MEEN 2130.

MEEN 3310. Thermodynamics 1. 3 cr. hrs.
Elementary principles of equilibrium thermodynamics of pure and mixed substances, including applications to systems and processes. Relationships between heat and work, the first law of thermodynamics, are applied to either open or closed systems, operating at either steady or unsteady conditions. Second law of thermodynamics is applied to assessing the efficiency of devices and systems. Prereq: MATH 1451 or MATH 1455; PHYS 1003 or PHYS 1013.

MEEN 3320. Fluid Mechanics. 3 cr. hrs.
Fundamental conservation laws of mass, momentum and energy as applied to fluid systems. Properties of fluids, hydrostatics, flow of real fluids in closed and open systems, dynamic similarity, dimensional analysis and viscid and inviscid fluid flow. Same as CEEN 3150. Prereq: MATH 2450 or MATH 2455, and MEEN 2120.

MEEN 3330. Fundamentals of Heat Transfer. 3 cr. hrs.

MEEN 3340. Thermodynamics 2. 3 cr. hrs.
This course is the culmination of thermodynamic, fluid and heat transfer concepts to the application of power and refrigeration cycles, psychrometrics systems, and combustion processes. Course includes a laboratory section in which experiments are conducted to demonstrate, test, and assess devices, processes and cycles. 2 hrs. lec.; 2 hrs. lab. Prereq: MEEN 3220 and MEEN 3330.

MEEN 3426. Engineering Statistics. 3 cr. hrs.
Introductory course in statistics, which is the field of study concerned with the collection, analysis and interpretation of uncertainty in data. Topics include summary statistics, basic probability, commonly used distributions, confidence intervals, and hypothesis testing. In addition, introductory concepts of engineering economy and cash flow diagrams will be covered in the first few weeks of the course to prepare students for the FE exam. Prereq: MATH 1451.

MEEN 3443. Manufacturing Engineering. 3 cr. hrs.
The types of processes available to manufacture various products. The characteristics of these processes and how they interact with design requirements, tolerances, safety and the environment. Integration of basic concepts into complete processes. Determination of the process to manufacture various assigned products. 2 hrs. lec., 2 hrs. lab. Prereq: MEEN 2210.

MEEN 3460. Materials Selection in Mechanical Design. 3 cr. hrs.
Design methodology and the criteria for the selection of materials from the four classes of materials (metals, plastics, ceramics and composites) are discussed. Criteria include processing requirements, mechanical properties, and environmental resistance. A rationale for selecting materials based on materials selection charts is presented. The process-structure-property relationship for ferrous and non-ferrous alloys, plastics, ceramics and composites is presented from the point of view of understanding selection criteria. Considerations of cost and availability are also taken into consideration. 2 hrs. lec.; 2 hrs. lab. Prereq: MEEN 2210.

MEEN 3991. Co-op Work Period 1. 0 cr. hrs.
Registration for approved cooperative education program work assignments is required of all co-op students. Grading and credits are accomplished in the accompanying following term when registered for courses numbered 3991, 3992, etc. Fee. SNC/UNC grade assessment.

MEEN 3992. Co-op Grading Period 1. 1 cr. hr.
Grading for preceding co-op work assignments is accomplished by review of Employer Evaluation Forms, Work Exit Reports, and other materials as required during each term in school following a work period. No tuition is charged for Grading Periods. S/U grade assessment.
MEEN 3993. Co-op Work Period 2. 0 cr. hrs.
Registration for approved cooperative education program work assignments is required of all co-op students. Grading and credits are accomplished in the accompanying following term when registered for courses numbered 3993, 3994, etc. Fee. SNC/UNC grade assessment.

MEEN 3994. Co-op Grading Period 2. 1 cr. hr.
Grading for preceding co-op work assignments is accomplished by review of Employer Evaluation Forms, Work Exit Reports, and other materials as required during each term in school following a work period. No tuition is charged for Grading Periods. S/U grade assessment.

MEEN 4220. Intermediate Dynamics. 3 cr. hrs.
Develop an understanding of the principles of 3D rigid body kinematics (motion) and kinetics (forces and accelerations). Use these principles to analyze the dynamic behavior of mechanical systems. Learn to use analytical mechanics tools including virtual work and Lagrange’s method. Develop a systematic approach for solving engineering problems. Prereq: MEEN 2120.

Review of beam theory; asymmetric bending, shear center, thin-walled sections; torsion of non-circular sections, open and closed thin-walled sections; energy methods, Castiglano’s second theorem, statically indeterminate structures, internal static indeterminacy; curved beams. Prereq: CEEN 2130 or MEEN 2130.

MEEN 4240. Polymers and Polymer Composites. 3 cr. hrs.
Introduction to physical/chemical structure of polymers, polymer characterization, polymer material properties and mechanical testing methods, elastic and viscoelastic polymer response, processing methods, composite materials, and the selection of polymers in design applications. Prereq: CEEN 2130 or MEEN 2130.

MEEN 4245. Fatigue and Fracture Mechanics. 3 cr. hrs.
Application of fatigue and fracture models to engineering design. Stress-life (high-cycle), strain-life (low cycle), and fatigue crack growth models for fatigue. Introduction to linear elastic fracture mechanics. Statistical considerations in failure. Fail safe design practices. Course includes illustrative case studies. Prereq: CEEN 2130 or MEEN 2130.

MEEN 4250. Design of Machine Elements 2. 3 cr. hrs.
Detailed design of gears and cams. Integration of dynamics into design of machinery is emphasized. Topics include balancing of machinery, selection of motors and critical frequency analysis, and miscellaneous power transmission components. Use of spreadsheets and computer programs to assist in the design of various components. Prereq: MEEN 3250 or equiv.

MEEN 4260. Introduction to Continuum Mechanics. 3 cr. hrs.
Introduction to tensor notation, tensor analysis and coordinate system invariance; analysis of stress, strain and rate of strain for infinitesimal and finite deformation; application of Newtonian mechanics to deformable media; mechanical constitutive equations; field equations for solid and fluid mechanics. Prereq: MATH 2451, Co-req: MATH 3100 or MEEN 3260, or equivalent.

MEEN 4265. Intermediate Finite Element Methods. 3 cr. hrs.
Introduces the finite element solution method for linear, static problems. Includes calculation of element stiffness matrices, assembly of global stiffness matrices, exposure to various finite element solution methods, and numerical integration. Emphasizes structural mechanics, and also discusses heat transfer and fluid mechanics applications in finite element analysis. Computer assignments include development of finite element code (FORTRAN or C) and also use of commercial finite element software (ANSYS and/or MARC). Prereq: MEEN 3260.

MEEN 4270. Physical Systems Modeling. 3 cr. hrs.

MEEN 4275. Mechatronics. 3 cr. hrs.
Mechatronics, as an engineering discipline, is the synergistic combination of mechanical engineering, electronics, control engineering, and computer science, all integrated through the design process. This course covers mechatronic system design, modeling and analysis of dynamic systems, control sensors and actuators, analog and digital control electronics, interfacing sensors and actuators to a microcomputer/microcontroller, discrete and continuous controller design, and real-time programming for control. Prereq: MEEN 3210 and MEEN 3220.

MEEN 4310. Combustion: Thermochemistry, Kinetics and Applications. 3 cr. hrs.
Fundamentals of combustion and chemical kinetics, with applications to engines and combustion devices. Study of fluid flow, thermodynamics, combustion, heat transfer and friction phenomena, and fuel properties relevant to engine power, efficiency and emissions. Examination of spark-ignition, diesel, stratified charge, HCCI, mixed-cycle and gas turbine engines. Prereq: MEEN 3340.

MEEN 4330. Optics, Lasers and Spectroscopy in Engineering. 3 cr. hrs.
Topical overview on the uses of optics, lasers, and spectroscopic measurement techniques in engineering and scientific disciplines. Technical content includes basic principles of geometric optics, principles behind and characteristics of laser operation, and linear spectroscopy. Emphasis on absorption and emission techniques for sensor development. Prereq: PHYS 1004 or PHYS 1014.

MEEN 4350. Transport Phenomena. 3 cr. hrs.
The subject of transport phenomena includes three closely related topics: fluid dynamics, mass transfer, and heat transfer. Fluid dynamics involves the transport of momentum, mass transfer is concerned with the transport of mass of various chemical species, and heat transfer deals with the transport of energy. In practice, rarely are these phenomena acting alone. Thus in this introductory course, these three topics are studied together so that a more cohesive understanding of these interrelated processes is developed. Prereq: MEEN 3340.
**MEEN 4360. Intermediate Thermodynamics. 3 cr. hrs.**
This intermediate course will cover fundamentals of thermodynamics, including classical and statistical approaches with application to equilibrium and non-equilibrium, non-reactive and reactive systems. Topics relevant to micro/nanoscale and biological systems may be covered. Prereq: MEEN 3340.

**MEEN 4410. Experimental Design. 3 cr. hrs.**
Application of statistical concepts to design engineering experiments to improve quality, production techniques, and reliability. Use and advantages of various models; factorial, fractional factorial, orthogonal arrays and fractional designs. Prereq: MATH 4720 or MEEN 3426 or cons. of instr.

**MEEN 4420. Failure Analysis. 3 cr. hrs.**
Methodology of failure analysis. Studies of brittle fracture, ductile fracture, fatigue, stress corrosion and electro-chemical corrosion as applied to the failure of metals. Involves some laboratory work and analyses of a variety of metallurgical failures. Prereq: MEEN 3460 and CEEN 2130 or MEEN 2130.

**MEEN 4430. Powder Metallurgy. 3 cr. hrs.**
The course introduces a modern technology with growing importance. It covers the basics of powder metallurgy with main emphasis on sintered steel. The primary topics covered are powder production, die compacting, sintering theory and practice, full density processing, properties under static and dynamic loading conditions. Prereq: MEEN 2460.

**MEEN 4440. Processing and Forming of Materials. 3 cr. hrs.**
Solidification and microstructural development in metal casting with an overview of selected melting processes. Overview of primary and secondary working principles involved in ferrous materials processing. Stress based and finite element analyses are applied to both sheet and bulk forming to develop a fundamental understanding of deformation processing principles and technology associated with processes such as drawing, open and closed die forging and rolling. Prereq: MEEN 2460 and MEEN 3443, which can be taken concurrently.

**MEEN 4450. Mechanical Behavior of Materials. 3 cr. hrs.**
Stress and strain relationships for elastic behavior. Theory of plasticity. Plastic deformation of single crystals and polycrystalline aggregates. Dislocation theory, fracture, internal friction, creep and stress rupture and brittle failure. Prereq: MEEN 3460 and CEEN 2130 or MEEN 2130; or cons. of instr.

**MEEN 4460. Work Measurement and Facilities Design. 3 cr. hrs.**
Concentrates on how to quantify work and how to design work tasks, based on measurement and methods engineering, to achieve optimal performance. Involves analysis and evaluation of facilities for industrial and service operations and designing facilities, regardless of size, for various types of operations. Prereq: MEEN 3426 or equiv.

**MEEN 4475. Ergonomics. 3 cr. hrs.**
Ergonomics maximizes the health and safety of workers, while maintaining productivity and quality. This course covers biomechanical and physiologic aspects of workplace design, such as engineering anthropometry, cumulative trauma disorders, (including carpal tunnel syndrome), low back injuries, hand tool design and evaluation, methods of surveillance in industrial environments, modeling, and ergonomics guidelines. Laboratory experiences are offered to demonstrate ergonomic principles and also provide students with hands-on experience in collecting data and conducting experiments. Prereq: GEEN 1120 or equiv.; and MEEN 3426 or equiv.

**MEEN 4485. Welding Engineering. 3 cr. hrs.**
Arc welding physics, fundamentals of power supplies and welding circuits, fusion and solid-state welding processes, weld testing, analysis of welded joints, demonstrations using various processes. Prereq: CEEN 2130 or MEEN 2130; and MEEN 3443.

**MEEN 4570. Biomaterials Science and Engineering. 3 cr. hrs.**
Designed to introduce the uses of materials in the human body for the purposes of healing, correcting deformities and restoring lost function. The science aspect of the course encompasses topics including: characterization of material properties, biocompatibility and past and current uses of materials for novel devices that are both biocompatible and functional for the life of the implanted device. Projects allow students to focus and gain knowledge in an area of biomaterials engineering in which they are interested. Same as BIEN 4420. Prereq: MEEN 2460 or consent of instructor.

**MEEN 4590. Engineering Fundamentals Review. 1 cr. hr.**
Review of basic science, mathematics, engineering science, and economics. S/U grade assessment. Prereq: Sr. stndg.

**MEEN 4920. Principles of Design. 3 cr. hrs.**
Course content focuses on a structured product design and development process that includes project definition, customer needs identification, product specification, concept generation, and concept selection. Course also focuses on issues related to teamwork, project management, and effective communication. Student team design projects culminate in the development of a technically and economically viable concept and a proposal for future development of this concept (done in the second semester of this two-course sequence). 2 hrs. lec., 2 hrs. disc. Prereq: Sr. stndg; Co-op students, Jr. stndg. Cross-listed with BIEN 4920, COEN 4920, EECE 4920.

**MEEN 4931. Topics in Mechanical Engineering. 3 cr. hrs.**
Covers a unique perspective or in-depth topic in: energy conversion, mechanical analysis and design and manufacturing systems.

**MEEN 4991. Co-op Work Period 3. 0 cr. hrs.**
Registration for approved cooperative education program work assignments is required of all co-op students. Grading and credits are accomplished in the accompanying following term when registered for courses numbered 4991, 4992. etc. Fee. SNC/UNC grade assessment.

**MEEN 4992. Co-op Grading Period 3. 1 cr. hr.**
Grading for preceding co-op work assignments is accomplished by review of Employer Evaluation Forms, Work Exit Reports, and other materials as required during each term in school following a work period. No tuition is charged for Grading Periods. S/U grade assessment.
MEEN 4993. Co-op Work Period 4. 0 cr. hrs.
Registration for approved cooperative education program work assignments is required of all co-op students. Grading and credits are accomplished in the accompanying following term when registered for courses numbered 4993, 4994 etc. Fee. SNC/UNC grade assessment.

MEEN 4994. Co-op Grading Period 4. 1 cr. hr.
Grading for preceding co-op work assignments is accomplished by review of Employer Evaluation Forms, Work Exit Reports, and other materials as required during each term in school following a work period. No tuition is charged for Grading Periods. S/U grade assessment.

MEEN 4995. Independent Study in Mechanical Engineering. 1-3 cr. hrs.
Undergraduate independent study project of either theoretical or experimental nature. Prereq: Jr. stndg., 3.000 GPA, cons. of instr., and cons. of dept. ch.

MEEN 4998. Senior Design Project. 3 cr. hrs.
Course focuses on detailed design, prototyping, and testing design concepts. Course includes topics directly relevant to student design projects and careers in the engineering profession. Student team design projects culminate in a final report that documents the performance and details (engineering drawings and/or documentation) of their final design. 2 hrs. lec., 2 hrs. disc. Prereq: MEEN 4920. Cross-listed with BIEN 4998, COEN 4998, and EECE 4998.
Concentrations and Minors

Concentration in Engineering Leadership

E-Lead Program

The Opus College of Engineering offers a people-focused, technical leadership program, E-Lead, for its undergraduates. This three-year program is designed to:

- Develop engineers able to address 21st-century global challenges
- Prepare individuals to lead, not only through innovation and technical expertise, but also through their ability to motivate, engage and guide people and organizations who represent the full range of diversity across the human spectrum
- Educate and develop the leadership and character of outstanding engineering students, who will be able to lead technical teams in solving global problems

To participate, students must apply and be accepted to the program in their sophomore year. Students who complete all of the required elements of the E-Lead Program earn 9 credits and have a concentration in Engineering Leadership noted on their transcript.

Program elements include:

- Three one-credit E-Lead Studios, offered each year
- Participation in an industry internship, co-op, research internship or major service project
- Shadowing industry leaders
- Attending national leadership institute
- Creation of Personal Leadership Development Portfolio
- Completion of a senior capstone leadership project

Throughout the three-year program, E-Lead students are encouraged to: practice leadership through work or service, regularly read leadership books and articles, communicate with mentor(s), and attend a national professional conference.

Required Courses:

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<th>Professional Development Course</th>
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<tr>
<td>GEEN 2952 Professional Development for Engineers</td>
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</table>

Seminar Courses

| GEEN 2961 | E-Lead 1: Foundations of Leadership and Individual Development |
|GEEN 3961 | E-Lead 2: Leading Others |
|GEEN 4961 | E-Lead 3: Leading Technology and Innovation |

Experiential Courses

| GEEN 3959 | E-Lead Experience: Explorations in Engineering Leadership Practice |
|GEEN 3990 | E-Lead Experience: Professional Engineering Leadership Experience |
|GEEN 4998 | E-Lead Experience: Capstone Project |

Total Credit Hours 9

Concentration in Global Engineering

The profession of engineering is becoming increasingly global, including geographically distributed design teams, multinational companies and operations, global customer bases and markets, regional and international standards, culturally influenced approaches to research and development and a world-view of the environment. As a result, there is a need for students to develop a global perspective of their technical field and profession.

The goal of this program is to provide an integrated opportunity for students to experience engineering from a global perspective throughout their studies and provide formal recognition of these accomplishments via the completion of a concentration as noted on their transcript.

All engineering undergraduates in good standing are eligible to participate in this program. Students who wish to pursue this concentration should work closely with their academic adviser beginning in their freshman year to effectively integrate their interests and these experiences with their engineering degree requirements.

This concentration requires completion of a minimum of 13 credits including:

<table>
<thead>
<tr>
<th>Culture/Foreign language - One of the following:</th>
<th>3</th>
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<tr>
<td>HIST 1301 Survey of Latin America</td>
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Minor in Engineering Ethics and Values

The goal of this program is to involve engineering students in an elective program which will help them to: (a) understand the impact of Christian, Catholic and Jesuit values on engineering ethics, (b) recognize current engineering ethical issues and (c) strengthen their moral resolve to act courageously on these issues once they enter the engineering profession.

The minor in engineering ethics and values requirements include:

<table>
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<tr>
<th>Required Courses</th>
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<tr>
<td>PHIL 1001</td>
<td>Philosophy of Human Nature</td>
</tr>
<tr>
<td>PHIL 2310</td>
<td>Theory of Ethics</td>
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<tr>
<td>THEO 1001</td>
<td>Introduction to Theology</td>
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Four ENEV colloquia

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<tr>
<td>ENEV 1952</td>
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<td>ENEV 2952</td>
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<td>ENEV 3952</td>
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<td>ENEV 4952</td>
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Three of the following courses:

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<tr>
<td>BIEN 4931</td>
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<td>ENEV 4995</td>
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<tr>
<td>MANA 3002</td>
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<tr>
<td>PHIL 3350</td>
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<td>PHIL 4320</td>
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<td>PHIL 4330</td>
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</table>
Concentrations and Minors

PHIL 4335  Biomedical Ethics
SOCI 3520  Health Care Systems
SOCI 5400  Social Inequality
SOWJ 1001  Introduction to Social Welfare and Justice
THEO 2400  Christian Discipleship
THEO 4430  Religion and Science
THEO 4440  Foundations of Ecological Ethics
THEO 4450  Medical Ethics

Total Credit Hours 22

a  Specific topics in Ethics only. College approval is required.
b  Study in the area of Engineering Ethics and Values only. College approval is required.

For more information, contact the Engineering Academic Advising Center (http://www.marquette.edu/engineering/academic-advising-center).

Non-Engineering Minors

Engineering students may choose to pursue minors that are outside the Opus College of Engineering. In general, if any other major or minor program is desired, students should consult the appropriate area in the Undergraduate Bulletin for guidelines and requirements. The following section provides information for non-engineering minors that are often pursued by engineering students.

Students wishing to achieve a minor in biological sciences, business administration, computer science, mathematics or physics should consult with the Engineering Academic Advising Center to discuss the requirements of these minors. Careful planning with an academic adviser can minimize the number of additional hours beyond the normal graduation requirements.

Biological Sciences Minor

The Biological Science (BSCI) minor may be of interest to biomedical engineering students. Students may obtain a minor in biological science by completing the course requirements listed in the biological science section of this bulletin with a grade of C or better. A curriculum substitution may be requested to allow BIEN 4700 Systems Physiology to count for BIOL 3701 Human Physiology.

Business Administration Minor

A Business Administration (BUAD) minor may be of interest to students of any engineering discipline. Students may obtain a minor in business administration by completing the course requirements listed in the business administration section of this bulletin with a grade of C or better. Curriculum substitutions may be requested for the following as appropriate.

- CEEN 1210 Introduction to Computing, Analysis, Design and Communication, GEEN 1210 Engineering Discovery 2 or BIEN 1120 Introduction to Computing for Biomedical Engineers can substitute for the BUAD 1060 Business Applications: Basic Business Analytic Tools requirement.
- MEEN 3426 Engineering Statistics or MATH 4720 Statistical Methods can substitute for BUAD 1560 Introduction to Statistics and Business Analytics.
- Electrical or Computer engineering students may utilize either MANA 3001 Behavior and Organization or MARK 3001 Introduction to Marketing as an EE Technical elective, or COEN Technical elective with careful selection of breadth and depth course selection.

Computer Science Minor

Students in Electrical or Computer Engineering may obtain a minor in computer science by completing the course requirements with a grade of C or better. The following is a list of requirements and curriculum substitutions allowed.

- COSC 1010 Introduction to Computer Programming--EECE 1610 Introduction to Computer Programming (3cr) and EECE 2030 Digital Electronics (1 of 3cr) count for COSC 1010 Introduction to Computer Programming (4cr).
- COSC 1020 Object-Oriented Software Design--EECE 2710 Introduction to Computer Hardware and Software (3cr) and COEN 4710 Computer Hardware (1 of 3cr) count for COSC 1020 Object-Oriented Software Design (4cr).
- COSC 2100 Data Structures and Algorithms 1--COSC 2010 Data Structures for Engineers counts for COSC 2100 Data Structures and Algorithms 1
- COSC 2200 Hardware Systems--EECE 2030 Digital Electronics (2 of 3cr) and COEN 4710 Computer Hardware (1 of 3cr) count for COSC 2200 Hardware Systems (3cr).
- MATH 2100 Discrete Mathematics--MATH 2105 Discrete Mathematics for Engineers (3cr) counts for MATH 2100 Discrete Mathematics (3cr).
- Complete 6 unique credit hours of upper-division COSC coursework.
Mathematics Minor

Students enrolled in the Opus College of Engineering may obtain a minor in mathematics by completing the course requirements listed in the mathematics section of this bulletin with a grade of C or better. It is important to note that MATH 1450 Calculus 1, MATH 1451 Calculus 2, MATH 2450 Calculus 3, and MATH 2451 Differential Equations count towards the mathematics minor. However, MATH 1455 Calculus 2 for Biomedical and Civil Engineers and MATH 2455 Differential Equations for Biomedical and Civil Engineers do not satisfy minor requirements.

Physics Minor

Students enrolled in the Opus College of Engineering may obtain a minor in physics by completing the course requirements listed in the physics section of this bulletin with a grade of C or better.

Students who take ELEN 3110 Electromagnetic Fields 1 or ELEN 3120 Electromagnetic Fields 2 may not take PHYS 4031 Electricity and Magnetism 1 or PHYS 4032 Electricity and Magnetism 2 to satisfy the physics minor requirements; both ELEN 3110 Electromagnetic Fields 1 or ELEN 3120 Electromagnetic Fields 2 count toward the upper-division PHYS course requirements.

ROTC Requirements for Engineering

Students are required to complete the requirements of their program as listed in the ROTC sections (http://bulletin.marquette.edu/undergrad/helenwayklinglercollegeofartsandsciences/reserveofficers_trainingcorps) of this bulletin. ROTC students are encouraged to schedule a meeting at the Engineering Academic Advising Center early in the first semester of their freshman year to prepare a course plan as required by their ROTC program.

AIR FORCE (AFROTC) - Minor in Air Force Aerospace Studies

All AFROTC students must complete all required courses as outlined in the bulletin for their specific engineering major as well as the courses required by the AFROTC program. Students in the AFROTC program may declare a minor in Air Force Aerospace Studies (AFAS).

ARMY (AROTC) - Minor in Military Science and Leadership

All AROTC students must complete all required courses as outlined in the bulletin for their specific engineering major as well as the courses required by the AROTC program. Students in the AROTC program may declare a minor in Military Science and Leadership (MISL).

NAVAL (NROTC) - Minor in Naval Science

All NROTC students must complete all required courses outlined in the bulletin for their specific engineering major as well as the courses required by the NROTC program. Students in the NROTC program may declare a minor in Naval Science (NASC). Students may be enrolled in either the Navy or Marine Option.

NASC 1022 Sea Power and Maritime Affairs satisfies the UCCS-HCS knowledge area.

NASC 2185 Leadership and Management satisfies the UCCS-ISB knowledge area.

NASC 3142 Naval Ship Systems 1 and NASC 3162 Naval Ship Systems 2 may count as engineering technical electives with approval. In the event a student elects to withdraw from the NROTC program, NASC 3142 Naval Ship Systems 1 and NASC 3162 Naval Ship Systems 2 will not qualify as technical electives in an engineering program. Electrical and Computer Engineering majors must satisfy breadth and depth elective requirements before NASC 3142 Naval Ship Systems 1 or NASC 3162 Naval Ship Systems 2 may be used as a technical elective.
General Engineering Courses

Engineering Ethics Values Courses

ENEV 1952. Ethics and Values Colloquium 1. 1 cr. hr.
The colloquium consists of a series of lectures, films, and discussions involving social problems with significant technical components, societal values and engineering ethics. Students are required to meet approximately three to four times during the term. S/U grade assessment.

ENEV 2952. Ethics and Values Colloquium 2. 1 cr. hr.
The colloquium consists of a series of lectures, films, and discussions involving social problems with significant technical components, societal values and engineering ethics. Students are required to meet approximately three to four times during the term. S/U grade assessment.

ENEV 3952. Ethics and Values Colloquium 3. 1 cr. hr.
The colloquium consists of a series of lectures, films, and discussions involving social problems with significant technical components, societal values and engineering ethics. Students are required to meet approximately three to four times during the term. S/U grade assessment.

ENEV 4952. Ethics and Values Colloquium 4. 1 cr. hr.
The colloquium consists of a series of lectures, films, and discussions involving social problems with significant technical components, societal values and engineering ethics. Students are required to meet approximately three to four times during the term. S/U grade assessment.

ENEV 4995. Independent Study. 1-4 cr. hrs.
Undergraduate independent study project of either a theoretical or experimental nature. Prereq: Jr. stndg, 3.000 GPA, cons. of instr., and cons. of dept. ch.

General Engineering Courses

GEEN 1120. Introduction to Engineering Graphics. 1 cr. hr.
Practicing and understanding the engineering graphics fundamentals and application of computer-aided design (CAD), utilizing solid modeling software to develop typical industrial product 3-D models and drawings. Prereq: Enrolled in Engineering.

GEEN 1130. Introduction to Engineering Computing. 1 cr. hr.
Introduces students to an engineering programming environment and the corresponding algorithm and logic development. Students apply engineering computing techniques to solve selected engineering (model) equations and problems. Prereq: Enrolled in the College of Engineering.

GEEN 1200. Engineering Discovery 1. 3 cr. hrs.
Introduces students to engineering and engineers, engineering system investigation and modeling, and engineering graphics fundamentals and computer-aided design (CAD). The lecture and laboratory topics, contents and activities include engineering essentials and Fermi’s questions/problems, scientific and engineering dimensions and units, introduction to spreadsheet computing, engineering graphics fundamentals and computer-aided design (CAD), utilizing solid modeling software, and engineering system investigation through various department modules. Professionalism, teamwork and technical communication are stressed. Students participate in a team-based computer graphics design project at the end of the semester.

GEEN 1210. Engineering Discovery 2. 3 cr. hrs.
Introduces students to engineering problem solving, the engineering design process and engineering computing. The lecture and laboratory topics/contents and activities include engineering problem solving steps/procedures, introduction to the engineering design process, introduction to programming basics and their applications to scientific and engineering problems, and multidisciplinary engineering problem solving through various department modules. Professionalism, teamwork, and technical communication are stressed. Students participate in a team-based engineering design projects during the semester. Prereq: GEEN 1200.

GEEN 2952. Professional Development for Engineers. 1 cr. hr.
Objective is to assist engineering students with their career discernment and to promote professional development. Focuses on the skills needed to secure a job and provides resources and tools to conduct a job search. Topics include: professional development; engineering options; cooperative education and internship opportunities; ethics as well as job search, resume writing, interviewing, professional communication and networking techniques. All sophomore-level and transfer students required to attend. Prereq: GEEN 1200.

GEEN 2960. Engineering Service Seminar. 0 cr. hrs.
Consists of a series of lectures, video presentations and discussions involving engineering-related service learning. Reflection providing an awareness of an engineer’s professional responsibilities to the community at large, and future opportunities for such involvement at the local, national and/or international levels. SNC/UNC grade assessment.

GEEN 2961. E-Lead 1: Foundations of Leadership and Individual Development. 1 cr. hr.
Identifying and developing individual traits, skills, talents, behaviors, personal management and values which contribute to effective leadership, especially in the technical professions. Investigation of leadership theory and leadership styles and the influence of gender, culture, faith and ethical character. Personality assessments, case studies, readings, presentations, role-playing and simulations will be emphasized. Prereq: GEEN 2952, Soph. stndng., and Enrollment in the College of Engineering.
GEEN 3959. E-Lead Experience: Explorations in Engineering Leadership Practice. 1 cr. hr.
Develop skills and practices important for life-long learning related to personal leadership growth and development in the technical fields. Studies include selecting and reading E-Lead approved leadership texts and producing video book reports about the leadership texts; discussing other leadership texts and reports with peers in the class; identifying, arranging and participating in a leadership shadow experience with industry leaders in technical fields; and attending a week-long national leadership conference. Prereq: GEEN 2952, GEEN 2961 and Jr. stndg., a member of the E-Lead Program in the College of Engineering and cons. of dept.

GEEN 3961. E-Lead 2: Leading Others. 1 cr. hr.
Identifying and developing skills, talents, behaviors, and attributes which contribute to effective leadership of teams and projects, especially in the technical professions. Investigation into leading change, collaboration, motivating others, negotiation, conflict resolution, performance evaluation, communication, facilitation, emotional intelligence, diversity challenges, global and cultural awareness, servant leadership. Simulations, role-playing, case studies, readings, presentations, and team problem-solving will be emphasized. Prereq: GEEN 2952, GEEN 2961, Jr. stndng., and Enrollment in the College of Engineering.

Students in the E-Lead program are required to participate in an industry internship, co-op, research project or major service project. During these experiences, E-Leaders make observations and reflect on their experience through the three leadership themes of the E-Lead Program - leading oneself, leading with others, and leading technology and innovation. Upon completion of the experience, students submit a reflective and integrative paper about the experience in his/her role, responding to predetermined questions and citing specific examples from the professional engineering leadership experience to describe their observations and assertions. Prereq: GEEN 2952, GEEN 2961 and Jr. stndg., a member of the E-Lead Program in the College of Engineering and cons. of dept.

GEEN 4961. E-Lead 3: Leading Technology and Innovation. 1 cr. hr.
Identifying and developing skills, talents, behaviors, and attributes which contribute to effective leadership of innovation and technology development in technical organizations. Investigation into leading change, strategic planning, marketing, competitive trends, benchmarking, product specification, financial planning, global and cultural markets, and ethical conduct. Simulations, case studies, readings, projects, presentations, and problem-solving will be emphasized. Prereq: GEEN 2952, GEEN 2961, GEEN 3961, Sr. stndng., and Enrollment in the College of Engineering.

GEEN 4995. Independent Study in General Engineering. 1-3 cr. hrs.
Undergraduate independent study project of either theoretical or experimental nature. Prereq: Jr. stndg., 3.000 GPA, cons. of instr., and cons. of dept. ch.

GEEN 4998. E-Lead Experience: Capstone Project. 3 cr. hrs.
The culminating engineering leadership experience for students completing the concentration in engineering leadership. Students use all knowledge and skills gained in the prerequisite courses to create meaningful change in a technical field or environment that has a significant impact on people and/or processes. Working with a team, students lead a project that focuses on technology development and demonstrate clear progression from brainstorming to planning to resource procurement to implementation. Prereq: GEEN 2952, GEEN 2961, GEEN 3961, GEEN 3959, GEEN 3990, GEEN 4961, and Sr. stndg., enrolled in the E-Lead Program in the College of Engineering and cons. of dept.
College of Health Sciences

From the Dean

College of Health Sciences website (http://www.marquette.edu/chs/index.shtml)

Welcome!

The College of Health Sciences features many of Marquette's highest ranked and nationally recognized programs. Our students come to us with the strongest academic credentials at the university, and experience a culture of excellence that includes state-of-the-art research and teaching facilities and many opportunities to interact with faculty scholars who are passionate about teaching, research and service.

Our highly distinctive undergraduate majors feature biomedical sciences, clinical laboratory science, exercise physiology, athletic training and speech pathology and audiology. Our outstanding professional programs include a doctoral program in physical therapy and master's programs in physician assistant studies and in speech and language pathology.

Our mission as a Jesuit university is to provide an excellent, rigorous and well-rounded education, and our location in the heart of the city of Milwaukee promises ample opportunity for exposure to the health and medical professions that a major metropolitan setting provides. While you can expect excellence from our faculty, you will be in some elite company with our academically talented students. Whether in our highly rigorous professional programs of study or through outstanding pre-professional and undergraduate education, our dedicated faculty and committed students have created a truly vibrant academic environment that's waiting for you.

Sincerely,

William E. Cullinan, Ph.D.
Dean, College of Health Sciences

College Mission Statement

The College of Health Sciences has the mission of providing outstanding preparation for careers in the health sciences and as health care providers. It is dedicated to improving health care delivery by educating excellent, caring and ethical health care professionals through a rigorous program of teaching, research and service. Our programs of study emphasize critical thinking in the context of clinical and scientific problem solving. Students are instilled with the Jesuit ideals of concern for the physical, emotional and spiritual development of the individual, as well as a lifelong commitment to leadership and learning in the advancement of their personal skills and professions.
Degrees Offered

Marquette University confers the degree of bachelor of science on students who have satisfactorily completed the following majors: athletic training, biomedical sciences, clinical laboratory science, exercise physiology and speech pathology and audiology. Students who successfully complete the Comprehensive Honors (p. 47) curriculum may earn a degree of honors bachelor of science.

The degrees of master of science and doctor of philosophy are conferred through the Marquette University Graduate School. A master of science degree in speech-language pathology and a certificate in bilingual English-Spanish are offered by the Department of Speech Pathology and Audiology. A master of science and doctor of philosophy degree in Clinical and Translational Rehabilitation Health Science are offered through the Department of Physical Therapy. Biomedical sciences faculty participate in the doctoral specialization in neuroscience through the biological sciences graduate program. Details for these programs can be found in the Graduate Bulletin (http://bulletin.marquette.edu/grad).

The college also offers a professional doctoral program in physical therapy and a professional master’s degree in physician assistant studies. Upon successful completion of these programs, the degree of doctor of physical therapy or master of physician assistant studies is conferred. Details for these programs can be found in the Health Sciences Professional Bulletin (http://bulletin.marquette.edu/healthscienceprofessional).
Majors and Minors Overview

The College of Health Sciences offers five undergraduate majors and three minors.

**Majors**

Students that declare a major offered by the College of Health Sciences must be a resident in the college to complete the major and earn the corresponding degree. Detailed information about major requirements are outlined in the bulletin section of the program/department offering the major.

- Athletic training and exercise physiology is offered by the Program in Exercise Science in the Department of Physical Therapy
- Biomedical Sciences is offered by the Department of Biomedical Sciences
- Clinical Laboratory Science is offered by the Department of Clinical Laboratory Science
- Exercise Physiology is offered by the Program in Exercise Science in the Department of Physical Therapy
- Speech Pathology and Audiology is offered by the Department of Speech Pathology and Audiology

**Minors**

College approval is required for declaring a minor offered in the College of Health Sciences. Detailed information about minor requirements are outlined in the bulletin section of the department offering the minor. The college offers the following minors:

- Minor in speech pathology and audiology offered through the Department of Speech Pathology and Audiology
- Minors in biomedical sciences and neuroscience offered through the Department of Biomedical Sciences.
Graduation Requirements

Amount and Quality of Work

Candidates for a degree must earn the required number of credits for their major and a minimum number of quality points equal to twice the number of credit hours attempted at Marquette (C average). Students may earn credits but not quality points from another institution. All students must earn at least a C average in their Marquette work.

A student must earn a C or better in all the courses in their major. Courses completed with a grade of CD or D do not count toward the total hour requirement for a major or minor but do count toward the total number of credit hours for graduation. Students who receive a grade of CD or D in a course in their major or minor may choose to repeat the course and for certain majors, are required to repeat the course or otherwise establish proficiency in a manner designated by the department. Credit is never given twice for the same course. Students must consult the area of the bulletin of their chosen major and minor for specific graduation requirements.

Students must fulfill the University Core of Common Studies, college and major curriculum requirements and take elective courses within the number of credits required for graduation. Certain combinations of major and minor fields may require more than the minimum number of credits for graduation. Majors in athletic training, biomedical sciences, clinical laboratory science, exercise physiology or speech pathology and audiology must earn a minimum of 128 credits hours. Students should consult an adviser before selecting a major and an optional minor.

Applicants for graduation must submit the online application for graduation via their CheckMarq account by the last day of advising week in the term prior to the term of graduation. (November for May and August graduates; March for December graduates.)

It is the responsibility of the student to know and fulfill all University Core of Common Studies, College of Health Sciences and major requirements.

The College of Health Sciences adheres to the University Graduation Requirements Policy (p. 68) and the University Commencement Policy (p. 60) in this bulletin.
Degree Requirements

Due to the unique degree requirements specific to each major in our college, you can find the degree requirement information within the individual major information pages.
Academic Regulations

Academic Regulations and General Information

Students in the College of Health Sciences are expected to comply with the academic requirements and regulations listed in the university section of this bulletin and must fulfill the graduation requirements stated in the bulletin in effect the year they entered Marquette.

Students who have interrupted their enrollment for two or more consecutive terms, follow the requirements and regulations listed in the bulletin in effect during the academic year of their return. (Exception is made for students who interrupted enrollment to serve in the Armed Forces.)

It is the responsibility of students to know and fulfill all university, College of Health Sciences, and major department requirements.

While the principal policies and procedures of the college are contained in this section of the bulletin, questions concerning other regulations should be directed to the college or relevant department office.

Academic Integrity

The College of Health Sciences follows the university guidelines for cases of academic dishonesty that are defined in the University Academic Integrity Policy (p. 50) in this bulletin.

Academic Load

The academic load of a student is measured by credit hours assigned to each course. The normal College of Health Sciences program varies from 15 to 18 credit hours per term. Request for permission to exceed 19 credit hours must have prior approval from the dean’s office.

Academic Dismissal/Probation/Academic Alert

The College of Health Sciences (CHS) is dedicated to ensuring students complete their undergraduate degree programs in a timely manner. To ensure timely degree completion, all CHS students are required to declare a major upon admission to the college and maintain good academic standing. Failure to maintain good academic standing may result in Academic Dismissal/College Academic Probation and/or College Academic Alert (CAA), as described below.

Academic Dismissal

The College of Health Sciences adheres to the University Academic Censure Policy (p. 55).

College Academic Probation

Undergraduate students in the College of Health Sciences may be placed on academic probation for the following:

1. A single term grade point average below 2.000.
2. Two or more grades of F, AU, W, WA and/or UW for a single term or four or more total grades of F, AU, W, WA and/or UW. A complete term withdrawal, in which a student withdraws from all classes in a given semester, counts as a single occurrence of W grades.
3. Failure to enroll in courses consistent with the declared primary major plan of study, including major cognates. Study abroad semesters are excluded from this requirement.
4. Failure to meet major-specific academic requirements (as listed in the majors sections of the bulletin) that results in dismissal from that major.

A student dismissed from a CHS major will be placed on academic probation and allowed to continue for one semester in the College of Health Sciences with a major of undecided. The student will be assigned an adviser from the College office who will assist the student in identifying a new plan of study, either within the College of Health Sciences or via transfer to another college at MU.

College Academic Alert (CAA)

Students admitted to the College of Health Sciences are expected to meet college academic standards and maintain good academic standing. Academic performance is monitored carefully by the Committee on Scholastic Actions, and students either not maintaining steady progress or not demonstrating adequate achievement will be barred from future registration by a College Academic Alert (CAA) registration hold.

The bases for committee review are:

- grade point average (GPA) deficiency
- inadequate progress
- grades of CD, D, F, I, W, WA, UW or ADW
- the number of semesters on college probation
- the violation of special conditions
Special conditions may be prescribed in writing at the time of the student’s admission, readmission or transfer into the college. Conditions may also be prescribed in writing in the case of a student whose course performance or failure to follow academic advice warrants such action. All students to whom conditions have been specified will be subject to committee review and possible CAA restriction should they fail to fulfill the specified terms. It is possible that a student be barred from registration for academic reasons even though the student’s cumulative GPA exceeds 2.000. Students concerned about their academic progress should consult the college office.

Students placed on College Academic Alert status will be notified by letter or email of the committee’s decision and of the appeal process. If a student’s appeal is denied, the student may request to enroll in another college via the process outlined in the University Academic Censure Policy (p. 55) of this bulletin, and if accepted, the CAA hold will be removed after admission into the new college.

Note: Students in the professional phase of the Doctoral of Physical Therapy or Master of Physician Assistant Studies programs must comply with the academic regulations listed in the Physical Therapy and Physician Assistant Student Handbook. The Physical Therapy and Physician Assistant Student Handbook is issued to students upon entering the professional phase of the curriculum.

Unless the CAA is removed via the individual colleges’ appeal process, the student may not register for courses at Marquette and may be dropped from any classes for future terms in which he/she is registered.

Advisers

Upon enrollment in the College of Health Sciences each student is assigned an adviser. The adviser will assist the student with course selection, sequencing of courses, academic matters related to their curriculum and career advising. It is the student’s responsibility to monitor his/her own progress toward degree requirements.

Attendance

Courses in the College of Health Sciences often include performance under the guidelines and supervision of faculty and staff in classroom, laboratory, clinic as well as on- and off-campus professional situations. Students are expected to attend all meetings of the courses in which they are registered. Any absence, regardless of the reason will prevent the student from getting the full benefit of the course. Each professor in the College of Health Sciences sets his/her course attendance policy within the guidelines of the University Attendance Policy (p. 58), and provides it at the start of the semester in the course syllabus. It is the responsibility of each student to follow the attendance policy for the courses in which they are enrolled. College of Health Sciences course professors may submit a grade of WA for students with excessive absences, as defined in the attendance policy for a course.

Background Checks, Drug Testing

Some degrees, majors and/or courses may require a student to submit to a criminal background check and/or drug testing. The results of those checks and/or tests may affect the student’s eligibility to continue in that degree, major and/or course.

CR/NC Option

For enrichment purposes, junior and senior students are given an option to elect one course per term (to a maximum of four courses) for which only a CR (credit) or NC (no-credit) is assigned.

Eligible courses include only true electives in the individual’s program selected from offerings by other divisions of the university. Courses excluded are all those taken in fulfillment of the requirements of the core curriculum and all offerings in their specific major or minor.

Grade Appeal Procedure

If the student feels that the scoring and/or grading of an individual quiz, examination or assignment is in error, she/he should call it to the attention of the instructor of the course immediately upon receipt of the grade.

A student may appeal a final grade received in a course if the student believes the grade to be in error. The student is expected to exhaust all possibilities of resolving the problem with the instructor. If this does not lead to resolution, the student may initiate, in writing, a formal appeal of the grade to the chairperson of the department. The student’s written request must state the reason he/she believes the grade should be changed. The chairperson reserves the right to meet with the student and instructor separately and/or together. The chairperson will make a final decision regarding the grade appeal. The student can appeal the decision of the chairperson to the dean of the College of Health Sciences. No level of appeal is available beyond the dean. No formal request for a grade appeal will be given consideration if the request is submitted later than the final day officially scheduled for the removal of incomplete grades, approximately four weeks after the beginning of the academic term immediately following the term in which the grade was assigned.

Independent Study Courses

Independent study courses (4995/7995) may be taken in the College of Health Sciences. The purpose of these courses is to provide an independent, guided study experience for qualified students. A student must be in good academic standing in the College of Health Sciences. The purpose of an independent study course is to allow the student to pursue topics and issues in a course and/or a legitimate course of study for which no regularly scheduled course is offered. Permission and approval is contingent on the approval of the research proposal, the faculty’s willingness to accept the proposal and to work with the student for the duration of the course. All independent study courses must have written approval from the instructor,
department chairperson and assistant dean. The form required to request the Independent Study is located on the Marquette Central academic forms website. ([http://www.marquette.edu/mucentral/registrar/policy_forms.shtml](http://www.marquette.edu/mucentral/registrar/policy_forms.shtml))

**Summer Sessions Study Approvals**

Students who plan to take courses in summer school at another institution are required to obtain the approval from the dean's office for such courses before the summer session begins. Approval will be based on course descriptions in the current bulletin of the college or university at which the courses will be attempted. The student is expected to present such information. If prior approval is not obtained, there is no guarantee that credits earned or course(s) will be accepted or transferred by Marquette University.

**Transfer Credit Policy**

The College of Health Sciences will grant credit for courses taken for a grade and completed with a C or better. Only credit will transfer, not grades. Courses completed on a quarter-hour system will be converted to semester credits. (See the University Transfer Policy (p. 20) in this bulletin). A Marquette equivalent will be specified for each transferable course. Courses awarded as 9290-9294 (lower-division) or 9390-9399 (upper-division) indicate courses that will transfer for which there is no discernible Marquette equivalent. These credits will count toward the degree hours completed, however, they will not fulfill any requirement where a specific course number (i.e. ENGL 1001 Rhetoric and Composition 1 or BISC 1015 Principles of Human Anatomy and Physiology) has been indicated. Contact the college office with any questions or concerns regarding the transfer of credits.
Special Academic Programs

Pre-professional Health Studies

Pre-professional studies at Marquette, means pursuing a bachelor’s degree with the intent to enroll in a professional school following graduation. Choosing a major in the College of Health Sciences is one way to prepare for a career in medicine, dentistry, forensics, chiropractic medicine, physical therapy, athletic training, physician assistant, occupational therapy, pharmacy, podiatry and optometry. The College of Health Sciences provides academic advising, pre-health advising, career counseling, seminars and recommendations to help you with the professional school application process.

Course requirements may vary among institutions and across disciplines. Students should consult graduate and professional schools of interest to identify specific course requirements.

Students considering the Doctor of Physical Therapy or Master of Physician Assistant Studies programs must complete prerequisite courses at an accredited four-year educational institution.

Pre-dental Scholars Program

The College of Health Sciences participates in the Pre-dental Scholars Program. More detailed information can be found in the university Special Programs (p. 35) section of this bulletin.
Student Organizations

American Medical Student Association (AMSA)
This student organization is for students interested in medical school. The organization provides opportunities for students to interact with fellow students and professionals in the medical field. All students in the university interested in applying to medical school are eligible to join.

Biomedical Sciences Student Association (BMSA)
All Biomedical Sciences students are eligible for membership in the Biomedical Sciences Association. The purpose of the organization is to provide students with opportunities to learn more about career opportunities; interact with alumni; develop service opportunities; participate in fund-raising activities; and interact with other students and faculty in a more informal setting.

College of Health Sciences Student Council
All health sciences students are eligible for membership in the College of Health Sciences Student Council. The council functions as a liaison between the college and the Marquette University Student Government. The council serves as a coordinating instrument of professional and social activities for all students in the College of Health Sciences. Its purpose is to stimulate a professional attitude among health sciences students; to promote cooperation and understanding among health sciences students as well as with the faculty and administration; and an awareness and promotion of health education in the community.

Clinical Laboratory Science
In addition to the university student organizations, clinical laboratory science students are eligible for membership in the Clinical Laboratory Science Student Council, the American Society for Clinical Laboratory Science (ASCLS) and the American Society for Clinical Pathology (ASCP).

Physical Therapy
Students enrolled in the Department of Physical Therapy are eligible for membership in the Physical Therapy Student Council and are required to become student members in the American Physical Therapy Association during the professional phase of the program.

Physician Assistant Studies
The Student Association of the American Academy of Physician Assistants has awarded a charter membership to the Department of Physician Assistant Studies at Marquette University. All students in the program participate. The organization coordinates fundraising activities, hosts guest lecturers and interacts with other student groups as well as the Wisconsin Academy of Physician Assistants. A major goal of the group is to facilitate student involvement in the political process of their national organization.

Pre-dental Student Organization of Marquette University
This student organization is for students interested in the field of dentistry. The organization provides an opportunity for students to interact with fellow students and professionals in the field of dentistry. All students in the university interested in the field of dentistry are eligible to join.

Speech Pathology and Audiology
The Marquette University Chapter of the National Student Speech-Language-Hearing Association (MU-NSSLHA) is comprised of undergraduate and graduate students interested in the professions of Speech-Language Pathology and Audiology. The organization hosts guest speakers from the professional community, interacts with other student groups and is active in community and charitable organizations.
Department of Biomedical Sciences

Chairperson: John R. Mantsch, Ph.D.

The Marquette University Department of Biomedical Sciences offers a Biomedical Sciences major and minor area of study for undergraduate students interested in pursuing careers in or related to health care professions and offers graduate courses for the Ph.D. specialization in neuroscience. In addition, the department offers three accelerated programs to the Doctor of Physical Therapy, Doctor of Dental Surgery, and MBA programs, as well as an early admission opportunity to the Physician Assistant Studies program at Marquette University. Lastly, for students who demonstrate exceptional work in the areas of research and community engagement as well maintain high academic standards, students may complete the Disciplinary Honors in Biomedical Sciences.

The primary purpose of the major and minor is to provide human-oriented courses in areas such as anatomical sciences, biochemistry, neuroscience, microbiology, molecular biology, pathology, pharmacology and physiology. The course work provides students with the opportunity to acquire the concepts, principles, facts, and terminology fundamental to all health care professions and related fields.

Pre-medical and Pre-Dental studies

The Biomedical Sciences major at Marquette is powerful preparation for students planning to study medicine or dentistry. The opportunity to study distinctively human medical sciences courses at the undergraduate level is exceedingly rare. In addition, courses in the curriculum are taught by faculty scientists, many of whom also teach in Marquette School of Dentistry. Students in this program pursue course work in the anatomical sciences (including gross anatomy), biochemistry, and physiology, all taught from a clinical, human perspective. The course work provides students with the opportunity to acquire the concepts, principals, facts and terminology fundamental to medicine, and indeed, all healthcare professions and related fields. In addition, the wide range of course options in the major allows students to develop degree plans that matches their areas of interest, such as, neuroscience, head and neck anatomy, public health, genetics, microbiology, pharmacology, research, etc. The program boasts exceptionally high acceptance rates to medical and dental schools, and tremendous success among graduates competing for medical residencies following medical school.

Direct Admit Physical Therapy

Partnering with the Physical Therapy program at Marquette University, the Biomedical Sciences Department offers an accelerated program option for the Direct Admit Physical Therapy program, allowing students to complete their undergraduate degree within the first year of the professional phase of the program. Students who are admitted directly to the Physical Therapy Program or those admitted following their junior year (space permitting) must meet the academic standards set by the Physical Therapy Department to continue within the program. Students who do not meet the academic requirements will work with their advisers to complete the standard Biomedical Sciences major.

Pre-Dental Scholars

Partnering with the School of Dentistry at Marquette University, the Biomedical Sciences Department offers an accelerated program as part of the Pre-Dental Scholar Program, allowing students to complete their undergraduate degree within the first year of the dental school program. Students who are admitted directly to the Pre-Dental Scholar Program or those admitted following freshmen year must meet the academic standards set by the School of Dentistry to continue within the program. Students who do not meet the academic requirements will work with their advisers to complete the standard Biomedical Sciences major.

MBA Accelerated Degree Program (ADP)

Marquette undergraduate students majoring in Biomedical Sciences can apply for admission to the Master of Business Administration (MBA) program in the second semester of their junior year. Students accepted into this program are eligible to enroll in up to 12 credits of MBA course work that carry graduate credit during their senior year. Credits obtained for these courses can be used to fulfill both undergraduate and graduate degree requirements. Due to the number of prerequisite courses required for admission to the MBA program, the MBA accelerated degree option requires careful planning as early as sophomore year. Interested students should contact their adviser early in their undergraduate career. Once students inform the Graduate School of their completion of undergraduate degree requirements, their admission as a regular degree status (RDS) student in the Graduate School of Management is activated.

Early Admission Option to Physician Assistant Studies

Partnering with the Department of Physician Assistant Studies at Marquette University, the Biomedical Sciences Department has created an early admission opportunity to the Physician Assistant (PA) Studies program. Students who complete the first two years of the pre-physician assistant curriculum will be eligible to apply to the Marquette University Physician Assistant Studies program as early as the fall semester of their sophomore year. Admitted students complete their undergraduate degree in Biomedical Sciences within the first two years of the PA program. A Master of Physician Assistant Studies will be awarded upon graduation from the PA program. Students who do not enter the PA program their Junior year will continue within the Biomedical Sciences major. The Department has course outlines for those who will enter the PA program following their Junior year and for those who will complete the standard Bachelor’s degree. Students will work with their advisers to identify the most appropriate program.
Academic Performance

All students must comply with the College of Health Sciences graduation requirements. Candidates for a degree must earn at least the minimum number of credits listed in their curriculum and a minimum GPA of 2.000. A student must earn a C or better in all major courses. Major courses completed with a CD or less do not count toward the total hour requirement for the major or minor but do count toward the total number of credit hours for graduation. A waiver request may be submitted by a student if a required BISC course taken in the senior year is completed with a CD or D grade, provided the student has completed at least 33 credits in the major with a C or better. A waiver request will be granted for no more than one senior-year course.

Candidates for the baccalaureate degree with a major in Biomedical Sciences must complete a minimum of 128 credit hours including the following requirements:

<table>
<thead>
<tr>
<th>Area</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>UCCS Requirements</td>
<td>33-37</td>
</tr>
<tr>
<td>Required Science Cognates</td>
<td>16-21</td>
</tr>
<tr>
<td>Medical Ethics and Health and Society Cognates</td>
<td>4-6</td>
</tr>
<tr>
<td>Major</td>
<td>33</td>
</tr>
<tr>
<td>General Electives</td>
<td>to achieve 128 total credits</td>
</tr>
</tbody>
</table>

Core and Department Curriculum Requirements:

UCCS Rhetoric (R)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 1001 Rhetoric and Composition 1</td>
<td>6</td>
</tr>
<tr>
<td>ENGL 1002 Rhetoric and Composition 2</td>
<td></td>
</tr>
<tr>
<td>or COMM 1100 Contemporary Presentation</td>
<td></td>
</tr>
</tbody>
</table>

UCCS Mathematics and Reasoning (MR) One of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1700 Modern Elementary Statistics</td>
<td>3-4</td>
</tr>
<tr>
<td>PSYC 2001 Psychological Measurements and Statistics</td>
<td></td>
</tr>
<tr>
<td>SOCI 2060 Social Statistics</td>
<td></td>
</tr>
</tbody>
</table>

UCCS Individual and Social Behaviors (ISB)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 1001 General Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

Any UCCS approved course

UCCS Science and Nature (SN)

Any required cognate (see below) approved for SN:

UCCS History of Cultures and Societies (HCS)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any approved UCCS HCS course</td>
<td>3</td>
</tr>
</tbody>
</table>

UCCS Literature and Performing Arts (LPA)

Any approved literature LPA course except the following: ARSC 3370, MUSI 1020, MUSI 2420, THAR 1020 and any other non-literature LPA courses.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>UCCS Human Nature and Ethics (HNE)</td>
<td>6</td>
</tr>
<tr>
<td>PHIL 1001 Philosophy of Human Nature</td>
<td></td>
</tr>
<tr>
<td>PHIL 2310 Theory of Ethics</td>
<td></td>
</tr>
</tbody>
</table>

UCCS Theology (T)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>THEO 1001 Introduction to Theology</td>
<td>6</td>
</tr>
</tbody>
</table>

One additional UCCS T approved course

Total Credit Hours 36-37

*ENGL 1001 Rhetoric and Composition 1 and ENGL 1002 Rhetoric and Composition 2 are recommended for pre-professional students.

Required Science Cognates:

All students are required to complete:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1001 General Biology 1</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 1002 General Biology 2</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1001 General Chemistry 1</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 1002 General Chemistry 2</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 2111 Organic Chemistry 1</td>
<td>1-4</td>
</tr>
</tbody>
</table>
or BISC 2050  Organic Chemistry for the Health Sciences

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 2001</td>
<td>Principles of Biological Investigation</td>
<td>3</td>
</tr>
<tr>
<td>CLLS 2200</td>
<td>Concepts in Clinical Laboratory Medicine</td>
<td></td>
</tr>
<tr>
<td>CLLS 3160</td>
<td>Molecular Diagnostics: Laboratory Techniques</td>
<td></td>
</tr>
<tr>
<td>PHAS 7270</td>
<td>Diagnostics Technology (For students admitted to the PA program)</td>
<td></td>
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</tbody>
</table>

Total Credit Hours 18-21

**Required Health and Society Cognate (one course) and Medical Ethics (minimum 1 credit):**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BISC 4170</td>
<td>Biology, Moral Behavior and Policy (Can be used as a Health and Society Cognate or BISC elective, but not both)</td>
<td>3</td>
</tr>
<tr>
<td>BISC 4275</td>
<td>Modern Plagues: Addiction, Obesity and Stress (Can be used as a Health and Society Cognate or BISC elective, but not both)</td>
<td></td>
</tr>
<tr>
<td>BISC 4381</td>
<td>Politics of U.S. Health Care</td>
<td></td>
</tr>
<tr>
<td>BISC 4461</td>
<td>Comparative Health Politics and Policy</td>
<td></td>
</tr>
<tr>
<td>CLLS 2060</td>
<td>Public Health (Can be used as a Health and Society Cognate or BISC elective, but not both)</td>
<td></td>
</tr>
<tr>
<td>CMST 4500</td>
<td>Health Communication</td>
<td></td>
</tr>
<tr>
<td>COMM 4330</td>
<td>Health, Science and Environmental Communication</td>
<td></td>
</tr>
<tr>
<td>HEAL 1025</td>
<td>Culture and Health (Can be used as a Health and Society Cognate or UCCS DC requirement, but not both)</td>
<td></td>
</tr>
<tr>
<td>HEAL 1200</td>
<td>Women's Health</td>
<td></td>
</tr>
<tr>
<td>HEAL 1400</td>
<td>Veteran Health and Culture</td>
<td></td>
</tr>
<tr>
<td>HEAL 2100</td>
<td>Primary Health Care Concepts</td>
<td></td>
</tr>
<tr>
<td>PSYC 3420</td>
<td>Health Psychology</td>
<td></td>
</tr>
<tr>
<td>SOCI 3300</td>
<td>Sociology of the Life Course</td>
<td></td>
</tr>
<tr>
<td>SOCI 3500</td>
<td>Culture, Health and Illness</td>
<td></td>
</tr>
<tr>
<td>SOCI 3520</td>
<td>Health Care Systems</td>
<td></td>
</tr>
<tr>
<td>SOCI 3550</td>
<td>Race, Gender and Medicine</td>
<td></td>
</tr>
<tr>
<td>SOCI 3570</td>
<td>Men, Masculinities and Health</td>
<td></td>
</tr>
<tr>
<td>SOCI 4300</td>
<td>Sociology of Aging</td>
<td></td>
</tr>
<tr>
<td>SOWJ 1001</td>
<td>Introduction to Social Welfare and Justice</td>
<td></td>
</tr>
<tr>
<td>SOWJ 2200</td>
<td>Human Behavior in the Social Environment</td>
<td></td>
</tr>
<tr>
<td>SOWJ 4700</td>
<td>Global Aid and Humanitarianism</td>
<td></td>
</tr>
<tr>
<td>SPAN 4715</td>
<td>Advanced Spanish for the Health Professions</td>
<td></td>
</tr>
<tr>
<td>PHAS 7095</td>
<td>Public Health (For students admitted to PA program)</td>
<td></td>
</tr>
</tbody>
</table>

Note: Biomedical Sciences often offers special topic courses (BISC 4930) which can be used to fulfill the Health and Society cognate. Students should confirm with their adviser if a section fulfills the requirement. A student must complete a Health and Society Course Approval Form, available in the department office, to receive credit towards the cognate.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 4336</td>
<td>Applied Ethics for the Health Sciences</td>
<td>1-3</td>
</tr>
<tr>
<td>PHIL 4335</td>
<td>Biomedical Ethics</td>
<td></td>
</tr>
<tr>
<td>THEO 4450</td>
<td>Medical Ethics</td>
<td></td>
</tr>
</tbody>
</table>

Total Credit Hours 4-6

**Students who are interested in pursuing a professional or graduate education (i.e. pre-med, pre-dental) should take the following courses:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 2111</td>
<td>Organic Chemistry 1</td>
<td></td>
</tr>
<tr>
<td>CHEM 2112</td>
<td>Organic Chemistry 2</td>
<td></td>
</tr>
<tr>
<td>PHYS 1001</td>
<td>General Physics 1</td>
<td></td>
</tr>
<tr>
<td>PHYS 1002</td>
<td>General Physics 2</td>
<td></td>
</tr>
<tr>
<td>BIOL 2001</td>
<td>Principles of Biological Investigation</td>
<td></td>
</tr>
<tr>
<td>MATH 1410</td>
<td>Calculus for the Biological Sciences</td>
<td></td>
</tr>
</tbody>
</table>
Biomedical Sciences Major

The major in biomedical sciences consists of a minimum of 33 credit hours and must be completed with a C grade or better. A maximum of 9 transfer credits can be applied towards the major. The following courses are required:

Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BISC 2135</td>
<td>Clinical Human Anatomy</td>
<td>4</td>
</tr>
<tr>
<td>BISC 3213</td>
<td>Biochemistry</td>
<td>3-4</td>
</tr>
<tr>
<td>or BISC 2070</td>
<td>Biochemistry for the Health Professions</td>
<td></td>
</tr>
<tr>
<td>BISC 4145</td>
<td>Human Physiology</td>
<td>4</td>
</tr>
</tbody>
</table>

Content Areas: Choose the number of courses/credits indicated from each of the content areas below.

Anatomy and Systems (One course, a maximum of 3 credits apply toward the major)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BISC 3112</td>
<td>Head and Neck Anatomy</td>
</tr>
<tr>
<td>BISC 3850</td>
<td>Systems Neuroscience</td>
</tr>
<tr>
<td>BISC 4140</td>
<td>Functional Neuroanatomy</td>
</tr>
<tr>
<td>BISC 4173</td>
<td>Principles of Human Embryology</td>
</tr>
<tr>
<td>BISC 4325</td>
<td>Endocrinology</td>
</tr>
<tr>
<td>BISC 4514</td>
<td>Human Microanatomy (4 credits; only 3 credits apply toward the 33 total credits needed for the major, all credits apply towards the 128 overall credits needed for the degree)</td>
</tr>
<tr>
<td>BISC 7130</td>
<td>Human Gross Anatomy (5 credits; must be enrolled in the DPT or MPA programs; only 3 credits apply towards the 33 total credits needed for the major, all credits apply towards the 128 overall credits needed for the degree)</td>
</tr>
<tr>
<td>BISC 7515</td>
<td>Biomedical Systems 1 (Pre-Dental Scholars only)</td>
</tr>
</tbody>
</table>

Cell and Molecular (Two courses, a minimum of 6 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BISC 3115</td>
<td>Human Microbiology (BISC 7410 for Pre-Dental Scholar or MPA program only)</td>
</tr>
<tr>
<td>or BISC 7410</td>
<td>Microbiology</td>
</tr>
<tr>
<td>BISC 4160</td>
<td>Molecular Pathology (can be used for either Cell and Molecular Content Area or Diseases and Pathology Content Area, but not both)</td>
</tr>
<tr>
<td>BISC 4340</td>
<td>Human and Applied Medical Genetics</td>
</tr>
<tr>
<td>BIOL 2201</td>
<td>Genetics</td>
</tr>
<tr>
<td>BIOL 2301</td>
<td>Cell Biology</td>
</tr>
<tr>
<td>BIOL 3501</td>
<td>Neurobiology</td>
</tr>
<tr>
<td>BIOL 4806</td>
<td>Immunobiology</td>
</tr>
</tbody>
</table>

Diseases and Pathology (Two courses, a minimum of 6 credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BISC 3150</td>
<td>General Pathology</td>
</tr>
<tr>
<td>BISC 4120</td>
<td>Pharmacology (BISC 7120 for MPA program only)</td>
</tr>
<tr>
<td>or BISC 7120</td>
<td>Medical Pharmacology</td>
</tr>
<tr>
<td>BISC 4155</td>
<td>Diseases of the Brain</td>
</tr>
<tr>
<td>BISC 4160</td>
<td>Molecular Pathology (can be used for either Cell and Molecular Content Area or Diseases and Pathology Content Area, but not both)</td>
</tr>
<tr>
<td>BISC 4275</td>
<td>Modern Plagues: Addiction, Obesity and Stress</td>
</tr>
</tbody>
</table>

Biomedical Sciences Electives: Additional courses (5-6 credit hours) selected from the following list to total the 33 credit hours required for the major completed with a minimum grade of C.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BISC 1001</td>
<td>Contemporary Issues in Biomedical Sciences (required course for all first semester freshman)</td>
</tr>
<tr>
<td>BISC 1030</td>
<td>Introduction to Dentistry (can only be applied as an elective for Pre-Dental Scholars)</td>
</tr>
<tr>
<td>BISC 3110</td>
<td>Nutritional Aspects of Health</td>
</tr>
<tr>
<td>BISC 3112</td>
<td>Head and Neck Anatomy</td>
</tr>
<tr>
<td>BISC 3115</td>
<td>Human Microbiology</td>
</tr>
<tr>
<td>BISC 3136</td>
<td>Gross Anatomy for the Biomedical Sciences</td>
</tr>
</tbody>
</table>
BIOL 1001 (SN)\(^*\) 3  
THEO 1001 (T) 3  
UCCS (HCS) 3  
BISC 1001 1  
---  
17 16

**Sophomore**

**First Term**

<table>
<thead>
<tr>
<th>Hours</th>
<th>Second Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>BISC 2135</td>
<td>4  PHIL 2310 3</td>
</tr>
<tr>
<td>BISC 2050 or CHEM 2111(^*)</td>
<td>1-4  CHEM 2112 (or elective)(^*) 4</td>
</tr>
<tr>
<td>BIOL 2001 (or lab course)(^*)</td>
<td>3  BISC 2070 or 3213(^*) 3-4</td>
</tr>
<tr>
<td>MATH 1410 (or elective)(^*)</td>
<td>3  Statistics (MR) 3-4</td>
</tr>
<tr>
<td>Elective</td>
<td>4  SOCI 1001 (or elective)(^*) 3</td>
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</table>

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15-18 16-17

**Junior**

**First Term**

<table>
<thead>
<tr>
<th>Hours</th>
<th>Second Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 1001 (or elective)(^*)</td>
<td>4  PHYS 1002 (or elective)(^*) 4</td>
</tr>
<tr>
<td>BISC 4145</td>
<td>4  Diseases and Pathology Course 3</td>
</tr>
<tr>
<td>Anatomy and Systems Course (^*)</td>
<td>3  Cell and Molecular Course 3</td>
</tr>
<tr>
<td>Health and Society requirement (^*)</td>
<td>3  Elective 3</td>
</tr>
<tr>
<td>UCCS LPA (Literature)</td>
<td>3  Elective 3</td>
</tr>
</tbody>
</table>

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17 16

**Senior**

**First Term**

<table>
<thead>
<tr>
<th>Hours</th>
<th>Second Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cell and Molecular Course</td>
<td>3  Diseases and Pathology Course 3</td>
</tr>
<tr>
<td>BISC elective</td>
<td>3  BISC elective 3</td>
</tr>
<tr>
<td>PHIL 4336</td>
<td>1  UCCS (T) 3</td>
</tr>
<tr>
<td>UCCS (DC)</td>
<td>3  Electives 6</td>
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<tr>
<td>Elective</td>
<td>6</td>
</tr>
</tbody>
</table>

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16 15

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Total credit hours: 128-132

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* Courses required for many post-graduate/professional programs, consult with specific program(s) of interest to confirm prerequisites.

** The biochemistry requirement is satisfied by either BISC 2070 3 cr. (sophomore year) or BISC 3213 4 cr. (sophomore or junior year).

*** Any course approved for the Health and Society Cognate. Topics (4930/31) courses that relate to health and society may be approved on an individual basis. BISC 4275 and CLLS 2060 fulfills either the Health and Society Cognate or BISC elective, but not both. HEAL 1025 fulfills either the Health and Society Cognate or the UCCS Diverse Cultures requirement, but not both.

**** The laboratory course requirement satisfied by either BIOL 2001, PHAS 7270 (for students admitted to the PA program), CLLS 2200, CLLS 3160 or PHTH 7525 (for students admitted to the DPT program).

***** Only 3 credits count toward the 33 total credits for the major. The total course credit number counts toward the 128 needed for the degree.

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**Typical Program for Biomedical Sciences Majors - Pre-Physician Assistant Studies**

Partnering with the Department Physician Assistant Studies at Marquette University, the Biomedical Sciences Department has created an opportunity for early admission into the Physician Assistant Studies (PA) program. Students who complete the first two years of the pre-physician assistant curriculum are eligible to apply to the Marquette University PA program as early as the fall term of their Sophomore year. Admitted students complete
their undergraduate degree in Biomedical Sciences within the first two years of the physician assistant program. A Master of Physician Assistant Studies is awarded upon graduation from the PA program. Students who do not enter the PA program their Junior year continue within the Biomedical Sciences major. The department has course outlines for those who enter the PA program their Senior year and for those who complete the standard bachelor's degree. Students work with their advisers to identify the most appropriate option.

**Freshman**

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 1001 (R)</td>
<td>3</td>
<td>ENGL 1002 or COMM 1100 (R)</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1001</td>
<td>4</td>
<td>CHEM 1002</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 1001 (SN)</td>
<td>3</td>
<td>BIOL 1002</td>
<td>3</td>
</tr>
<tr>
<td>UCCS (HCS)</td>
<td>3</td>
<td>PSYC 1001 (ISB)</td>
<td>3</td>
</tr>
<tr>
<td>THEO 1001 (T)</td>
<td>3</td>
<td>PHIL 1001</td>
<td>3</td>
</tr>
<tr>
<td>BISC 1001</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>17</td>
<td></td>
<td>16</td>
</tr>
</tbody>
</table>

**Sophomore**

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BISC 2135</td>
<td>4</td>
<td>BISC 3213</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 2111</td>
<td>4</td>
<td>CHEM 2112</td>
<td>4</td>
</tr>
<tr>
<td>UCCS LPA (Literature)</td>
<td>3</td>
<td>Statistics (MR)****</td>
<td>3-4</td>
</tr>
<tr>
<td>UCCS (DC)</td>
<td>3</td>
<td>UCCS (T)</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 2310 (HNE)</td>
<td>3</td>
<td>BISC 2020</td>
<td>1</td>
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<tr>
<td></td>
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<td>15</td>
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</table>

**Junior**

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
<th>Summer Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BISC 4340 (Cell and Molecular Course)</td>
<td>3</td>
<td>BISC 3150 (Diseases and Pathology Course)</td>
<td>3</td>
<td>PA Curriculum`</td>
<td>14</td>
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<tr>
<td>BISC 4145</td>
<td>4</td>
<td>PHTH 7558 (BISC Elective)</td>
<td>4</td>
<td></td>
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</tr>
<tr>
<td>BISC 7410 (Cell and Molecular Course)</td>
<td>4</td>
<td>PHAS 7270</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BISC 7130 (Anatomy and Systems Course)</td>
<td>5</td>
<td>PHAS 7095**</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PA Curriculum`</td>
<td>4</td>
<td>PA Curriculum`</td>
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<td>20</td>
<td></td>
<td>19</td>
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<td>14</td>
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**Senior**

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>BISC 7120 (Diseases and Pathology Course)</td>
<td>4</td>
<td>PA Curriculum`</td>
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<tr>
<td>PA Curriculum`</td>
<td>6</td>
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</tr>
<tr>
<td></td>
<td>10</td>
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</tbody>
</table>

Total credit hours: 128

* See PA section of the Bulletin (http://bulletin.marquette.edu/healthscienceprofessional/departmentofphysicianassistantstudies/curriculainformation). PA courses fulfill remaining elective requirements to complete 128 credits required for the B.S. degree. All courses completed prior to awarding of B.S. degree count toward the undergraduate GPA and the determination of academic honors.

** Fulfills BISC Health and Society Cognate
Typical Program for Biomedical Sciences Majors - Direct Admit Physical Therapy Students

Partnering with the Physical Therapy program at Marquette University, the Biomedical Sciences Department has established an accelerated option for the Direct Admit Physical Therapy program, allowing students to complete their undergraduate degree after the first year of the professional phase of the program. Students who were admitted directly to the Physical Therapy Program or those admitted following their Junior year (space permitting) must meet the academic standards set by the Physical Therapy Department to continue in the program. Students who do not meet the academic requirements work with their advisers to complete the standard Biomedical Sciences major.

**Freshman**

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1001 (SN)</td>
<td>3</td>
<td>BIOL 1002</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1001</td>
<td>4</td>
<td>CHEM 1002</td>
<td>4</td>
</tr>
<tr>
<td>ENGL 1001 (R)</td>
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<td>ENGL 1002 or COMM 1100 (R)</td>
<td>3</td>
</tr>
<tr>
<td>THEO 1001 (T)</td>
<td>3</td>
<td>PSYC 1001 (ISB)</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
<td>PHIL 1001</td>
<td>3</td>
</tr>
<tr>
<td>BISC 1001</td>
<td>1</td>
<td></td>
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</tr>
<tr>
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</table>

**Sophomore**

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BISC 2135</td>
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<td>BISC 2070</td>
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<td>BISC 2050</td>
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<td>UCCS (HCS)</td>
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<td>PHTH 1001*</td>
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<td>UCCS LPA (Literature)</td>
<td>3</td>
<td>Lab Cognate (BIOL 2001, CLLS 2200 or CLLS 3160)</td>
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</tr>
<tr>
<td>Developmental or Abnormal Psychology</td>
<td>3</td>
<td>Statistics (MR)**</td>
<td>3-4</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
<td>PHIL 2310 (HNE)</td>
<td>3</td>
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</table>

**Junior**

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 1001</td>
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<td>PHYS 1002</td>
<td>4</td>
</tr>
<tr>
<td>BISC 4145</td>
<td>4</td>
<td>Cell and Molecular Course</td>
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</tr>
<tr>
<td>Cell and Molecular Course</td>
<td>3</td>
<td>BISC Elective</td>
<td>3</td>
</tr>
<tr>
<td>UCCS T</td>
<td>3</td>
<td>Health and Society Requirement ^</td>
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</tr>
<tr>
<td>PHIL 4336</td>
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<td>Elective</td>
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</table>

**Senior**

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
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<tbody>
<tr>
<td>PHTH 7512 (DC)</td>
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<td>PHTH 7504</td>
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<td>PHTH 7503</td>
<td>3</td>
<td>PHTH 7515</td>
<td>2</td>
</tr>
<tr>
<td>BISC 7130 (Anatomy and Systems Course) ****</td>
<td>5</td>
<td>PHTH 7516</td>
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<tr>
<td>PHTH 7513</td>
<td>3</td>
<td>PHTH 7525 (BISC Elective)</td>
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<tr>
<td></td>
<td></td>
<td>PHTH 7528</td>
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</tr>
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</table>
BISC 4120 (Diseases and Pathology Course)  3
BISC 3150 (Diseases and Pathology Course)  3

14  17

Total credit hours: 128

* Students who are not direct admit PT students are not required to complete PHTH 1001

** Any course approved for the Health and Society Cognate. Topics (4930/31) courses that relate to health and society may be approved on an individual basis. BISC 4275 and CLLS 2060 fulfill either the Health and Society Cognate or BISC elective, but not both. HEAL 1025 fulfills either the Health and Society Cognate or the UCCS Diverse Cultures requirement, but not both.

*** Any statistics course approved for math requirement of the UCCS

**** Only 3 credits count toward the 33 total credits for the major. The total course credit number counts toward the 128 needed for the degree.

### Typical Program for Biomedical Sciences Majors - Pre-Dental Scholars

Partnering with the School of Dentistry at Marquette University, the Biomedical Sciences Department has established an accelerated track option through the Pre-Dental Scholar Program, allowing students to complete their undergraduate degree within the first year of the dental school program. Students who were admitted directly to the Pre-Dental Scholar Program or those admitted following Freshmen year must meet the academic standards set by the School of Dentistry to continue in the program. Students who do not meet the academic requirements work with their advisers to complete the standard Biomedical Sciences major.

#### Freshman

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 1001 (R)</td>
<td>3</td>
<td>ENGL 1002 (R)</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1001</td>
<td>4</td>
<td>CHEM 1002</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 1001 (SN)</td>
<td>3</td>
<td>BIOL 1002</td>
<td>3</td>
</tr>
<tr>
<td>UCCS (HCS)</td>
<td>3</td>
<td>PSYC 1001 (ISB)</td>
<td>3</td>
</tr>
<tr>
<td>THEO 1001 (T)</td>
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<td>BISC 1030</td>
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</tr>
<tr>
<td>BISC 1001</td>
<td>1</td>
<td>PHIL 1001</td>
<td>3</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>17</td>
</tr>
</tbody>
</table>

#### Sophomore

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BISC 2135</td>
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<td>CHEM 2112</td>
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<td>CHEM 2111</td>
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<td>BISC 2070</td>
<td>3</td>
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<tr>
<td>Statistics (UCCS MR)**</td>
<td>3</td>
<td>BIOL 2001</td>
<td>3</td>
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<td>UCCS (DC)</td>
<td>3</td>
<td>PHIL 2310 (HNE)</td>
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<tr>
<td>Elective</td>
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<td>Elective</td>
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<td></td>
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#### Junior

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
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<tr>
<td>PHYS 1001</td>
<td>4</td>
<td>PHYS 1002</td>
<td>4</td>
</tr>
<tr>
<td>BISC 4145</td>
<td>4</td>
<td>Diseases and Pathology Course</td>
<td>3</td>
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<tr>
<td>Diseases and Pathology Course</td>
<td>3</td>
<td>Cell and Molecular Course</td>
<td>3</td>
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<tr>
<td>Health and Society Requirement*</td>
<td>3</td>
<td>UCCS (T)</td>
<td>3</td>
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<tr>
<td>Elective</td>
<td>3</td>
<td>UCCS LPA (literature)</td>
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### Senior

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>BISC 7410 (Cell and Molecular Course)</td>
<td>4</td>
<td>BISC 7516 (BISC elective)</td>
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<tr>
<td>BISC 7514 (BISC Elective)</td>
<td>4</td>
<td>Clinical curriculum</td>
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<tr>
<td>BISC 7515 (Anatomy and Systems Course)</td>
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<td>DEIN 7110</td>
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<tr>
<td>Clinical curriculum</td>
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<td></td>
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</table>

Total credit hours: 128

* Any course approved for the Health and Society Cognate. Topics (4930/31) courses that relate to health and society may be approved on an individual basis. BISC 4275 and CLLS 2060 fulfill either the Health and Society Cognate or BISC elective, but not both. HEAL 1025 fulfills either the Health and Society Cognate or the UCCS Diverse Cultures requirement, but not both.

** Any statistics course approved for math requirement of the UCCS

*** Individual courses listed above apply towards the BISC major requirements. The remaining clinical curriculum credits in D1 year apply toward the 128 total credits required for the B.S. degree and are included in the GPA calculations for the B.S. degree and academic honors.

### Typical Program for Biomedical Sciences Majors - STEM MBA

Marquette undergraduate students majoring in Biomedical Sciences can apply for admission to the Master of Business Administration (MBA) program in the second semester of their junior year. Students accepted into this program are eligible to enroll in up to 12 credits of MBA course work that carry graduate credit during their senior year. Credits obtained for these courses can be used to fulfill both undergraduate and graduate degree requirements. Due to the number of prerequisite courses required for admission to the MBA program, the MBA accelerated degree option requires careful planning as early as sophomore year. Interested students should contact their adviser early in their undergraduate career. Once students inform the Graduate School of their completion of undergraduate degree requirements, their admission as a regular degree status (RDS) student in the Graduate School of Management is activated.

### Freshman

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
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<tbody>
<tr>
<td>ENGL 1001 (R)</td>
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<td>ENGL 1002 or COMM 1100 (R)</td>
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<tr>
<td>CHEM 1001</td>
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<td>4</td>
</tr>
<tr>
<td>BIOL 1001 (SN)</td>
<td>3</td>
<td>BIOL 1002</td>
<td>3</td>
</tr>
<tr>
<td>THEO 1001 (T)</td>
<td>3</td>
<td>PSYC 1001 (ISB)</td>
<td>3</td>
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<tr>
<td>UCCS (HCS)*</td>
<td>3</td>
<td>PHIL 1001</td>
<td>3</td>
</tr>
<tr>
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<td></td>
</tr>
<tr>
<td></td>
<td>17</td>
<td></td>
<td>16</td>
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### Sophomore

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BISC 2135</td>
<td>4</td>
<td>BISC 3213 or 2070</td>
<td>3-4</td>
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<tr>
<td>CHEM 2111 or BISC 2050</td>
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<td>CHEM 2112 (or elective)</td>
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<tr>
<td>UCCS LPA (Literature)</td>
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<td>PHIL 2310</td>
<td>3</td>
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<tr>
<td>MATH 1390</td>
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<td>BUAD 1060</td>
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<tr>
<td>ECON 1103**</td>
<td>3</td>
<td>MATH 1400**</td>
<td>3</td>
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<tr>
<td>Junior</td>
<td>First Term</td>
<td>Hours</td>
<td>Second Term</td>
</tr>
<tr>
<td>--------</td>
<td>------------</td>
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<td>-------------</td>
</tr>
<tr>
<td>Anatomy and Systems Course ***</td>
<td>3</td>
<td>BISC 4145</td>
<td>4</td>
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<tr>
<td>Cell and Molecular Course</td>
<td>3</td>
<td>Diseases and Pathology Course</td>
<td>3</td>
</tr>
<tr>
<td>Health and Society requirement ****</td>
<td>3</td>
<td>BIOL 2001 (or lab course)</td>
<td>3</td>
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<td>MATH 1700 **</td>
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<td>ACCO 1030</td>
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<td>ACCO 1031</td>
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<table>
<thead>
<tr>
<th>Senior</th>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
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<tbody>
<tr>
<td>Cell and Molecular Course</td>
<td>3</td>
<td>Diseases and Pathology Course</td>
<td>3</td>
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</tr>
<tr>
<td>BISC elective</td>
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<td>BISC elective</td>
<td>3</td>
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<tr>
<td>Med/Bio Ethics</td>
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<td>UCCS (T)</td>
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<tr>
<td>FINA 6100</td>
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<td>MARK 6100</td>
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<tr>
<td>MANA 6100</td>
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<td>ECON 6100</td>
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<tr>
<td></td>
<td>15</td>
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</tbody>
</table>

Total credit hours: 128

* MBA Elective Core = one course from each of the areas: 1/Quantitative Methods; 2) Information Technology; 3) Social, Ethical, Political Environment

** AP credits accepted for MBA prerequisites (MATH 1410 or higher can substitute for MATH 1400)
AP credits accepted for MATH 1700, ECON 1103/1104 and MATH 1400(MATH 1450 or higher)

*** If course is more than 3 credits, only 3 credits count towards the 33 total credits for the major. The total course credit number counts toward the 128 needed for the degree.

**** Any course approved for the Health and Society Cognate. Topics (4930/31) courses that relate to health and society may be approved on an individual basis. BISC 4275 and CLLS 2060 fulfills either the Health and Society Cognate or BISC elective, but not both. HEAL 1025 fulfills either the Health and Society Cognate or the UCCS Diverse Cultures requirement, but not both.

**Biomedical Sciences Minor**

Choose any of the following courses for a total of 18 credits:

- BISC 1030 Introduction to Dentistry (Can only be applied as credit for Pre-Dental Scholars) 1
- BISC 1060 Chemistry for the Health Professions 3
- BISC 2070 Biochemistry for the Health Professions 3
- BISC 2135 Clinical Human Anatomy 4
- BISC 3110 Nutritional Aspects of Health 3
- BISC 3112 Head and Neck Anatomy 3
- BISC 3115 Human Microbiology 3
- BISC 3150 General Pathology 3
- BISC 3213 Biochemistry 4
- BISC 3850 Systems Neuroscience 3
- BISC 3859 Evolution 3
- BISC 4120 Pharmacology 3
- BISC 4140 Functional Neuroanatomy 3
- BISC 4145 Human Physiology 4
- BISC 4146 Physiology In Depth: Contemporary Issues 1
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>BISC 4155</td>
<td>Diseases of the Brain</td>
<td>3</td>
</tr>
<tr>
<td>BISC 4160</td>
<td>Molecular Pathology</td>
<td>3</td>
</tr>
<tr>
<td>BISC 4170</td>
<td>Biology, Moral Behavior and Policy</td>
<td>3</td>
</tr>
<tr>
<td>BISC 4173</td>
<td>Principles of Human Embryology</td>
<td>3</td>
</tr>
<tr>
<td>BISC 4275</td>
<td>Modern Plagues: Addiction, Obesity and Stress</td>
<td>3</td>
</tr>
<tr>
<td>BISC 4325</td>
<td>Endocrinology</td>
<td>3</td>
</tr>
<tr>
<td>BISC 4340</td>
<td>Human and Applied Medical Genetics</td>
<td>3</td>
</tr>
<tr>
<td>BISC 4514</td>
<td>Human Microanatomy</td>
<td>4</td>
</tr>
<tr>
<td>BISC 4931</td>
<td>Topics in Biomedical Sciences</td>
<td>1-3</td>
</tr>
<tr>
<td>BISC 4995</td>
<td>Independent Study in Biomedical Sciences</td>
<td>1-6</td>
</tr>
<tr>
<td>BISC 7130</td>
<td>Human Gross Anatomy (PA and PT students only)</td>
<td>5</td>
</tr>
<tr>
<td>CLLS 2200</td>
<td>Concepts in Clinical Laboratory Medicine</td>
<td>3</td>
</tr>
</tbody>
</table>

A maximum of nine transfer credit hours can be applied toward the requirements for a minor.

For students in **non-science majors** interested in pursuing a minor in biomedical sciences, it is strongly recommended that BISC 1015 Principles of Human Anatomy and Physiology, offered spring term, is completed for the UCCS Science and Nature requirement. BISC 1060 Chemistry for the Health Professions (a fall term course) and BISC 2070 Biochemistry for the Health Professions (a spring term course) should be the first BISC minor courses completed. These two BISC minor courses fulfill the chemistry and biochemistry prerequisites for most other BISC minor courses.

**Program Director: Doug Lobner, Ph.D.**

**Honors Committee:** Doug Lobner, Ph.D., Bob Peoples, Ph.D., Maria Crowe, Ph.D., Kevin Siebenlist, Ph.D.

The Disciplinary Honors Program in Biomedical Sciences is designed for students to demonstrate exceptional work in the areas of research and community engagement, as well maintain high academic standards. Students involved in this program must go beyond normal expectations in these areas by generating an honors proposal that integrates coursework, research, community engagement, writing, and oral presentations into a coherent plan of work. There are two specific focuses within the program, one in which the emphasis is on scientific research and the other on community engagement, although all students must include some experience in each area.

Graduation with Disciplinary Honors in Biomedical Sciences requires completion of the portfolio and participation in a second-semester senior year capstone course. As part of this course, the students are required to prepare a presentation describing how they completed their Honors Plan.

**Curricular Requirements**

Honors students within each focus are required to complete five courses which may be applied simultaneously to the Biomedical Sciences major as elective credit. Students should consult the Biomedical Sciences major bulletin to confirm which Honor’s courses may be used toward Biomedical Sciences elective credit.

For their laboratory research experience, students within the research focus must complete six credits of BISC 4995H Honors Independent Study in Biomedical Sciences (students enroll twice, for three credits each class session) or complete three credits of BISC 4995H Honors Independent Study in Biomedical Sciences and participate in the Biomedical Sciences Summer Research Program. Participation in the summer research program is indicated by registration for a 0 credit summer course (BISC 9002H).

**Research Focus Requirements – 2 courses (3 or 6 credits)**

Questions about the research focus can be directed to Dr. Lobner, Doug.Lobner@marquette.edu

- Six credits of honors laboratory research (BISC 4995H Honors Independent Study in Biomedical Sciences) (enrolling twice, for three credits each class session), or three credits plus participation in the summer research program (BISC 9002H)
- Thematic research plan-related curriculum
- Additional extra-curricular activities should be considered (seminar series, etc.)
- Inclusion of community engagement component (For example: assist with anatomy lab tours for high school students)
- A written component of the plan is required during one of the independent study courses or the capstone course.

**Community Engagement Focus Requirements – 2 courses (6 credits)**

Questions about the community engagement focus can be directed to Autumn Swanson, Autumn.Swanson@marquette.edu

- Six credits of honors community engagement course (BISC 4991H Honors Community Engagement in Biomedical Sciences) (enrolling twice, for three credits each class session)
- Thematic community engagement plan-related curriculum
- Additional extra-curricular activities should be considered (seminar series, etc.)
• Inclusion of relevant research component (For example: attend a research-based seminar series)
• A written component of the plan is required during one of the independent study courses or the capstone course.

Curricular Requirements for both the Research and Community Engagement Focuses – 3 courses (3 credits).
In addition to the individual focus requirements, all students within the program must take two one-credit Honors courses as well as the Honors Program capstone course.

Choose two of the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BISC 4151H</td>
<td>Honors Advanced Pathology</td>
<td>1</td>
</tr>
<tr>
<td>BISC 4146H</td>
<td>Honors Physiology In Depth: Contemporary Issues</td>
<td>1</td>
</tr>
<tr>
<td>BISC 4214H</td>
<td>Honors Advanced Biochemistry</td>
<td>1</td>
</tr>
<tr>
<td>BISC 4341H</td>
<td>Honors Advanced Cellular Genetics and Cancer</td>
<td>1</td>
</tr>
<tr>
<td>BISC 4851H</td>
<td>Honors Advanced Systems Neuroscience</td>
<td>1</td>
</tr>
</tbody>
</table>

Required Capstone:
Disciplinary Honors Capstone (BISC 4997H) 1

Academic Standards
Students must have a 3.200 cumulative grade point average for entry into the Disciplinary Honors Program in Biomedical Sciences. Students must achieve a 3.200 cumulative grade point average in order to graduate with an Honors Program degree. If a student drops below a 3.200 in any given semester during the junior year or any subsequent year, the student receives a letter of warning from the director. If a student drops below a 3.200 cumulative GPA, they are placed on Honors Program academic probation; if they do not achieve a 3.200 cumulative by the end of the following semester, they are removed from the program. Students must earn a grade of C or better in a course for it to count toward the Honors Degree.

Eligibility
The program is structured to be completed over the last two years of a student’s academic career. Sophomores are eligible to apply to the program near the end of the spring semester as long as they meet the 3.2 minimum cumulative GPA requirement.

Application
The application requires a comprehensive Honors Plan addressing three core honors themes: Academic Excellence, Research, and Community Engagement. Along with the Honors Plan submission, the student must identify a faculty mentor who will sponsor the plan.

The Disciplinary Honors Program in Biomedical Sciences Committee approves the plans and selects a limited number of honors applicants to participate in the program.

Sample proposals, application deadline and application forms can be accessed at the Department of Biomedical Sciences Web page.

Courses

BISC 1001. Contemporary Issues in Biomedical Sciences. 1 cr. hr.
Introduction to the field of biomedical sciences with a special emphasis on current topics in health and medicine, development of critical thinking skills, and professional development. S/U grading basis. Prereq: BISC major with Freshman stndg.

BISC 1010. Contemporary Issues in Nutrition. 3 cr. hrs.
Personalized nutrition applications for health promotion designed for non-science majors. Topics include scientific methods, nutrients, life cycle nutrition, weight management, disordered eating, dietary supplements (including botanicals) and nutrition and fitness. Not to be taken for credit by students who have earned credit for HEAL 2045 or BISC 3110.

BISC 1015. Principles of Human Anatomy and Physiology. 5 cr. hrs.
Principles of Human Anatomy and Physiology is an introduction to the structures and functions of the human body. Laboratory included.

BISC 1030. Introduction to Dentistry. 1 cr. hr.
An introduction to the diverse aspects of the dental profession, featuring guest speakers and hands-on laboratory techniques. S/U grade assessment. Prereq: Cons. of dept. ch.

BISC 1060. Chemistry for the Health Professions. 3 cr. hrs.
An introduction to general chemistry and organic chemistry stressing those aspects necessary for the health professions. Prereq: NURS major.

BISC 2015. Anatomy and Physiology for the Health Sciences 1. 3 cr. hrs.
The first module of a human anatomy and physiology course sequence for pre-professional students in the health sciences. Provides an introduction to the structures and functions of the human body. Laboratory included. Prereq: EXPH or ATTR major.
BISC 2016. Anatomy and Physiology for the Health Sciences 2. 3 cr. hrs.
The second module of a human anatomy and physiology course sequence for pre-professional students in the health sciences. Provides an introduction to the structures and functions of the human body. Laboratory included. Prereq: BISC 2015.

BISC 2020. Medical Terminology. 1 cr. hr.
Studies medical terminology organized by body systems with a focus on prefixes, suffixes, word roots and their combining form. Does not apply towards BISC major electives. Prereq: BISC 2135 and BISC major.

BISC 2050. Organic Chemistry for the Health Sciences. 1 cr. hr.
Structure and function of carbohydrates, lipids, nucleic acids, amino acids, proteins, enzymes, and biological information flow. This background information will be employed to explore cell signaling, cellular metabolism, and biological information flow (genetics). Prereq: CHEM 1001 and CHEM 1002.

BISC 2070. Biochemistry for the Health Professions. 3 cr. hrs.
Survey course of carbohydrates, lipids, proteins, enzymes, bioenergetics, metabolism of carbohydrates, lipids, proteins, and nucleotides. Emphasis placed on health and disease. Prereq: BISC 1060; or courses in general and organic chemistry; or cons. of instr.

BISC 2135. Clinical Human Anatomy. 4 cr. hrs.
A regional approach to human anatomy where all body systems are integrated. Correlations between structure and function are emphasized. Laboratory included. Prereq: BISC major, BIOL 1002 and Soph. stdg; or cons. of instr.

BISC 3110. Nutritional Aspects of Health. 3 cr. hrs.
Basic principles and fundamentals of human nutrition. Nutrients are discussed in terms of sources, absorption, metabolism and utilization, deficiency, requirements, and assessment of status. Life cycle nutrition and nutrition in disease states. Intended audience: future health care professionals. Prereq: A course in Biochemistry and BISC major; or cons. of instr. Not to be taken for credit by students who have had BISC 1010 or HEAL 2045.

BISC 3112. Head and Neck Anatomy. 3 cr. hrs.
Survey of neuroanatomy, sensory systems and speech, muscular and vascular systems, and osteology of the head and neck. An emphasis is placed on functional anatomy and significant clinical correlates. Laboratory included. Prereq: BISC 2135 and BISC major; or cons. of instr.

BISC 3115. Human Microbiology. 3 cr. hrs.
Provides foundational knowledge of infectious agents of human medical importance and how the body responds to those pathogens. Covers the physiology, genetics and pathogenesis of diseases caused by bacteria, viruses, fungi and parasites as well as their diagnosis, prevention and treatment. Microbial control, antibiotics and vaccination are also covered. Immunology and host-pathogen interactions are highlighted throughout the course. Prereq: BISC major, BIOL 1002, and a biochemistry course, which may be taken concurrently; or cons. of instr.

BISC 3136. Gross Anatomy for the Biomedical Sciences. 2 cr. hrs.
This undergraduate human gross anatomy laboratory course takes a regional approach to the dissection of human cadaveric material and includes all body structures/systems. Space reserved for Biomedical Sciences majors in good standing. Enrollment is limited based upon specimen availability. Prereq: BISC 2135 and cons. of instr.

BISC 3150. General Pathology. 3 cr. hrs.
Overview of cellular degenerations, inflammation and neoplasia. Various organ systems and their primary disease states will then be presented. These systems include musculoskeletal, nervous, cardiovascular, pulmonary, reproductive, digestive, endocrine, and integument. Taught using lecture note handouts, Power Point, websites and examination objectives. Prereq: BISC major and courses in anatomy and physiology, which may be taken concurrently; or PHTH major; or PHAS major; or cons. of instr.

BISC 3213. Biochemistry. 4 cr. hrs.
The chemistry of cells in health and disease. Structure and function of proteins, carbohydrates, lipids, and nucleic acids; enzyme function, cell signaling, cellular metabolism, and biological information flow (genetics). Prereq: CHEM 2112 or CHEM 2114, can be taken concurrently.

BISC 3850. Systems Neuroscience. 3 cr. hrs.
Broad overview of neural systems supporting perception, learning, and behavior. Highly integrative with various thematic content including: functional organization of the nervous system, sensory & motor systems, neural encoding, motivation, emotion, learning & memory. Application of each topic to mental health is discussed. Prereq: BIOL 1001.

BISC 3859. Evolution. 3 cr. hrs.
Evolution consists of describing its history and analyzing its causes and mechanisms. Emphasizes the general principles of evolution, the hypotheses about the causes of evolutionary change that apply to most organisms, and the major patterns of change that have characterized many different groups. Prereq: BIOL 1001 and BIOL 1002, a biochemistry course, and cons. of instr.

BISC 4120. Pharmacology. 3 cr. hrs.
This course covers the fundamentals of human pharmacology and the basic principles dictating drug action within the human body. The course focuses on the therapeutic actions and clinical applications of various drug classes with emphasis on cellular mechanisms, physiological responses, adverse reactions, and clinical indications, accompanied by general discussion on the pathological conditions for which common therapeutic agents are used. Prereq: BISC major, a course in biochemistry and BISC 4145; or PHTH major; or cons. of instr.

BISC 4140. Functional Neuroanatomy. 3 cr. hrs.
Examines the basic structure and function of the central nervous system from spinal cord to cerebral cortex. Material will be presented within both clinical and basic contexts. Based on the understanding of the normal circuitry and function of the brain, clinically relevant neurological disorders and basic neuroanatomical methods will also be explored. Laboratory included. Prereq: BISC 2135 or BISC 7130.
BISC 4145. Human Physiology. 4 cr. hrs.
Human physiology including blood and circulation, muscular, neuronal and sensory systems, renal and respiratory systems, digestion, metabolism, reproduction, their control by the endocrine and central nervous systems, and clinical correlates. Prereq: BISC major, BISC 2135, and BISC 2070 or BISC 3213; or PHAS major.

BISC 4146. Physiology In Depth: Contemporary Issues. 1 cr. hr.
In depth treatment of selected topics in physiology with an emphasis on contemporary news relevant to health and physiology. Prereq: BISC 4145.

BISC 4146H. Honors Physiology In Depth: Contemporary Issues. 1 cr. hr.
In depth treatment of selected topics in physiology with an emphasis on contemporary news relevant to health and physiology. Prereq: BISC 4145 and admission to Marquette University Honors Program.

BISC 4147. Human Physiology Laboratory. 1 cr. hr.
Uses virtual laboratory technology and a team-based learning approach to investigate fundamental concepts of human physiology. Clinical correlates are emphasized in a problem-based learning format. Prereq: BISC 4145, may be taken concurrently; cons. of instr.

BISC 4151. Advanced Pathology. 1 cr. hr.
In depth coverage of selected topics in pathology, with an emphasis on current topics that are in the news and relevant to health and disease. Prereq: BISC 3150, which may be taken concurrently, or cons. of instr.

BISC 4151H. Honors Advanced Pathology. 1 cr. hr.
In depth coverage of selected topics in pathology, with an emphasis on current topics that are in the news and relevant to health and disease. Prereq: BISC 3150, which may be taken concurrently, or cons. of instr. and admission to Marquette University Honors Program.

BISC 4155. Diseases of the Brain. 3 cr. hrs.
Primary objective is to better understand brain function by examining pathological states involving the central nervous system. In the process of developing a deeper understanding of the neurosciences, presented are opportunities to develop critical thinking skills, utilize the scientific method and explore how research and contemporary approaches to drug development impact human health. By focusing on diseases of the brain, explores how deficits in cognition and other aspects of brain function provides insight as to what it means to be human. Prereq: BISC 2135.

BISC 4160. Molecular Pathology. 3 cr. hrs.
Cellular and molecular basis of human diseases, therapeutic interventions and current research efforts. Prereq: BISC major and a course in biochemistry, which may be taken concurrently; or cons. of instr.

BISC 4165. Microbiology Laboratory. 1 cr. hr.
Introduction to various topics of microbiology laboratory including the isolation, cultivation, enumeration and characterization of bacteria of human medical importance. Brightfield, darkfield, and phase contrast microscopy are utilized. Specialized techniques include: antibiotic susceptibility testing, anaerobic cultivation and immunological assays. Contact course instructor to request permission to enroll. Does not apply towards BISC major electives. Prereq: BISC 3115 and cons. of instr.

BISC 4170. Biology, Moral Behavior and Policy. 3 cr. hrs.
A multidisciplinary course on moral decision making as it relates to public policy in healthcare. Examines the foundation of moral behavior and advances to the neural substrates of decision making with an emphasis on the learning, reward processing, and emotional systems that control behavior. Also incorporates discussions of specific ethical issues in biomedical sciences, paying particular attention to the nature of the dilemma and the voices guiding public policy. Can apply to either the Health and Society cognate, or the BISC major electives, but not both. Prereq: BISC 2135.

BISC 4173. Principles of Human Embryology. 3 cr. hrs.
System by system approach to the understanding of the sequence of human embryonic and fetal development. Early events include gametogenesis, implantation and placentation are covered to give a foundation for discussing the development of major organ systems. Discusses the underlying causes of morphological errors in the development which lead to congenital malformations. Stresses the effects of harmful (teratogenic) substances early in the developmental period. Provides a basic understanding of early inductive influences on major organ systems. Prereq: BIOL 1002 and BISC 2135.

BISC 4174. Advanced Biochemistry. 1 cr. hr.
Biochemistry is the body of knowledge upon which much of medical science is built. A living cell requires three things in order to maintain and propagate life: precursors, energy and information. Designed around the in depth examination of structure and function of selected precursors; how they are used to generate energy, store energy, or build more complex biomolecules; and how the information molecules control these processes. The topics covered depend on current health news and student interest. Prereq: BISC 3213, which may be taken concurrently, and cons. of instr.

BISC 4214H. Honors Advanced Biochemistry. 1 cr. hr.
Biochemistry is the body of knowledge upon which much of medical science is built. A living cell requires three things in order to maintain and propagate life: precursors, energy and information. Designed around the in depth examination of structure and function of selected precursors; how they are used to generate energy, store energy, or build more complex biomolecules; and how the information molecules control these processes. The topics covered depend on current health news and student interest. Prereq: BISC 3213, which may be taken concurrently and cons. of instr. based on admission to the Disciplinary Honors Program in BISC.

BISC 4275. Modern Plagues: Addiction, Obesity and Stress. 3 cr. hrs.
Focusses on the interrelationship and connections between addiction, obesity and stress and their common underlying mechanisms. The approach will be primarily physiological/neurobiological rather than psychological/sociological. Prereq: BISC 4145 and cons. of instr.
BISC 4325. Endocrinology. 3 cr. hrs.
Introduction to the field of endocrinology. Focuses on understanding the endocrine system, principles of hormone regulation, hormone signaling mechanisms, and endocrine disorders. Topics include: reproduction, stress responses, metabolic function, growth and homeostasis. Prereq: BIOL 1002, and BISC 4145 or BIOL 3701.

BISC 4340. Human and Applied Medical Genetics. 3 cr. hrs.
Provides an overview of genetic principles that are relevant to human health and disease. Topics include: packaging and sequence architecture of the human genome, Human Genome Project, patterns of Mendelian inheritance in humans, development, genetic alterations and metabolic disease hemoglobinopathies, immunogenetics, genetic testing and gene therapy. Consists of didactic lectures with interspersed clinical cases. Intended for students interested in a career in medical professions. Prereq: BISC 3213 or BIOL 4101; or PHAS major; or cons. of instr.

BISC 4341. Advanced Cellular Genetics and Cancer. 1 cr. hr.
A discussion-based focus on current advances in cellular genetics and cancer research. Students discuss current articles from the news or the primary literature related to the class topics. Includes a lecture component to provide background information for each topic. Prereq: BISC 4340, which may be taken concurrently, or cons. of instr.

BISC 4341H. Honors Advanced Cellular Genetics and Cancer. 1 cr. hr.
A discussion-based focus on current advances in cellular genetics and cancer research. Students discuss current articles from the news or the primary literature related to the class topics. Includes a lecture component to provide background information for each topic. Prereq: BISC 4340, which may be taken concurrently, or cons. of instr. and admission to Marquette University Honors Program.

Examines the American health care system, health care policies, and underlying politics. Provides an overview of the organization and financing of health care in the United States. Examines the impact of the political system, political parties and interest groups, and values on the health care system and health policies at national and state levels. Pays particular attention to the enactment and implementation of the 2010 health care reform law, but also covers the social determinants of health and policies for vulnerable populations. Same as POSC 4381. Prereq: Jr. stndg.

BISC 4461. Comparative Health Politics and Policy. 3 cr. hrs.
Explores through comparative analysis the ways in which different nations address the goals of equitable access, affordability and quality in health care. Considers the similarities and differences in health policy challenges facing rich and developing nations. Employs comparative analysis of different models of health care provisions and financing, and examines the underlying politics of health care systems and policies in different countries. Same as POSC 4461. Prereq: Jr. stndg.

BISC 4514. Human Microanatomy. 4 cr. hrs.
A study of the microscopic structure of cells, tissues and organs of the human body. Emphasis is placed on structure-function relationships and on the interaction of various cell types, tissues and organ systems. Includes laboratory. Prereq: BIOL 1001 and BISC 2135; or cons. of instr.

BISC 4851. Advanced Systems Neuroscience. 1 cr. hr.
Discusses current topics in neuroscience research to develop an appreciation for how neuroscientists unlock the mysteries of the brain to better understand human health and disease. Prereq: BISC 3850, which may be taken concurrently, or cons. of instr.

BISC 4851H. Honors Advanced Systems Neuroscience. 1 cr. hr.
Discusses current topics in neuroscience research to develop an appreciation for how neuroscientists unlock the mysteries of the brain to better understand human health and disease. Prereq: BISC 3850, which may be taken concurrently, and cons. of instr. based on admission to the Disciplinary Honors Program in BISC.

BISC 4931. Topics in Biomedical Sciences. 1-3 cr. hrs.
Selected topics in biomedical sciences. Specific topics will be designated in the Schedule of Classes.

BISC 4986. Internship in Biomedical Sciences. 1-3 cr. hrs.
Co-op or intern experience in the biomedical industry. Features educational activity and productive work related to health care delivery or industrial or administrative aspects of health care. S/U grade assessment. Limited to a maximum of 6 credits with a maximum 3 credits applied towards the BISC major. Prereq: Cons. of dept. via Internship Director.

BISC 4991H. Honors Community Engagement in Biomedical Sciences. 1-3 cr. hrs.
Students are expected to not just be involved in community engagement, but to develop a new community engagement program. At the end of the term students give a powerpoint presentation to the biomedical sciences faculty. A paper may be required by the faculty mentor. Prereq: Cons. of dept. and admission to Marquette University Honors Program.

BISC 4995. Independent Study in Biomedical Sciences. 1-6 cr. hrs.
Research on a selected topic under the direction of a faculty member of the Department of Biomedical Sciences. Can be taken for a maximum total of 6 credits, maximum of 3 credits can be applied towards BISC major. Prereq: Cons. of dept. ch.

BISC 4995H. Honors Independent Study in Biomedical Sciences. 1-6 cr. hrs.
Research on a selected topic under the direction of a faculty member of the Department of Biomedical Sciences. Can be taken for a maximum total of 6 credits, maximum of 3 credits can be applied towards BISC major. Prereq: Cons. of dept. ch. and admission to Marquette University Honors Program.
BISC 7001. Principles of Dentistry. 1 cr. hr.
Surveys the dental profession from the perspectives of participating clinicians, residents and students. Included is an introduction to clinical specialties, procedures, practice settings, as well as alternatives to clinical practice. S/U grade assessment. Prereq: Enrolled in the Biomedical Sciences Post-Baccalaureate certificate program.

BISC 7005. Professional Development 1. 0 cr. hrs.
Designed to focus on and improve the skills necessary for a successful application to dental school or other graduate/career path upon completion of the program. Focuses on the application building aspect within career development. SNC/UNC grade assessment. Prereq: Enrolled in the Biomedical Sciences Post-Baccalaureate certificate program.

BISC 7006. Professional Development 2. 0 cr. hrs.
Designed to focus on and improve the skills necessary for a successful application to dental school or other graduate/career path upon completion of the program. Focuses on the interview skill aspect of career development. SNC/UNC grade assessment. Prereq: Enrolled in the Biomedical Sciences Post-Baccalaureate certificate program.

BISC 7007. Professional Development 3. 0 cr. hrs.
Designed to focus on and improve the skills necessary for a successful application to dental school or other graduate/career path upon completion of the program. Focuses on the transition from the post-baccalaureate program to the student's future goals. SNC/UNC grade assessment. Prereq: Enrolled in the Biomedical Sciences Post-Baccalaureate certificate program.

BISC 7021. Medical and Dental Terminology. 1 cr. hr.
Provides a foundation for the understanding and use of common terminology in the medical field, with particular emphasis on dentistry. Designed to introduce basic prefixes, suffixes, and word roots, and their combining forms, as well as advanced clinical terminology specific to the dental profession. Prereq: Enrolled in the Biomedical Sciences Post-Baccalaureate certificate program.

BISC 7120. Medical Pharmacology. 4 cr. hrs.
Fundamentals of human pharmacology and basic principles dictating drug actions within the human body with emphasis on applications in general medicine. Focuses on the therapeutic actions and clinical applications of various drug classes. Topics include: cellular mechanisms, physiological responses, adverse reactions, drug-drug interactions, and clinical indications, accompanied by discussion on the pathological conditions for which common therapeutic agents are used. Applications of pharmacology commonly encountered by physician assistants are presented and are reinforced through interactive clinically correlated lectures presented by practicing physicians and physician assistants. Prereq: BISC 4145 and PHAS major.

BISC 7130. Human Gross Anatomy. 5 cr. hrs.
A human gross anatomy course including lecture and a cadaver dissection laboratory. Anatomy of the limbs, back, thorax, abdomen, pelvis, and head and neck is approached on a regional basis. Lectures emphasize regional anatomical relationships, functional aspects of the systems, and provide a guide to the dissections. Prereq: PHTH major; or PHAS major only.

BISC 7160. Foundations in Public Health. 3 cr. hrs.
Exploration of select public health issues with an emphasis on dental health disparities. Service learning experiences are incorporated to further the student's integration of public health issues with the dental profession. Prereq: Enrolled in the Biomedical Sciences Post-Baccalaureate certificate program.

BISC 7210. Clinical Biochemistry. 4 cr. hrs.
Examines biochemistry of human cells. Examines the chemistry of amino acids, proteins, carbohydrates, lipids, and nucleic acids. Explores the metabolism and metabolic regulation of these molecules, as well as changes in disease states. When necessary, compares and contrasts human biochemistry with that of bacterial cells. Prereq: General and organic chemistry.

BISC 7215. Clinical Microbiology with Lab. 4 cr. hrs.
Focuses on the general biology of bacterial, viral, fungal and parasitic pathogens of human medical importance and the response of the human host. Laboratory sessions reinforce content from lectures and introduce students to laboratory skills including isolation, cultivation, enumeration, and characterization of bacteria of human medical importance. Utilizes Brightfield microscopy. Specialized techniques include antibiotic susceptibility testing, anaerobic cultivation, biochemical tests and immunological assays. Prereq: Enrolled in the Biomedical Sciences Post-Baccalaureate certificate program.

BISC 7235. Principles of Dental Gross Anatomy. 3 cr. hrs.
Provides students with a foundation in human anatomy, with focus on regions most relevant to dental medicine. Emphasizes correlations between structure, function, and clinical application. Includes laboratory. Prereq: Enrolled in the Biomedical Sciences Post-Baccalaureate certificate program.

BISC 7410. Microbiology. 4 cr. hrs.
This course focuses on infectious agents of human medical importance and on the host pathogen interaction. Topic areas include the general characteristics of bacteria, viruses, fungi and parasites as well as the etiology, pathogenesis, laboratory identification, and epidemiology of selected diseases. Control of microorganisms is discussed in terms of sterilization, disinfection, chemotherapy and immunization. The immune system and the immune response are discussed. Prereq: School of Dentistry or PHAS major.

BISC 7514. General Histology. 4 cr. hrs.
This course is a study of the normal microscopic structure and function of human cells, tissues and organs. The structural basis for various physiological and pathological processes such as inflammation and endocrine cycles is presented. The student is also introduced to tissues of the oral region that are studied in detail in DENT 7121. Laboratory exercises promote visual identification of structure. Prereq: School of Dentistry only.
BISC 7515. Biomedical Systems 1. 3 cr. hrs.
Provides an introduction to human anatomy of the head and neck region. Topics include the skull, temporomandibular joint, muscles of mastication and facial expression and an overview of the orbital and cervical regions. Structural and functional relationships between the cranial nerves and central neuroanatomical pathways are presented along with selected clinical correlations. Begins to build the foundational knowledge of the biomedical systems that is necessary for dental students as they start patient rounds during the first semester. Prereq: School of Dentistry only.

BISC 7516. Biomedical Systems 2. 4 cr. hrs.
A human gross anatomy course for dental students that integrates lecture with a cadaver dissection laboratory. Follows the neurocranial anatomy course with expanded topics and detailed dissections of the head and neck regions. Lectures and dissections of the thorax, abdomen and pelvis, along with lectures on the upper and lower extremities are included. Part of a biomedical systems course sequence integrating anatomy, physiology, pathology, and dental clinical correlates. Prereq: School of Dentistry only.

BISC 7517. Biomedical Systems 3. 4 cr. hrs.
Module 3 of a systems-based course integrating anatomy, physiology and pathology including dental clinical correlates. Prereq: School of Dentistry only.

BISC 7518. Biomedical Systems 4. 4 cr. hrs.
Module 4 of a systems-based course integrating anatomy, physiology and pathology including dental clinical correlates. Prereq: School of Dentistry only.

BISC 7520. Dental Pharmacology. 4 cr. hrs.
Fundamentals of human pharmacology and basic principles dictating drug actions within the human body with emphasis on applications in dentistry. Focuses on the therapeutic actions and clinical applications of various drug classes. Topics include: cellular mechanisms, physiological responses, adverse reactions, drug–drug interactions, and clinical indications, accompanied by discussion on the pathological conditions for which common therapeutic agents are used. Applications of pharmacology commonly encountered by dentists are presented and are reinforced through interactive clinically correlated lectures presented by dental professionals. Prereq: School of Dentistry only.

BISC 7550. Remediation. 0-6 cr. hrs.
Variable credits. Variable titles. 0 credit will be SNC/UNC grade assessment; 1-6 credits will be graded. Prereq: Cons. of dept. ch. only.

BISC 7995. Independent Study in Biomedical Sciences. 1-6 cr. hrs.
Research on a selected topic under the direction of a faculty member of the Department of Biomedical Sciences. Can be taken for a maximum total of 6 credits, maximum of 3 credits can be applied towards BISC major.

BISC 9002H. Honors Student Study/Research Placeholder in Biomedical Sciences. 0 cr. hrs.
Used to enroll a honors student who is not enrolled in the term, but is on campus for an educational experience other than academic credit, such as work in a lab or clinic. Used for tracking purposes only. SNC/UNC grade assessment. Prereq: cons. of dpt. ch.
Department of Clinical Laboratory Science

Chairperson: April L. Harkins, Ph.D., MT(ASCP)
Department of Clinical Laboratory Science website

The mission of the Department of Clinical Laboratory Science is to educate persons who will be highly skilled in laboratory medicine and who will possess those professional qualities necessary for the practice of clinical laboratory science. The degree awarded in this department qualifies one to work as a clinical laboratory scientist (aka, medical laboratory scientist or medical technologist) in hospital laboratories, clinics, physicians’ offices, research and teaching laboratories, as well as in biotechnology and pharmaceutical companies and public health labs. The course work provides the foundations necessary for individuals to qualify for medical school, graduate schools and other professional programs.

The Clinical Laboratory Science major is an integrated four-year curriculum leading to a bachelor of science degree. The first three years are spent in classrooms and labs on campus. The teaching laboratories on the university campus are structured to simulate a clinical setting and students have opportunities to experiment with modern technologies and diagnostic instrumentation. The clinical practicum required for this degree occurs during the fourth year and involves clinical rotations in laboratories in the Metro Milwaukee area.

Accreditation
The Clinical Laboratory Science Program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences; 5600 N. River Road, Suite 720; Rosemont, IL 60018; (773) 714-8880. Upon successful completion of the course work and practicum, students are eligible for the appropriate certification and/or licensure examinations. The university assumes no responsibility for the success of its students in obtaining professional certification or other types of professional licensure.

Admission Requirements
Applicants to the Department of Clinical Laboratory Science are expected to fulfill the university admission requirements. Entering freshmen are accepted to the Fall term. In addition to the university admission requirements, applicants must have completed two laboratory sciences, one of which must be chemistry. Three years of advanced high school mathematics and high school physics are also recommended. For students applying for admission with advanced standing from another institution or as transfers from within the university, the general university regulations apply. The number of students admitted with advanced standing or as transfers with any classification depends upon available openings in the class for which the applicant qualifies. Advanced standing or transfer students are never accepted for admission to the senior year only.

Certain essential functions represent the non-academic requirements of the program that a student must possess to successfully complete the program and become employable. These include the ability to distinguish colors, the ability to learn to perform and interpret highly complex testing methods and the ability to disseminate information in an accurate and confidential manner. Students must have good tactile skills, possess adequate physical and emotional health to work under stress and time constraints and demonstrate respect and care for others. Students must also be able to work efficiently and accurately in a clinical laboratory environment that often includes:

- Loud noises
- Strong odors
- Biohazardous materials
- Repetitive motions
- Standing for long periods of time

Ordinarily, the following courses are not accepted from other institutions:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLLS 2200</td>
<td>Concepts in Clinical Laboratory Medicine</td>
<td>3</td>
</tr>
<tr>
<td>CLLS 3124</td>
<td>Medical Bacteriology</td>
<td>4</td>
</tr>
<tr>
<td>CLLS 3127</td>
<td>Medical Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>CLLS 3140</td>
<td>Laboratory Instrumentation</td>
<td>3</td>
</tr>
<tr>
<td>CLLS 3173</td>
<td>Analytical and Clinical Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>CLLS 3174</td>
<td>Clinical Hematology 1</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td><strong>Total Credit Hours</strong></td>
<td><strong>22</strong></td>
</tr>
</tbody>
</table>

Due to the nature of the content of the following courses, a student who has already completed these courses must repeat them if five or more years has lapsed between the time the course was completed and the date of enrollment in the senior year.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BISC 2070</td>
<td>Biochemistry for the Health Professions</td>
<td>3</td>
</tr>
<tr>
<td>BISC 3213</td>
<td>Biochemistry</td>
<td>4</td>
</tr>
<tr>
<td>CLLS 3124</td>
<td>Medical Bacteriology</td>
<td>4</td>
</tr>
<tr>
<td>CLLS 3127</td>
<td>Medical Microbiology</td>
<td>4</td>
</tr>
</tbody>
</table>
Ordinarily, the following must be taken during the year immediately preceding the senior year:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLLS 3124</td>
<td>Medical Bacteriology</td>
<td>4</td>
</tr>
<tr>
<td>CLLS 3127</td>
<td>Medical Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>CLLS 3140</td>
<td>Laboratory Instrumentation</td>
<td>3</td>
</tr>
<tr>
<td>CLLS 3173</td>
<td>Analytical and Clinical Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>CLLS 3174</td>
<td>Clinical Hematology 1</td>
<td>4</td>
</tr>
</tbody>
</table>

**Professional Standards**

In addition to being evaluated through the use of written examinations and assignments, class participation and practical examinations, clinical laboratory science students are also evaluated with respect to their professional qualities. The instructors in most clinical laboratory science courses complete a written evaluation of each student. Students who fail to comply with the rules and regulations of the department with respect to immunizations, health insurance, safety, honesty or whose conduct or health is unsatisfactory may be dismissed from the CLLS major.

During the senior year, students are subject to academic and professional policies of the department as well as the rules and regulations of the affiliating clinical facility to which they are assigned. Students in the senior year who are in violation of the rules and regulations of the clinical facility are subject to dismissal from that facility. This action is under the jurisdiction of the authorities of that institution in consultation with the university department chair.

In clinical laboratory science courses, a student who in any way acts dishonestly in class assignments or examinations shall be liable to dismissal from the department and being issued a grade of F.

For the safety of patients, peers and themselves, students are required to dress appropriately while attending clinical laboratory science sessions for all courses.

**Academic Progression**

Successful program progression requires students to complete each term in a lock-step sequence with a grade of C or higher in all major courses. Each course is only offered once each academic year and should a student fall out of sequence, they will be delayed one year to continue. Students who fail to maintain progress necessary to meet the minimum requirements because of grade point average or excessive failure (F or U) grades are subject to review by the CLLS Academic Standards Committee, and they may be dismissed from the CLLS major.

During the senior year the academic actions taken are varied in severity dependent upon the scholastic and/or professional deficiency. These actions are the following: clinical warning, clinical censure and required to withdraw. The method of making up unacceptable grades during the senior year which have resulted in the issuing of an action of clinical warning or clinical censure are determined by mutual agreement between the university department chair and the affiliation clinical program director. The CLLS Academic Standards Committee prescribes, in writing, conditions under which these students are allowed to continue. Students who do not meet the conditions thus stipulated are dismissed from the major.

Junior students must have a criminal background check prior to beginning their clinical assignments. Some clinical sites may have requirements beyond those of the university (e.g. physical examination, drug testing, etc.). Seniors are expected to participate in the state clinical laboratory science conference.

**Degree Requirements**

Candidates for the baccalaureate degree in Clinical Laboratory Science must complete a minimum of 128 credit hours including the following requirements.

Course requirements and regulations are subject to change on an annual basis and depend upon the demands of the profession and requirements for accreditation and/or certification. Students are subject to these changes regardless of the date of their matriculation in the major.

**Core Curriculum Requirements**

Students majoring in Clinical Laboratory Science must complete a minimum of 37 semester hours of core curriculum requirements. The University Core of Common Studies (UCCS) curriculum is included in the Clinical Laboratory Science (CLS) Core Curriculum requirements. Students must have a cumulative GPA of 2.200 and at least a 2.00 in their required science, mathematics, and CLS courses at the conclusion of their junior year to continue in the program.

<table>
<thead>
<tr>
<th>Area</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>UCCS Requirements</td>
<td>33-36</td>
</tr>
<tr>
<td>Required Science and Medical Ethics Cognates</td>
<td>23-25</td>
</tr>
<tr>
<td>Major</td>
<td>56</td>
</tr>
<tr>
<td>General Electives</td>
<td></td>
</tr>
<tr>
<td></td>
<td>to achieve 128 total credits</td>
</tr>
</tbody>
</table>
Core Curriculum Requirements:

UCCS Rhetoric (R)*
- Any approved UCCS Rhetoric courses

UCCS Mathematical Reasoning (MR)
- MATH 1700 Modern Elementary Statistics
  or PSYC 2001 Psychological Measurements and Statistics

UCCS Diverse Cultures (DC)
- Any approved UCCS DC course

UCCS Histories of Cultures and Societies (HCS)
- Any approved UCCS HSC course

UCCS Individual and Social Behavior (ISB)
- Any approved UCCS ISB course

UCCS Literature and Performing Arts (LPA)
- Any approved UCCS LPA course

UCCS Science and Nature (SN)
- BIOL 1001 General Biology 1

UCCS Human Nature and Ethics (HNE)
- PHIL 1001 Philosophy of Human Nature
  PHIL 2310 Theory of Ethics

UCCS Theology (T)
- THEO 1001 Introduction to Theology
  One additional approved UCCS Theology course

Total Credit Hours 36

*ENGL 1001 Rhetoric and Composition 1 and ENGL 1002 Rhetoric and Composition 2 are recommended for pre-professional students.

Science and Medical Ethics Cognate Requirements:

PHIL 4336 Applied Ethics for the Health Sciences 1
BIOL 1002 General Biology 2 3
CHEM 1001 General Chemistry 1 4
CHEM 1002 General Chemistry 2* 4
CHEM 2111 Organic Chemistry 1 4
A course in biochemistry:
  BISC 2070 Biochemistry for the Health Professions* 3-4
  BISC 3213 Biochemistry* 4
A course in physiology:
  BISC 1015 Principles of Human Anatomy and Physiology* 4-5
  BISC 4145 Human Physiology* 4

Total Credit Hours 23-25

* Indicates essential cognate courses, the subject matter of which is deemed essential to the understanding of clinical laboratory science course work, which must be completed with a grade of C or better.

Major and Essential Course Requirements

Students must also achieve a grade of C or better in all CLLS major courses and the essential courses identified above.

CLLS major courses and essential cognate courses in which grades lower than a C have been earned must be repeated or the student demonstrate proficiency in the discipline by some other method as approved by the promotions committee. Students who complete guided study (CLLS 1100 Guided Study in Clinical Laboratory Science) to establish proficiency are issued a grade of CR. A student will not normally be permitted to repeat more than two of these courses.

Clinical Laboratory Science Major

The following courses constitute the Clinical Laboratory Science major:
## Major Course Requirements:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLLS 1200</td>
<td>Professional Issues in CLLS</td>
<td>0</td>
</tr>
<tr>
<td>CLLS 2200</td>
<td>Concepts in Clinical Laboratory Medicine</td>
<td>3</td>
</tr>
<tr>
<td>CLLS 3124</td>
<td>Medical Bacteriology</td>
<td>4</td>
</tr>
<tr>
<td>CLLS 3127</td>
<td>Medical Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>CLLS 3140</td>
<td>Laboratory Instrumentation</td>
<td>3</td>
</tr>
<tr>
<td>CLLS 3160</td>
<td>Molecular Diagnostics: Laboratory Techniques</td>
<td>3</td>
</tr>
<tr>
<td>CLLS 3173</td>
<td>Analytical and Clinical Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>CLLS 3174</td>
<td>Clinical Hematology 1</td>
<td>4</td>
</tr>
<tr>
<td>CLLS 4180</td>
<td>Basic Concepts in Clinical Education Methods &amp; Practicum</td>
<td>1</td>
</tr>
<tr>
<td>CLLS 4181</td>
<td>Modern Management Concepts for the Clinical Laboratory &amp; Practicum</td>
<td>1</td>
</tr>
<tr>
<td>CLLS 4183</td>
<td>Clinical Chemistry and Practicum</td>
<td>6</td>
</tr>
<tr>
<td>CLLS 4184</td>
<td>Clinical Hematology 2 and Practicum</td>
<td>4</td>
</tr>
<tr>
<td>CLLS 4185</td>
<td>Clinical Hemostasis and Practicum</td>
<td>3</td>
</tr>
<tr>
<td>CLLS 4186</td>
<td>Clinical Immunohematology and Practicum</td>
<td>6</td>
</tr>
<tr>
<td>CLLS 4187</td>
<td>Clinical Immunology and Serology and Practicum</td>
<td>2</td>
</tr>
<tr>
<td>CLLS 4188</td>
<td>Clinical Microbiology and Practicum</td>
<td>6</td>
</tr>
<tr>
<td>CLLS 4189</td>
<td>Clinical Urinology and Practicum</td>
<td>2</td>
</tr>
</tbody>
</table>

Total Credit Hours: 56

## General Electives - 12 credits

Students may choose from any university offerings to earn a total of 12 credits of general electives. Upon arrival at Marquette University the student’s adviser will work out a program that is best suited to the needs of the student. The science requirements are subject to revision.

## Typical Program for Clinical Laboratory Science Majors

### Freshman

<table>
<thead>
<tr>
<th>Term</th>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BIOL 1001 (SN)</td>
<td>3</td>
<td>BIOL 1002</td>
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### Sophomore

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** Total credit hours: 128

The senior year (clinical phase) consists of 38 consecutive weeks usually beginning with Summer Session.

* Offered only in the Fall semester of each academic year.

** Offered only in the Spring semester of each academic year.

+ Must be taken in the semester immediately preceding the clinical phase.

### Typical Program for Clinical Laboratory Science Majors - Pre-medical

#### Freshman

<table>
<thead>
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16 16

#### Sophomore

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#### Junior

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<td>CLLS 3127** +</td>
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</table>
### CLLS 1001. Introduction to Clinical Laboratory Methods. 1 cr. hr.
Fundamental concepts in laboratory analysis and data correlation. Topics limited to specific disease entities. Laboratory exercises include certain aspects of clinical chemistry, clinical hematology and clinical microbiology. (Saturdays). Prereq: Enrolled in CLLS Young Scholar Program.

### CLLS 1100. Guided Study in Clinical Laboratory Science. 0-2 cr. hrs.
Analysis of selected topics under faculty supervision. Primarily for undergraduate students who wish to enhance their knowledge in selected disciplines through guided study. 0 credit will be SNC/UNC grade assessment; 1-2 credits will be graded. Prereq: CLLS major; or cons. of dept. ch.

### CLLS 1200. Professional Issues in CLLS. 0 cr. hrs.
Introduction to Clinical Laboratory Science as a profession and to the department and major at Marquette. Includes topics to assist the student in a successful transition to college including the advising process. SNC/UNC grade assessment. Prereq: CLLS major.

### CLLS 2050. Forensic Science. 3 cr. hrs.
An introduction to the principles of forensic science. An overview of criminal law, the crime scene, evidence collection and processing, forensic medicine (pathology) drugs and toxins, firearms, questioned documents, trace evidence, fingerprints and DNA as evidence. Emphasis on the investigatory role of the forensic scientist. Laboratory sessions reinforce information from lectures and provide hands-on experiences, including homicide scene investigation techniques, molecular biology procedures.

### CLLS 2060. Public Health. 3 cr. hrs.
An exploration and overview of public health medicine and its contribution to prevention and control of disease. Provides familiarization with epidemiology surveillance and investigation methods, including statistical tools. Included is an introduction to the following components of public health medicine: communicable and non-communicable disease diagnosis and monitoring, environmental and foodborne health concerns, social and behavioral health issues, community health services, and the bioterrorism response network.

### CLLS 2200. Concepts in Clinical Laboratory Medicine. 3 cr. hrs.
Introduction to pathophysiology and the basic laboratory techniques of clinical pathology. Lecture and laboratory sessions limited to selected topics in hematology, immunohematology and clinical chemistry. Prereq: CLLS major and BIOL 1001 & 1002(BIOL 1002 can be taken concurrently); and CHEM 1001 & 1002(CHEM 1002 can be taken concurrently).

### CLLS 3124. Medical Bacteriology. 4 cr. hrs.
Emphasis on the theoretical foundations and methodologies needed in a medical bacteriology laboratory. Topics include: cultivation, isolation, microscopy, and antibiotic susceptibility testing. Morphological, cultural, biochemical, and immunological characteristics of bacteria examined as a basis for their differentiation and identification. Epidemiology, pathogenicity, and treatment of bacterial infections explored. Concepts of the humoral immune response included. Prereq: CLLS major and Biochemistry, which may be taken concurrently.
CLLS 3127. Medical Microbiology. 4 cr. hrs.
Study of the identification and differentiation of pathogens and normal flora of humans based upon correlation of morphological, biochemical, immunological, and molecular characteristics. Epidemiology, pathogenicity, and treatment modalities are also investigated. Fungi, parasites, viruses, and bacteria are studied along with concepts of the cellular immune response. Laboratory involves isolation and identification of medically important microorganisms, including proper patient specimen processing. Prereq: CLLS major and CLLS 3124.

CLLS 3140. Laboratory Instrumentation. 3 cr. hrs.
Application of the principles of basic electronics, spectrophotometry, fluorometry, electrochemistry, flame emission, atomic absorption and flow cytometry to laboratory instruments used in diagnostic and research laboratories. Selected laboratory experiments investigate these applications as related to clinical chemistry and hematology. Background in quality assurance is provided. Focuses on team problem-solving and instrument trouble-shooting. Prereq: CLLS major.

CLLS 3160. Molecular Diagnostics: Laboratory Techniques. 3 cr. hrs.
Medical and forensic molecular biology, including a review of DNA/RNA structure and function, will be covered. Relevant laboratory techniques include isolation of genomic DNA from various tissue samples, PCR RFLP, molecular diagnosis of cancer, detection of infectious agents and identification of inherited diseases. Prereq: CLLS or BISC major & biochemistry (can be taken concurrently).

CLLS 3173. Analytical and Clinical Chemistry. 4 cr. hrs.

CLLS 3174. Clinical Hematology 1. 4 cr. hrs.
Study of identification and differentiation of blood and bone marrow cells with emphasis on morphology, function and pathology of these cells. Includes the study of blood parasites. Principles of methodologies used and their relationship to diagnosis and treatment of disease. Laboratory provides experience in identification of cellular elements in normal and disease states. Prereq: Jr. stndg. and CLLS major.

CLLS 4180. Basic Concepts in Clinical Education Methods & Practicum. 1 cr. hr.
Educational concepts especially appropriate to instruction in a clinical setting using clinical materials. The concepts discussed include: writing learning objectives, learning styles, testing and evaluation methods and use of audio-visuals. Prereq: Sr. stndg. and CLLS major; individual assignments to clinical laboratory affiliations.

CLLS 4181. Modern Management Concepts for the Clinical Laboratory & Practicum. 1 cr. hr.
Comparison of management theories and styles for effective leadership. Principles and methods of communication essential to the delivery of quality health care. Strategic financial planning ensuring cost effectiveness in the diagnostic laboratory. Statistical analysis comparing alternative methodologies for selection of reliable laboratory procedures. Selected projects relating managerial practices to clinical laboratory organization and use of laboratory data systems for health care delivery. Prereq: Sr. stndg. and CLLS major; individual assignments to clinical laboratory affiliations.

CLLS 4183. Clinical Chemistry and Practicum. 6 cr. hrs.
The chemical constituents of blood and other body fluids in health and disease. Principles of the methods used in qualitative and quantitative determination of these constituents. Treatment of the theoretical aspects of instrumentation used in these determinations. Prereq: Sr. stndg. and CLLS major; individual assignments to clinical laboratory affiliations.

CLLS 4184. Clinical Hematology 2 and Practicum. 4 cr. hrs.
Quantitative and qualitative study of blood, bone marrow and body fluid cells and alterations present in disease. Principles of procedures used. Methods of obtaining and preserving blood specimens with consideration of the theory and practice of aseptic technique. Prereq: Sr. stndg. and CLLS major; individual assignments to clinical laboratory affiliations.

CLLS 4185. Clinical Hemostasis and Practicum. 3 cr. hrs.
The components in the blood related to the hemostatic mechanisms, the principles of the procedures involved and their relationship to the diagnosis and treatment of disease. Prereq: Sr. stndg. and CLLS major; individual assignments to clinical laboratory affiliations.

CLLS 4186. Clinical Immunohematology and Practicum. 6 cr. hrs.
Therapeutic and diagnostic aspects of immunohematology. Aspects of blood transfusion and of methods used in preservation and selection of properly matched blood for transfusion. Prereq: Sr. stndg. and CLLS major; individual assignments to clinical laboratory affiliations.

CLLS 4187. Clinical Immunology and Serology and Practicum. 2 cr. hrs.
The mechanisms of resistance to disease, especially the antigen-antibody reactions and the diagnostic procedures used in determining this resistance. Prereq: Sr. stndg. and CLLS major; individual assignments to clinical laboratory affiliations.

CLLS 4188. Clinical Microbiology and Practicum. 6 cr. hrs.
Advanced study of pathogenic and normal flora microorganisms having medical importance. Includes methods for obtaining and handling specimens for culture as well as principles of current instrumentation. Identification protocol include cultural, morphological, biochemical, immunological, and molecular characteristics. Pathophysiology of infectious diseases caused by bacteria, fungi, parasites and viruses is examined. Prereq: Sr. stndg. and CLLS major; individual assignments to clinical laboratory affiliations.
CLLS 4189. Clinical Urinology and Practicum. 2 cr. hrs.
Physical, chemical and microscopic study of urine with emphasis on the changes exhibited in disease with related physiology. Prereq: Sr. stndg. and CLLS major; individual assignments to clinical laboratory affiliations.

CLLS 4931. Topics in Clinical Laboratory Science. 1-4 cr. hrs.
Selected topics in clinical laboratory science. Specific topics determined each term.

CLLS 4995. Independent Study in Clinical Laboratory Studies. 1-4 cr. hrs.
Prereq: Cons. of dept. ch.
Exercise Science

Department of Physical Therapy Chairperson: Lawrence G. Pan, P.T., Ph.D., F.A.P.T.A

Program in Athletic Training website (http://www.marquette.edu/chs/athletic/index.shtml)

Program in Exercise Physiology website (http://www.marquette.edu/chs/exercise)

The Program in Exercise Science, which is located in the Department of Physical Therapy, offers undergraduate majors in athletic training (ATTR) and exercise physiology (EXPH).

Direct Admit Physical Therapy

For incoming freshmen admitted to the Direct Admission Physical Therapy program, the ATTR/DPT and EXPH/DPT allow students to begin the three-year DPT program in the senior year of undergraduate studies for a total of six years of study, instead of the usual seven years.

CTRH Accelerated Degree Program (ADP)

The Program in Exercise Science offers early admission into its M.S. Program in Clinical and Translational Rehabilitation Health Science (CTRH). Marquette undergraduate students majoring in Athletic Training or Exercise Physiology can apply for admission to this program in the second semester of their junior year. Students accepted into this program are eligible to enroll in up to 17 credits of Clinical and Translational Rehabilitation Health Sciences course work that carry graduate credit during their senior year. Credits obtained for these courses can be used to fulfill both undergraduate and graduate degree requirements. Once students inform the Graduate School of their completion of undergraduate degree requirements, their admission as a regular degree status (RDS) student in the graduate program is activated.

MBA Accelerated Degree Program (ADP)

Marquette undergraduate students majoring in Athletic Training or Exercise Physiology can apply for admission to the Master of Business Administration program in the second semester of their junior year. Students accepted into this program are eligible to enroll in up to 12 credits of MBA course work that carry graduate credit during their senior year. Credits obtained for these courses can be used to fulfill both undergraduate and graduate degree requirements. Due to the number of prerequisite courses required for admission to the MBA program, the MBA accelerated degree option requires careful planning as early as sophomore year. Interested students should contact their advisor early in their undergraduate career. Once students inform the Graduate School of their completion of undergraduate degree requirements, their admission as a regular degree status (RDS) student in the Graduate School of Management is activated.

See Athletic Training (p. 601) section of this bulletin.

See Exercise Physiology (p. 610) section of this bulletin.
Athletic Training

Athletic Training is an allied health profession whose mission is to enhance the quality of health care for the physically active through prevention, evaluation, management and rehabilitation of athletic injuries. Students wishing to become athletic trainers will receive an educational foundation in exercise and basic sciences as well as complete the required cognates for the National Athletic Training Association (NATA). To ensure a wide variety of practical experiences and expert clinical supervision, class size is limited. Applicants must meet specific admission and retention criteria.

Degree Offered

Marquette University confers the degree bachelor of science with a major in athletic training on those students who have successfully completed the required curricula.

Accreditation

The athletic training major has been granted accredited status through the Commission on Accreditation of Athletic Training Education (CAATE). Students successfully graduating from this program are eligible to sit for the certification exam through the National Athletic Trainers' Association Board of Certification (NATABOC).

Admission Requirements

Admission to the athletic training major can occur at two points in the academic sequencing, either direct admission as an incoming freshman or transfer admission.

The major is filled initially through **direct admission** by applicants applying in their senior year of high school. Direct admission decisions are made from a ranking of applicants based largely on their high school performance, standardized test scores and athletic training essay. The maximum number of students admitted to athletic training is limited as the program needs to provide adequate clinical supervision to each student. Once accepted by the university, students must provide a completed program physical form documenting compliance with the program's "Technical Standards" prior to full acceptance into the Athletic Training major. See the Athletic Training website (http://www.marquette.edu/chs/athletic/admission.shtml) for more information about admission and "Technical Standards".

Students at Marquette who were not admitted directly into the program can apply for **transfer admission** into the sophomore class. Transfer applicants are evaluated individually. The program will accept a minimum of 2 qualified transfer students into each sophomore class. Additional transfers into the athletic training major will only be considered if there are vacancies in the program created by previously accepted students transferring out of the major. Transfer students are accepted into the sophomore class of athletic training majors and will require three years to complete the required athletic training classes regardless of their previous academic standing.

To be considered for a transfer into the athletic training major, the student must meet the following criteria:

1. Must have a minimum of 2.750 GPA (cumulative)
2. Must document that they have observed in an athletic training setting, preferably at Marquette, for 30 hours.
3. Must have completed or be currently enrolled in and successfully completing the required freshman courses, which include:

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<td>EXPH 1001</td>
<td>Introduction to Exercise Science</td>
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<td>EXPH 1010</td>
<td>Emergency Care, CPR and AED</td>
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<td>Anatomy and Physiology for the Health Sciences 1</td>
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<td>ATTR 1020</td>
<td>Prevention and Care of Athletic Injuries</td>
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</table>

Total Credit Hours: 20

4. Must submit a signed Technical Standards form indicating their compliance with program technical standards. This must be verified with a completed program physical form prior to full acceptance into the major.

If a candidate meets the criteria he/she must then fill out the transfer application and file this with the Program Director of Athletic Training by March 1st prior to the fall in which they will join the sophomore class. Eligible candidates will be interviewed and admission decisions will be made prior to the end of the school year.

Transfer students from outside of Marquette University must meet with the program director to determine their present standing and the process for applying to the athletic training major.
Professional Conduct and Academic Regulations

Students in the athletic training major are expected to adhere to the standards of conduct and professionalism set forth by the NATA and described in the student handbook. Professional behavior is vital to the success of every health care provider. To assist each student in developing and refining their professional behaviors, athletic training students are regularly evaluated during the Clinical Proficiency courses and Athletic Training Practicum. Violations and/or major deficiencies may prevent students from receiving clinical assignments and may be grounds for academic probation or dismissal from the major, as described in the Athletic Training Student Handbook.

Academic Performance

Candidates for a degree must comply with the academic performance requirements described in the student handbook. Failure to meet these requirements will result in possible academic probation or dismissal from the program as described in the handbook. They must earn a minimum cumulative GPA of 2.750. All students must comply with the College of Health Sciences graduation requirements. A student must earn a C or better in all major courses. Major courses completed with a CD or less count toward the total hour requirements, but do not fulfill graduation requirements and must be repeated prior to advancing in course sequence. The Department will only allow those students who have satisfactorily completed all academic, technical and professional behavior requirements to attend a clinical affiliation or practicum. The Program reserves the right to deny practicum placement to any student that has not satisfactorily met the requirements printed in the Athletic Training Student Handbook. Cancellation or delay of a practicum may result in delayed graduation.

Limit on the use of substitute repeat option

Since the institution of the punitive F in May 1991, the university has implemented the use of the substitute repeat option whereby the new repeated course grade will be used in the computation of the GPA and the student will receive degree credit only once. The Program in Exercise Science endorses the use of the substitute repeat option as a means to improve a student's GPA but limits its use to a maximum of five instances.

In addition to the above, the program expects its students to adhere to standards of conduct and professionalism. Professional behavior is vital to the success of every health care provider. Violations and/or major deficiencies may prevent students from receiving clinical assignments, may be grounds for dismissal from the major, or other penalties.

Examinations

Final examinations are held in all subjects. A student's grade of scholarship in each subject is determined by the combined results of his or her class work, course assignments, and examinations as defined in the course syllabus. A student who misses a final examination in an ATTR or other course risks the loss of credit and the possibility of not being permitted to enroll in subsequent ATTR and/or EXPH courses. Any student that misses a final exam in any course must file a written excuse with the College of Health Sciences office within 48 hours of the examination. Should the excuse be deemed valid, permission may be given for a delayed examination.

Certification in Basic Life Support

Certification in basic life support that includes child, infant, and both one- and two-person adult CPR along with AED (automatic external defibrillation) training is required of all students. Certification may be obtained following successful completion of EXPH 1010. Continued certification must be maintained by and is the responsibility of the student. Students without current CPR with AED certification cannot participate in their clinical experience which may result in the failure of that experience and may delay graduation.

Health Insurance/Health Certification

A program physical form must be completed by the student's physician or student health services prior to each academic year, as described in the student handbook. All students prior to clinical/practical experiences must present evidence of health insurance before clinical/internship assignment can be made. A chest X-ray, vaccinations, and TB screening may be required prior to clinical assignment as dictated by the specific site. Hepatitis B vaccination is recommended.

Athletic Training and Doctor of Physical Therapy

A curriculum has been developed to accommodate prerequisites for entrance into the D.P.T. while meeting the required course work for ATTR. Students that are either direct admit students or intend on applying to the D.P.T. program must meet with PT and ATTR advisers as soon as possible to discuss programmatic differences that are required to meet each program's requirements.

Students must be aware that some courses in the D.P.T. curriculum can be substituted to complete the ATTR degree, allowing the completion of both programs in a total of 6 years. However, this will result in a one semester delay in graduation from the athletic training major. Students can participate in the May Commencement ceremonies following completion of year four and continue in the PT program without interruption. However, undergraduate diplomas will not be granted until December, after successful completion of the DPT5 Fall semester, which fulfills the final ATTR requirements. See curriculum for specifics.

A minimum of 128 credit hours is required for the degree including the following requirements:
Area | Credit Hours
--- | ---
UCCS Requirements | 34
Required Cognates | 17
Major | 73
General Electives | 4

**UCCS Curriculum Requirements for Athletic Training**

Refer to the University Core of Common Studies (UCCS) for courses that will meet requirements, if not specified below.

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### UCCS Individual and Social Behaviors (ISB)

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<td>One additional UCCS T approved course</td>
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</tbody>
</table>

### UCCS Literature and Performing Arts (LPA)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>Any UCCS LPA approved course</td>
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</table>

### UCCS Human Nature and Ethics (HNE)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>PHIL 1001</td>
<td>Philosophy of Human Nature</td>
</tr>
<tr>
<td>PHIL 2310</td>
<td>Theory of Ethics</td>
</tr>
<tr>
<td>PHIL 4336</td>
<td>Applied Ethics for the Health Sciences (or PHIL 4335 or THEO 4450, each for 3 credits)</td>
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**Required Cognates for ATTR**

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<tr>
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<tbody>
<tr>
<td>BIOL 1001</td>
<td>General Biology 1</td>
</tr>
<tr>
<td>BIOL 1002</td>
<td>General Biology 2</td>
</tr>
<tr>
<td>CHEM 1001</td>
<td>General Chemistry 1</td>
</tr>
<tr>
<td>CHEM 1002</td>
<td>General Chemistry 2</td>
</tr>
</tbody>
</table>

**Athletic Training Major**

The following major course requirements must be completed with a C grade or better or SNC grade for 0 credit ATTR seminar courses. See the Academic Performance section for this major. Major courses completed with a CD or less must be repeated prior to advancing in the course sequence in the sophomore and junior years.

### Major Course Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>EXPH 1001</td>
<td>Introduction to Exercise Science</td>
</tr>
<tr>
<td>EXPH 1010</td>
<td>Emergency Care, CPR and AED</td>
</tr>
<tr>
<td>BISC 2015</td>
<td>Anatomy and Physiology for the Health Sciences 1</td>
</tr>
<tr>
<td>BISC 2016</td>
<td>Anatomy and Physiology for the Health Sciences 2</td>
</tr>
<tr>
<td>EXPH 2106</td>
<td>Cognitive and Motor Learning</td>
</tr>
<tr>
<td>EXPH 2110</td>
<td>Kinesiology/Biomechanics</td>
</tr>
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</table>
Curricula have also been developed for those students interested in using Athletic Training as a pre-medical, pre-dental, pre-veterinary or pre-graduate school degree. Students are required to meet with an adviser to discuss programmatic differences based upon their unique circumstances.

Typical Program for Athletic Training Majors

**Freshman**

<table>
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<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
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<tbody>
<tr>
<td>ENGL 1001 (R)</td>
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<td>ENGL 1002 or COMM 1100 (R)</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1001</td>
<td>4</td>
<td>CHEM 1002</td>
<td>4</td>
</tr>
<tr>
<td>EXPH 1001</td>
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<td>ATTR 1020</td>
<td>2</td>
</tr>
<tr>
<td>EXPH 1010</td>
<td>2</td>
<td>BISC 2015</td>
<td>3</td>
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<tr>
<td>BIOL 1001 (SN)</td>
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<td>BISC 2016</td>
<td>3</td>
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<tr>
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**Sophomore**

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<th>Hours</th>
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<td>BIOL 1002</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 1001 (ISB)</td>
<td>3</td>
<td>EXPH 2190</td>
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<tr>
<td>PHIL 1001 (HNE)</td>
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<td>EXPH 2110</td>
<td>4</td>
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### Junior

<table>
<thead>
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<th>Hours</th>
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<th>Hours</th>
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<tbody>
<tr>
<td>ATTR 3160</td>
<td>2</td>
<td>ATTR 3170</td>
<td>3</td>
</tr>
<tr>
<td>ATTR 3203</td>
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<td>ATTR 3204</td>
<td>0</td>
</tr>
<tr>
<td>ATTR 3983</td>
<td>1</td>
<td>ATTR 3984</td>
<td>1</td>
</tr>
<tr>
<td>UCCS (MR-statistics course)</td>
<td>3</td>
<td>EXPH 3180</td>
<td>4</td>
</tr>
<tr>
<td>UCCS (LPA)</td>
<td>3</td>
<td>EXPH 2106</td>
<td>3</td>
</tr>
<tr>
<td>EXSC 3189 Nutrition and Exercise Performance</td>
<td>4</td>
<td>BISC 4120 (or UCCS THEO)**</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 2310 (HNE)</td>
<td>3</td>
<td>UCCS (DC)</td>
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16  
17

### Senior

<table>
<thead>
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<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
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<tr>
<td>ATTR 3985</td>
<td>1</td>
<td>ATTR 4986 Practicum in AT</td>
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</tr>
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<td>ATTR 4205</td>
<td>0</td>
<td></td>
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</tr>
<tr>
<td>EXPH 3170</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATTR 4120 (or UCCS THEO)**</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EXPH 4187</td>
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<td>PHIL 4336</td>
<td>1</td>
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<tr>
<td>Electives</td>
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</table>

15  
14

Total credit hours: 128

** ATTR students can complete either BISC 4120 Pharmacology in the spring term of junior year or ATTR 4120 Pharmacology in Athletic Training in the fall term of senior year.

**NOTE:** Major courses (BISC 2015/2016 and all EXPH and ATTR courses listed in the curriculum) completed with a CD or less must be repeated prior to advancing in the course sequence for the sophomore and junior years.

### Typical Program for Athletic Training Majors - Direct Admit DPT

A curriculum has been developed to accommodate the prerequisites for entrance into the DPT while meeting the required course work for the athletic training major. Students that are either direct admit DPT students or intend on applying to the DPT program must meet with an adviser as soon as possible to discuss programmatic differences that are required to meet entrance standards. Students must be aware that all required courses must be completed prior to graduation.

### Freshman

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
<th>Summer Term</th>
<th>Hours</th>
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<tbody>
<tr>
<td>ENGL 1001 (R)</td>
<td>3</td>
<td>ENGL 1002 or COMM 1100 (R)</td>
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<td>UCCS (LPA)</td>
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<td>UCCS (HCS)</td>
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<td>PHIL 1001 (HNE)</td>
<td>3</td>
<td>PSYC 1001 (ISB)</td>
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<tr>
<td>CHEM 1001</td>
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<td>CHEM 1002</td>
<td>4</td>
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<td>ATTR 1020</td>
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<td>Course</td>
<td>First Term Hours</td>
<td>Second Term Hours</td>
<td>Hours</td>
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<td>------------------</td>
<td>-------------------</td>
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<td></td>
<td></td>
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<tr>
<td>EXPH 1010</td>
<td>2</td>
<td></td>
<td>3</td>
<td></td>
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<td>BIOL 1001 (SN)</td>
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**Sophomore**

<table>
<thead>
<tr>
<th>Course</th>
<th>First Term Hours</th>
<th>Second Term Hours</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXPH 2115</td>
<td>5</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>PHIL 2310 (HNE)</td>
<td>3</td>
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<td>3</td>
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<tr>
<td>THEO 1001 (T)</td>
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<td></td>
<td>4</td>
</tr>
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<td>ATTR 2130</td>
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<td>3</td>
</tr>
<tr>
<td>ATTR 2981</td>
<td>1</td>
<td></td>
<td>2</td>
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<tr>
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<td>PSYC cognate for DPT**</td>
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<tr>
<td></td>
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<td><strong>17</strong></td>
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**Junior**

<table>
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<tr>
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<th>Hours</th>
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<tr>
<td>ATTR 3160</td>
<td>2</td>
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<td>3</td>
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<tr>
<td>ATTR 3203</td>
<td>0</td>
<td>EXPH 3180</td>
<td>4</td>
</tr>
<tr>
<td>ATTR 3983</td>
<td>1</td>
<td>ATTR 3984</td>
<td>1</td>
</tr>
<tr>
<td>EXPH 3189 Nutrition and Exercise Performance</td>
<td>4</td>
<td>EXPH 2106</td>
<td>3</td>
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<tr>
<td>PHYS 1001</td>
<td>4</td>
<td>PHYS 1002</td>
<td>4</td>
</tr>
<tr>
<td>UCCS (MR) Statistics</td>
<td>3</td>
<td>PHIL 4336</td>
<td>1</td>
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<td>UCCS (T)</td>
<td>3</td>
<td>ATTR 3204</td>
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<tr>
<td></td>
<td><strong>17</strong></td>
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**Senior**

<table>
<thead>
<tr>
<th>Course</th>
<th>First Term Hours</th>
<th>Second Term Hours</th>
<th>Hours</th>
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<tr>
<td>ATTR 3985</td>
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<td>BISC 4120</td>
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<td>DPT Curriculum</td>
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<td>BIOL 3701</td>
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<td>PHTH 7515 (for EXPH 4187)</td>
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<td>BISC 7130</td>
<td>5</td>
<td>PHTH 7516 (for EXPH 4187)</td>
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<td>PHTH 7513 (for EXPH 3170)</td>
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<td>PHTH 7525</td>
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<td>BISC 3150</td>
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<td>PHTH 7512 (DC)</td>
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<td>PHTH 7504 (for ATTR 4986)</td>
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**DPT 5**

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<tr>
<td>PHTH 7986 (for ATTR 4986)</td>
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</table>
DPT Curriculum

Total credit hours: 149

* Students enrolled in the Doctor of Physical Therapy program will follow the curricula as established by the Physical Therapy Department. The curriculum includes courses in the fourth and fifth year of the DPT program that will substitute for required ATTR major courses (listed in parenthesis). Students can participate in the May Commencement ceremony with their class, however, diplomas and official transcripts will not be granted until satisfactory completion of the fall semester in the DPT5 year.

** The DPT program prerequisites include a second PSYC course in either developmental or abnormal psychology. Possible MU courses include PSYC 3101, 3120 or 3401. Other courses require approval of the PT program.

NOTE: Major courses (BISC 2015/2016 and all EXPH and ATTR courses listed in the curriculum) completed with a CD or less must be repeated prior to advancing in the course sequence for the sophomore and junior years.

Typical Program for Athletic Training Majors - Accelerated Degree Program (MS Thesis and Non-Thesis Options)

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<thead>
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<th>Hours</th>
<th>Second Term</th>
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<td>BIOL 1001</td>
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<td>CHEM 1001</td>
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<td>ENGL 1002 or COMM 1100</td>
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<td>EXPH 1010</td>
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<td>BISC 2015</td>
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<td>THEO 1001</td>
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<tr>
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<td>PHIL 2310</td>
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<td>UCCS (MR) Statistics</td>
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18 16
ATTR 3203 0  ATTR 3204 0

17 17

**Senior**

<table>
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<th>Hours</th>
</tr>
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<tr>
<td>EXPH 4187</td>
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<td>CTRH Curriculum TBD&lt;sup&gt;*&lt;/sup&gt;</td>
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<td>EXPH 5192</td>
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<td>EXPH 5195</td>
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<tr>
<td>BISC 5135&lt;sup&gt;*&lt;/sup&gt;</td>
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</tbody>
</table>

CTRH Curriculum TBD<sup>*</sup>

| Total credit hours: 130 |

* A maximum 12 credits of graduate courses taken in senior year can apply toward the CTRH graduate program. In addition, BISC 5135 and 5145 apply towards ATTR major requirements (in place of 7 credits of ATTR 4986) and must be completed with a C or better. CTRH requirements completed in senior year will apply toward the 128 total credits for B.S. degree.

**Courses**

**ATTR 1020. Prevention and Care of Athletic Injuries. 2 cr. hrs.**
Lecture/lab. Common athletic injuries and illnesses will be presented with emphasis on prevention and care. Principles and techniques of athletic taping and bracing as well as equipment fitting, blister and wound care will be discussed. Prereq: ATTR major; or EXSC major; or cons. of instr.

**ATTR 2130. Athletic Training Evaluation 1. 3 cr. hrs.**
Lecture/lab. Pre-season screening and evaluation procedures will be discussed. Concepts of evaluation will be emphasized. Common medical diagnostic procedures will be reviewed and evaluation of the lower extremity will be introduced. Includes screening of internal injuries in athletic participation. Anatomy and physiology. Prereq: EXSC 2115, which may be taken concurrently, and cons. of instr.

**ATTR 2131. Athletic Training Evaluation 2. 3 cr. hrs.**
Lecture/lab. This course is a continuation of Evaluation I and includes assessment of the trunk, back, neck, head and upper extremity. Prereq: ATTR 2130 and cons. of instr.

**ATTR 2150. Therapeutic Modalities. 2 cr. hrs.**
Lecture/lab. Presents current concepts in the use of modalities in the treatment of athletic injuries and the pathophysiology of tissue injury and healing. Prereq: ATTR 2130, BISC 2015 and BISC 2016; ATTR major or cons. of dept.

**ATTR 2201. Athletic Training Seminar 1. 0 cr. hrs.**
Selected topics pertinent to the field of athletic training and applicable to all levels of the athletic training major are presented. Course includes student presentations, case presentations, guest speakers, faculty speakers and topics that are not covered in other courses in the curriculum. Prereq: ATTR 1020.

**ATTR 2202. Athletic Training Seminar 2. 0 cr. hrs.**
Selected topics pertinent to the field of athletic training and applicable to all levels of the athletic training major are presented. Course includes student presentations, case presentations, guest speakers, faculty speakers and topics that are not covered in other courses in the curriculum. Prereq: ATTR 2981.

**ATTR 2931. Topics in Athletic Training. 1-4 cr. hrs.**
Selected topics, not a part of the regular course work taught because of a special need, interest or opportunity. Prereq: Jr. stndg. and EXSC major; or Sr. stndg. and ATTR major; or Jr. stndg. and ATTR major; or Sr. stndg. and ATTR major; or cons. of instr.

**ATTR 2981. Clinical Proficiencies in Athletic Training 1. 1 cr. hr.**
Clinical psychomotor skills related to emergency care, taping, equipment fitting and prevention of injury will be assessed in the clinical environment. S/U grade assessment. Prereq: ATTR 1020.

**ATTR 2982. Clinical Proficiencies in Athletic Training 2. 1 cr. hr.**
Clinical psychomotor skills related to evaluation of the lower extremity are assessed in the clinical environment. S/U grade assessment. Prereq: ATTR 2981, ATTR 2130 and EXPH 1010.
ATTR 3160. Rehabilitative/Therapeutic Exercise in Athletic Training. 2 cr. hrs.
Lecture/lab. This course will present current concepts in the design and administration of rehabilitative/therapeutic exercise in the treatment of athletic injuries. Prereq: ATTR 2130, ATTR 2131, ATTR 3150, BISC 2015, BISC 2016 and EXPH 2110.

ATTR 3170. General Medicine in Athletic Training. 3 cr. hrs.
Lecture/lab. Designed to describe and assess common general medical conditions seen in athletics and includes: common ear and mouth pathologies, description of and assessment of respiratory conditions, common conditions such as diabetes mellitus, urinary tract infections, reproductive abnormalities and viral/infective disorders will be discussed. Common clinical skills (auscultation, vital signs, otoscope, chemstrips, oculcar motor function spirometry) are demonstrated and mastered. Prereq: ATTR 1020, ATTR 2130, ATTR 2131, BISC 1015, and EXPH 1010.

ATTR 3203. Athletic Training Seminar 3. 0 cr. hrs.
Selected topics pertinent to the field of athletic training and applicable to all levels of the athletic training major are presented. Course includes student presentations, case presentations, guest speakers, faculty speakers and topics that are not covered in other courses in the curriculum. Prereq: ATTR 2982.

ATTR 3204. Athletic Training Seminar 4. 0 cr. hrs.
Selected topics pertinent to the field of athletic training and applicable to all levels of the athletic training major are presented. Course includes student presentations, case presentations, guest speakers, faculty speakers and topics that are not covered in other courses in the curriculum. Prereq: ATTR 3983.

ATTR 3983. Clinical Proficiencies in Athletic Training 3. 1 cr. hr.
Clinical psychomotor skills related to evaluation of the upper extremity, spine, and those relating to the application of the therapeutic modalities will be assessed in the clinical environment. S/U grade assessment. Prereq: ATTR 2982 and ATTR 2131 and ATTR 2150.

ATTR 3984. Clinical Proficiencies in Athletic Training 4. 1 cr. hr.
Clinical psychomotor skills related to therapeutic exercise will be assessed in the clinical environment. S/U grade assessment. Prereq: ATTR 3983 and ATTR 3160.

ATTR 3985. Clinical Proficiencies in Athletic Training 5. 1 cr. hr.
Clinical psychomotor skills related to general medical principles, psychosocial intervention, health care administration, exercise program management, and selected special topics will be assessed in the clinical environment. S/U grade assessment. Prereq: ATTR 3170 and ATTR 3984.

ATTR 4120. Pharmacology in Athletic Training. 3 cr. hrs.
Course includes the concepts and content related to pharmacology from the athletic training educational competencies. Topics include: pharmacodynamics, pharmacokinetics, terminology related to pharmacology, legal aspects of medication management, as well as, absorption, distribution, metabolism and elimination of common medications and other drugs as it relates to athletes and the athletic population. Prereq: EXSC 2115; Athletic Training Major or cons. of instr.

ATTR 4205. Athletic Training Seminar 5. 0 cr. hrs.
Selected topics pertinent to the field of athletic training and applicable to all levels of the athletic training major are presented. Course includes student presentations, case presentations, guest speakers, faculty speakers and topics that are not covered in other courses in the curriculum. Prereq: ATTR 3984.

ATTR 4986. Practicum in Athletic Training. 7-16 cr. hrs.
Students will experience field work, hands on clinical experience, event coverage and preparation over an entire semester. Injury assessment, use of modalities, evaluation and rehabilitation skills will be strengthened. Practicum will be under the direct supervision of a certified athletic trainer. Current CPR and First Aid certifications. S/U grade assessment. Prereq: Sr. stndg., ATTR major, cons. of dept. ch., and cons. of program director.

ATTR 4995. Independent Study in Athletic Training. 1-4 cr. hrs.
Independent Study. Prereq: Cons. of instr.
Exercise Physiology

The Exercise Physiology major provides an academic program of liberal arts and basic sciences for the student interested in exercise physiology, fitness and health/wellness. The sequenced curriculum seeks to develop a graduate with the skills and academic background to pursue a career in the rapidly growing health and fitness industry. In addition, students are well prepared to pursue graduate work or professional education in a variety of areas including physical therapy, sports medicine, occupational therapy, medical school, etc. Incoming freshman admitted to the Direct Admit Physical Therapy program and those applicants accepted to the physical therapy program in their junior year will follow a course sequence that allows them to begin the doctorate in physical therapy (D.P.T.) in their senior year.

Degree Offered

Marquette University confers the degree bachelor of science with a major in exercise physiology on those students who have satisfactorily completed the required curricula.

Accreditation/Recognition

For successfully meeting established criteria, the National Strength and Conditioning Association (NSCA) officially recognizes Marquette University’s Education Program in Strength and Conditioning through January 2020.

The exercise physiology Program in the Department of Physical Therapy at Marquette University in Wisconsin is the fourth academic institution in the United States to be recognized as an accredited academic program of study for exercise physiology by the American Society of Exercise Physiologists (ASEP). A ten-year accreditation was awarded from ASEP through September 2022.

Academic Performance

The Program in Exercise Science established the following policies with regard to grades, the use of the Substitute Repeat Option and the useful lifetime of courses:

Candidates for a degree must earn at least the minimum number of credits listed in their curriculum and a minimum GPA of 2.600. All students must comply with the College of Health Sciences graduation requirements. All students must meet a minimum cumulative grade point average of 2.400 after freshman year, and a 2.600 after sophomore year and beyond. A student should understand that a grade point average of 3.000 or better is required for admission consideration by most graduate programs. A student must earn a C or better in all major courses. Major courses completed with a CD or D count toward the total credit hour degree requirements, but do not fulfill major requirements and must be repeated prior to advancing in course sequence.

Limit on the use of substitute repeat option

Since the institution of the punitive F in May 1991, the university has implemented the use of the substitute repeat option whereby the new repeated course grade will be used in the computation of the GPA and the student will receive degree credit only once. The Program in Exercise Science endorses the use of the substitute repeat option as a means to improve a student’s GPA but limits its use to a maximum of five instances.

In addition to the above, the program expects its students to adhere to standards of conduct and professionalism. Professional behavior is vital to the success of every health care provider. Violations and/or major deficiencies may prevent students from receiving clinical assignments, may be grounds for dismissal from the major, or other penalties.

Examinations

Final examinations are held in all subjects. A student’s grade of scholarship in each subject is determined by the combined results of his or her class work, course assignments, and examinations as defined in the course syllabus. A student who misses a final examination in an EXPH or other course risks the loss of credit and the possibility of not being able to enroll in subsequent EXPH courses. Any student that misses a final exam in any course must file a written excuse with the College of Health Sciences office within 48 hours of the examination. Should the excuse be deemed valid, permission may be given for a delayed examination.

Certification in Basic Life Support

Certification in basic life support that includes child, infant, and both one- and two-person adult CPR along with AED (automatic external defibrillation) training is required of all students. Certification may be obtained following successful completion of EXPH 1010. Continued certification must be maintained by and is the responsibility of the student. Students without current CPR with AED certification cannot participate in their clinical experience which may result in the failure of that experience and may delay graduation.

Health Insurance/Health Certification

All students prior to clinical/practical experiences must present evidence of health insurance before clinical/internship assignment can be made. A chest X-ray, vaccinations, and TB screening may be required prior to clinical assignment as dictated by the specific site. Hepatitis B vaccination is recommended.
**Exercise Physiology and Doctor of Physical Therapy**

A curriculum has been developed to accommodate prerequisites for entrance into the D.P.T. while meeting the required course work for EXPH. Students that are either direct admit students or intend on applying to the D.P.T. program must meet with a physical therapy adviser as soon as possible to discuss programmatic differences that are required to meet the standards.

Students must be aware that several courses in the D.P.T. curriculum are required to complete the EXPH major, resulting in a delay in conferring the degree. Students can participate in the May Commencement ceremonies following completion of the DPT4 year, however, diplomas will not be granted until December, after successful completion of the DPT5 Fall semester.

A minimum of 128 credit hours are required for the degree including the following requirements areas:

<table>
<thead>
<tr>
<th>Area</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>UCCS Requirements</td>
<td>34-37</td>
</tr>
<tr>
<td>Required Cognates</td>
<td>14</td>
</tr>
<tr>
<td>Major (includes three credits of advanced EXPH electives)</td>
<td>67</td>
</tr>
<tr>
<td>General Electives</td>
<td>to achieve 128 total credits</td>
</tr>
</tbody>
</table>

**UCCS Curriculum Requirements for EXPH**

Refer to the University Core of Common Studies (UCCS) for courses that will meet requirements, if not specified below. The university allows for one dual application course towards fulfillment of two UCCS knowledge areas. Students who complete a dual application course will complete 34 UCCS credits (instead of the typical 37 credits) and will need to complete additional general elective credits to achieve the 128 credits required for the degree.

**UCCS Rhetoric (R)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 1001</td>
<td>Rhetoric and Composition 1</td>
</tr>
<tr>
<td>ENGL 1002</td>
<td>Rhetoric and Composition 2</td>
</tr>
<tr>
<td>or COMM 1100</td>
<td>Contemporary Presentation</td>
</tr>
</tbody>
</table>

**UCCS Mathematics and Reasoning (MR) - One of the following:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1700</td>
<td>Modern Elementary Statistics</td>
</tr>
<tr>
<td>PSYC 2001</td>
<td>Psychological Measurements and Statistics</td>
</tr>
<tr>
<td>SOCI 2060</td>
<td>Social Statistics</td>
</tr>
</tbody>
</table>

**UCCS Individual and Social Behavior (ISB)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 1001</td>
<td>General Psychology</td>
</tr>
</tbody>
</table>

**UCCS Diverse Cultures (DC)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any approved UCCS DC course</td>
<td></td>
</tr>
</tbody>
</table>

**UCCS Literature and Performing Arts (LPA)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any UCCS LPA approved course</td>
<td></td>
</tr>
</tbody>
</table>

**UCCS Histories of Cultures and Societies (HCS)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any UCCS HCS approved course</td>
<td></td>
</tr>
</tbody>
</table>

**UCCS Science and Nature (SN)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1001</td>
<td>General Biology 1</td>
</tr>
</tbody>
</table>

**UCCS Human Nature and Ethics (HNE)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 1001</td>
<td>Philosophy of Human Nature</td>
</tr>
<tr>
<td>PHIL 2310</td>
<td>Theory of Ethics</td>
</tr>
<tr>
<td>PHIL 4336</td>
<td>Applied Ethics for the Health Sciences (or PHIL 4335 or THEO 4450, three credits each)</td>
</tr>
</tbody>
</table>

**UCCS Theology (T)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>THEO 1001</td>
<td>Introduction to Theology</td>
</tr>
<tr>
<td>One additional UCCS (T) approved class</td>
<td></td>
</tr>
</tbody>
</table>

**Required Cognate courses for EXPH**

All students are required to complete:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1001</td>
<td>General Biology 1 (also fulfills UCCS SN requirement - see above)</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 1002</td>
<td>General Biology 2</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1001</td>
<td>General Chemistry 1</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 1002</td>
<td>General Chemistry 2</td>
<td>4</td>
</tr>
</tbody>
</table>
Exercise Physiology Major

The following major course requirements and EXPH major electives must be completed with a C grade or better (see the Academic Performance section). Major course requirements completed with a CD or less must be repeated prior to advancing in the course sequence for the sophomore and junior years.

Major Course Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXPH 1001</td>
<td>Introduction to Exercise Science</td>
<td>2</td>
</tr>
<tr>
<td>EXPH 1010</td>
<td>Emergency Care, CPR and AED</td>
<td>2</td>
</tr>
<tr>
<td>BISC 2015</td>
<td>Anatomy and Physiology for the Health Sciences 1</td>
<td>3</td>
</tr>
<tr>
<td>BISC 2016</td>
<td>Anatomy and Physiology for the Health Sciences 2</td>
<td>3</td>
</tr>
<tr>
<td>EXPH 2106</td>
<td>Cognitive and Motor Learning</td>
<td>3</td>
</tr>
<tr>
<td>EXPH 2110</td>
<td>Kinesiology/Biomechanics</td>
<td>4</td>
</tr>
<tr>
<td>EXPH 2115</td>
<td>Exercise Physiology and Bioenergetics</td>
<td>5</td>
</tr>
<tr>
<td>EXPH 2190</td>
<td>Scientific Principles of Strength and Conditioning</td>
<td>3</td>
</tr>
<tr>
<td>EXPH 3100</td>
<td>Exercise Leadership</td>
<td>3</td>
</tr>
<tr>
<td>EXPH 3170</td>
<td>Administration in Exercise Science (PHTH 7513 for students admitted to DPT program)</td>
<td>3</td>
</tr>
<tr>
<td>EXPH 3180</td>
<td>Exercise Testing, Prescription and EKG</td>
<td>4</td>
</tr>
<tr>
<td>EXPH 3189</td>
<td>Nutrition and Exercise Performance</td>
<td>4</td>
</tr>
<tr>
<td>EXPH 3986</td>
<td>Exercise Physiology Practicum 1</td>
<td>2</td>
</tr>
<tr>
<td>EXPH 4187</td>
<td>Exercise Physiology for Special Populations (PHTH 7515 for students admitted to DPT program)</td>
<td>3</td>
</tr>
<tr>
<td>EXPH 4192</td>
<td>Advanced Exercise Physiology (PHTH 7518 for students admitted to DPT program)</td>
<td>3</td>
</tr>
<tr>
<td>EXPH 4195</td>
<td>Advanced Exercise Physiology Laboratory (PHTH 7518 for DPT students)</td>
<td>1</td>
</tr>
<tr>
<td>EXPH 4986</td>
<td>Exercise Physiology Practicum 2 (PHTH 7503/7504/7986 for students admitted to DPT program)</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Total Credit Hours</td>
<td>67</td>
</tr>
</tbody>
</table>

Additional EXPH advanced electives from the list below.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>EXPH 2931</td>
<td>Topics in Exercise Physiology</td>
</tr>
<tr>
<td>EXPH 3010</td>
<td>Cardio Dance</td>
</tr>
<tr>
<td>EXPH 3020</td>
<td>Core Stabilization</td>
</tr>
<tr>
<td>EXPH 3030</td>
<td>Introduction to Research in Biomechanics</td>
</tr>
<tr>
<td>EXPH 3040</td>
<td>Yoga</td>
</tr>
<tr>
<td>EXPH 3050</td>
<td>Latin Dance Aerobics</td>
</tr>
<tr>
<td>EXPH 3060</td>
<td>Kickboxing F.I.T.</td>
</tr>
<tr>
<td>EXPH 3070</td>
<td>Latin Dance Aerobics + Toning</td>
</tr>
<tr>
<td>EXPH 3080</td>
<td>Tai Chi</td>
</tr>
<tr>
<td>EXPH 3090</td>
<td>Environmental Physiology</td>
</tr>
<tr>
<td>PHTH 1001</td>
<td>Introduction to Physical Therapy and Medical Terminology (for Direct-Admit PT students)</td>
</tr>
</tbody>
</table>

EXPH Major Elective Courses (3 credits required): Additional courses selected from the following list:

Curricula have also been developed for those students interested in using Exercise Physiology as a pre-medical, pre-dental, pre-veterinary or pre-graduate school degree. Students are required to meet with an adviser to discuss programmatic differences based upon their unique circumstances.

Typical Program for Exercise Physiology Major

Freshman

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 1001 (R)</td>
<td>3</td>
<td>ENGL 1002 or COMM 1100 (R)</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 1001</td>
<td>4</td>
<td>CHEM 1002</td>
<td>4</td>
</tr>
<tr>
<td>EXPH 1010</td>
<td>2</td>
<td>BISC 2015</td>
<td>3</td>
</tr>
<tr>
<td>EXPH 1001</td>
<td>2</td>
<td>BISC 2016</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 1001</td>
<td>3</td>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>UCCS (HCS)</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------</td>
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</table>

### Sophomore

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>EXPH 2115</td>
<td>5</td>
<td>PHIL 2310</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 1001 (ISB)</td>
<td>3</td>
<td>EXPH 2190</td>
<td>3</td>
</tr>
<tr>
<td>PHIL 1001 (HNE)</td>
<td>3</td>
<td>EXPH 2110</td>
<td>4</td>
</tr>
<tr>
<td>THEO 1001 (T)</td>
<td>3</td>
<td>Statistics (MR)</td>
<td>3</td>
</tr>
<tr>
<td>UCCS (LPA)</td>
<td>3</td>
<td>BIOL 1002</td>
<td>3</td>
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</table>

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXPH 3100</td>
<td>3</td>
<td>EXPH 3180</td>
<td>4</td>
</tr>
<tr>
<td>EXPH 3986</td>
<td>2</td>
<td>EXPH elective</td>
<td>3</td>
</tr>
<tr>
<td>EXPH 3189</td>
<td>4</td>
<td>EXPH 2106</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>6</td>
<td>UCCS (DC)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>UCCS (T)</td>
<td>3</td>
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<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXPH 3170</td>
<td>3</td>
<td>EXPH 4986 EXPH Practicum 2</td>
<td>16</td>
</tr>
<tr>
<td>EXPH 4187</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EXPH 4192</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EXPH 4195</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>PHIL 4336</td>
<td>1</td>
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<tr>
<td>Electives</td>
<td>4</td>
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### Junior

<table>
<thead>
<tr>
<th>First Term</th>
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<th>Second Term</th>
<th>Hours</th>
</tr>
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<tbody>
<tr>
<td>EXPH 3100</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EXPH 3986</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EXPH 3189</td>
<td>4</td>
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<td>Electives</td>
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<td>UCCS (DC)</td>
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<td>UCCS (T)</td>
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<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXPH 3170</td>
<td>3</td>
<td></td>
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<tr>
<td>EXPH 4187</td>
<td>3</td>
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<td>EXPH 4192</td>
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<td>EXPH 4195</td>
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<td>PHIL 4336</td>
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<td>Electives</td>
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<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
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<td></td>
<td>15</td>
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</tr>
<tr>
<td></td>
<td>16</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total credit hours: 128

**Note:** Major courses (BISC 2015/2016 and all EXPH courses listed in the curriculum) completed with a CD or less must be repeated prior to advancing in the course sequence for the sophomore and junior years.

### Typical Program for Exercise Physiology Major - Direct Admit DPT

This curriculum has been developed to accommodate the prerequisites for entrance into the DPT while meeting the required course work for the exercise physiology major. Students that are either direct admit DPT students or intend on applying to the DPT program must meet with an adviser as soon as possible to discuss programmatic differences that are required to meet entrance standards.

#### Freshman

<table>
<thead>
<tr>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 1001 (R)</td>
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**Sophomore**

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**Junior**

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**Senior**

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**DPT 5**

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DPT Curriculum: 7

Total credit hours: 139

* The DPT program prerequisites include a second PSYC course in either developmental or abnormal psychology. Possible MU courses include PSYC 3101, 3120 or 3401. Other courses require approval of the DPT program.

** Or BISC 4145 Human Physiology(offered Spring term only)
Students enrolled in the Doctor of Physical Therapy program follow the curricula as established by the Physical Therapy Department. The curriculum includes courses in the fourth and fifth year of the DPT program that substitute for required EXPH major courses (listed in parenthesis). Students participate in the May Commencement ceremony with their class, however, diplomas and official transcripts are not granted until satisfactory completion of the fall semester in the DPT5 year. All courses completed prior to awarding of B.S. degree are counted towards undergraduate GPA and determination of academic honors.

Typical Program for Exercise Physiology Majors - CTRH Accelerated Degree Program (M.S. Thesis and Non-thesis Options)

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**Courses**

**EXPH 1001. Introduction to Exercise Science. 2 cr. hrs.**
Exposure to the fields of exercise science. Current topics of interest including certification requirements and professional development. Prereq: ATTR major; or EXPH major; or cons. of instr.

**EXPH 1010. Emergency Care, CPR and AED. 2 cr. hrs.**
Lecture/lab. An overview of principles and techniques of first aid, emergency care and cardiopulmonary resuscitation. Competency in skills leads to American Heart Association Health Care Provider CPR and first aid certification. Prereq: EXPH major; or ATTR major; or cons. of instr.

**EXPH 1050. Surface Anatomy and Palpation. 1 cr. hr.**
Laboratory course designed to define and analyze the forces influencing movements, describe body planes and axes, and identify anatomical structures (muscles and joints) through palpation. Prereq: EXPH Major; or ATTR Major; or cons. of instr.; anatomy and physiology or concurrent with anatomy and physiology.

**EXPH 2106. Cognitive and Motor Learning. 3 cr. hrs.**
Lecture/lab. A study of the principles of human motor learning development from infancy through adulthood. Instructional emphasis is given to those factors which have implications for exercise and training. Prereq: EXPH major; ATTR major; or cons. of instr.

**EXPH 2110. Kinesiology/Biomechanics. 4 cr. hrs.**
Lecture/lab. Study of human motion emphasizing skeletal structure. Mechanical principles which influence human exercise are examined. Identification of the origin, insertion and function of major muscles is included along with surface anatomy. Prereq: EXPH 2115, BISC 2015 and BISC 2016 must be completed with a grade of C or better prior to enrolling in this course.

**EXPH 2115. Exercise Physiology and Bioenergetics. 5 cr. hrs.**
Lecture/lab. Protein, carbohydrate and lipid metabolism in relation to energy production including anaerobic and oxidative pathways with an emphasis on exercise and health. A study of the effects of exercise on the major systems of the human body, including the cardiorespiratory and neuromuscular systems. Prereq: BISC 2015, BISC 2016, CHEM 1001; and CHEM 1002 which may be taken concurrently, ATTR major; EXPH major; or cons. of dept. ch.

**EXPH 2190. Scientific Principles of Strength and Conditioning. 3 cr. hrs.**
Lecture/lab. This course reviews the research and applications of disciplines such as physiology and biomechanics. Specific topics include program design, exercise techniques, strength, power, speed and flexibility development, physical testing, and training adaptations. Prereq: EXPH 2115.

**EXPH 2931. Topics in Exercise Physiology. 1-4 cr. hrs.**
Selected topics, not a part of the regular course work taught because of a special need, interest, or opportunity. Prereq: Jr. stndg. and EXPH major; or Jr. stndg. and ATTR major; or cons. of instr.

**EXPH 3010. Cardio Dance. 1 cr. hr.**
Provides students with a new method for teaching cardiovascular fitness in a clinical/exercise setting. Utilizing the principles and techniques learned throughout the semester, students will be required to develop a instruct a cardio dance fitness session. Prereq: ATTR or EXPH major.

**EXPH 3020. Core Stabilization. 1 cr. hr.**
Core Stabilization will introduce the students to the anatomy and function of the human body core musculature. Students will learn an evidence based approach to develop an integrated exercise plan to strengthen and stabilize the core. Students will be able to integrate this knowledge into an appropriate treatment plan for a variety of special populations. Exercise modalities such as the physioball, foam roll, body blade, theraband, and Pilates will be learned. Prereq: ATTR or EXPH major.

**EXPH 3030. Introduction to Research in Biomechanics. 2 cr. hrs.**
Exposes students to a wide variety of biomechanical research methods that are used to study human movement. Students will be exposed to these methods through inquiry-based learning projects. In addition, general experiences related to the collection, analysis, and presentation of scientific data will be emphasized. Prereq: ATTR or EXPH major.

**EXPH 3040. Yoga. 1 cr. hr.**
Provides students with the opportunity to gain a better understanding of the practice and benefits of yoga. Philosophy and history as well as traditional and modern aspects of yoga will be covered. Various class styles will be presented and explored. Prereq: ATTR or EXPH major.

**EXPH 3050. Latin Dance Aerobics. 1 cr. hr.**
Introduces students to basic and advanced Latin dance steps choreographed to appropriate music. Students learn proper class format and structure to lead a safe and fun Latin Dance Aerobics class, including non-verbal cues, and appropriate modifications. Prereq: ATTR or EXPH major.
EXPH 3060. Kickboxing F.I.T.. 1 cr. hr.
Students will learn proper class format, safety, technique and structure to develop and lead safe and effective kickboxing training routines. Prereq: ATTR or EXPH major.

EXPH 3070. Latin Dance Aerobics + Toning. 1 cr. hr.
Introduces students to basic and advanced Latin dance steps choreographed to appropriate music. Students learn proper class format and structure to lead a safe and fun Latin Dance Toning class, including proper cues, exercises, and appropriate modifications. Prereq: ATTR or EXPH major.

EXPH 3080. Tai Chi. 1 cr. hr.
Students learn the "Fifteen Important Transitions" (F.I.T.) of Tai Chi F.I.T. and adjunct exercises (qigong) for their utilization in a variety of clinical settings. Throughout this course, participants learn the principles and practice the postures of Tai Chi F.I.T., along with qigong exercises, to develop and lead safe and effective Tai Chi F.I.T. programs to improve an individual's physical strength, posture and alignment, balance, motor recruitment strategies, and proprioception. Prereq: ATTR or EXPH major.

EXPH 3090. Environmental Physiology. 2 cr. hrs.
Systems based physiological responses and adaptations to acute and chronic environmental stress. Considerations will be given to rest and exercise conditions. Depending on class interest, topics could include: Spaceflight and microgravity, hyperbaric environments, hypoxia, high altitude, heat, cold, as well as exercise under extreme conditions such as expeditionary climbing. Application to chronic disease will be emphasized throughout the course. Prereq: ATTR or EXPH major.

EXPH 3100. Exercise Leadership. 3 cr. hrs.
Lecture/lab. A study of the necessary leadership qualities and skills expected for leading exercise activities. Will develop expertise in the instruction of a wide variety of fitness related programs. Prereq: EXPH 2110 and EXPH 2115; and a course in anatomy and physiology.

EXPH 3170. Administration in Exercise Science. 3 cr. hrs.
Study of the strategies and considerations involved in the successful management of a fitness facility. Areas include program planning, budgeting, facility design and organization. Prereq: EXPH major; ATTR major; or cons. of instr.

EXPH 3180. Exercise Testing, Prescription and EKG. 4 cr. hrs.
Lecture/lab. Practical experience in fitness testing/assessment, program design and instruction in a wide variety of fitness related programs. Emphasis on test protocols for evaluating health related components of physical fitness. Prereq: EXPH 2115.

EXPH 3189. Nutrition and Exercise Performance. 4 cr. hrs.
Lecture. A study of the basic nutritional concepts, principles and current issues. Emphasis on nutrition for training and conditioning related to health and wellness, including ergogenic aids. Prereq: EXPH 2115.

EXPH 3196. Exercise Physiology Practicum 1. 2 cr. hrs.
Work experience in approved fitness-related agencies. Experience may include fitness testing, evaluation, exercise prescription, instruction, leadership or management in different settings. May be dependent on space. Current CPR and First Aid certifications. S/U grade assessment. Prereq: Jr. stndg., EXPH major, EXPH 3100, which may be taken concurrently, EXPH 1010, EXPH 2110, EXPH 2115 and EXPH 2190, which may be taken concurrently.

EXPH 4010. Obesity - A Comprehensive Approach. 2 cr. hrs.
Explores obesity as a disease process using a multi-focal approach. Students will examine mental, physical, and social facets of obesity as well as approaches to treat and prevent it. For EXSC/ATTR students, application of classroom material will occur via service learning at a variety of sites in MPS and other facilities throughout Milwaukee, WI. Prereq: ATTR or EXPH major.

EXPH 4187. Exercise Physiology for Special Populations. 3 cr. hrs.
Lecture. A study of program modifications and techniques for various populations; which may include for example exercise prescription throughout the life span. Prereq: EXPH 2115 and EXPH 3180, or cons. of dept. ch.

EXPH 4190. Advanced Strength & Conditioning. 3 cr. hrs.
Covers advanced strength and conditioning topics including: plyometrics, speed and agility development, testing, program design, linear and non-linear periodization and potentiation phenomenon. Prereq: EXPH 2115, EXPH 2190 and cons. of instr.

EXPH 4192. Advanced Exercise Physiology. 3 cr. hrs.
Advanced course in the study of the body's response to physical activity. Focus is on standard techniques utilized in exercise physiology research. Prereq: Sr. stndg., EXPH major or ATTR major, EXPH 2115, EXPH 3180, and anatomy and physiology; or cons. of instr.

EXPH 4195. Advanced Exercise Physiology Laboratory. 1 cr. hr.
Presents advanced techniques used in exercise physiology to study the human body’s response and adaptations to exercise. Focuses on laboratory techniques and skills that are standard, but cutting edge in exercise physiology research and form the basis of knowledge in exercise physiology. Laboratory techniques include those used to study and quantify neuromuscular function, metabolic responses and cardiovascular adjustments to acute and chronic exercise. Students gain practical experience in the scientific process and come to understand and perform these techniques. Prereq: Sr. stndng, EXPH Major, EXPH 2115, and anatomy and physiology (BISC 2015 and BISC 2016); or cons. of instr.

EXPH 4956. Distinguished Scholar in EXPH Research. 1-3 cr. hrs.
Review and application of research related to exercise physiology under the direction of a faculty adviser. Students participate in various aspects of the research process which may include literature review, design/proposal, data collection, analysis/interpretation, and dissemination of results.
EXPH 4960. Distinguished Scholar in EXPH Seminar. 0-3 cr. hrs.
Scholarly presentations by visiting faculty and clinicians, resident faculty and graduate students on current topics related to exercise physiology. 0 cr. graded SNC/UNC, 1-3 cr. graded S/U.

EXPH 4986. Exercise Physiology Practicum 2. 7-16 cr. hrs.
Work experience in approved fitness-related agencies. Experience may include fitness testing, evaluation, exercise prescription, instruction. Leadership or management in different settings. May be dependent on space. S/U grade assessment. Prereq: Cons. of program dir., Sr. stndg, EXPH major, current CPR and First Aid certifications and satisfactory completion of all EXPH major course work with a grade of C or better.

EXPH 4995. Independent Study in Exercise Physiology. 1-4 cr. hrs.
Independent study under the direction of faculty. Prereq: Cons. of instr.
Speech Pathology and Audiology

Chairperson: Linda Crowe, Ph.D.
Department of Speech Pathology and Audiology website (http://www.marquette.edu/chs/speech)

The Department of Speech Pathology and Audiology at Marquette University offers a bachelor of science degree in speech pathology and audiology and a master of science degree in speech-language pathology. The undergraduate program is considered pre-professional, meaning that a graduate degree is necessary before a person is qualified for professional employment.

The primary purpose of the undergraduate program is to provide introductory level knowledge in the field of Speech Pathology and Audiology, within the context of a traditional liberal Arts and Sciences education, which prepares an individual for study in a professional graduate degree program. This liberal education is based on the philosophy that the individual with an educational foundation in the Arts and Sciences will have a broad appreciation for society and its values. Such a traditional undergraduate emphasis provides the needed foundation for the more narrowly focused professional education at the graduate level and is suitable for careers in other communication, education and health-related professions besides speech-language pathology and audiology.

The undergraduate major in speech pathology and audiology includes courses in the areas of normal speech production and development, disorders of speech, language and hearing and methods of evaluation and therapy. Clinical practicum involves actual work with children and adults having speech/language/hearing problems under the direct supervision of certified speech-language pathologists and audiologists. This work is accomplished at the Marquette University Speech and Hearing Clinic. Professional preparation occurs at the graduate level and is a prerequisite for certification/licensure as a professional speech-language pathologist or audiologist.

Degree Offered

The undergraduate curriculum in Speech Pathology and Audiology is a four-year program leading to a Bachelor of Science degree.

Accelerated Degree Program (ADP)

The Department of Speech Pathology and Audiology offers early admission into its M.S. Program in Speech-Language Pathology. Marquette undergraduate students majoring in speech pathology and audiology can apply for this program in the second semester of their junior year. Students accepted into this program are eligible to enroll in up to 12 credits of Speech Pathology and Audiology (SPPA) course work that carry graduate credit during their senior year. Credits obtained for these courses can be used to fulfill both undergraduate and graduate degree requirements. Once students inform the Graduate School of their completion of undergraduate degree requirements, their admission as a regular degree status (RDS) student in the graduate program is activated.

Students with Communicative Disorders

The Department of Speech Pathology and Audiology at Marquette University is dedicated to graduating students with optimum preparation for successful careers in the profession of communication disorders. Since voice, fluency, articulation, language or hearing impairments may interfere with a clinician’s ability to effectively treat persons with communication impairments, we encourage students in our program with such impairments to seek treatment.

English Proficiency

Our department supports the position of the American Speech-Language-Hearing Association in encouraging persons of diverse backgrounds to enter the field of communication disorders. All students in the Department of Speech Pathology and Audiology must provide evidence of adequate written and verbal communication skills in Standard American English necessary to meet academic and clinical requirements. Non-native speakers of English will work closely with their advisers throughout the course of their study toward establishing this proficiency prior to enrollment in clinical practicums. Students who speak with accents and/or dialects may seek assistance in improving these skills at the recommendation of department instructional staff.

Admission Requirements

Applicants to the Department of Speech Pathology and Audiology are expected to fulfill the admission requirements listed in the University section of this bulletin. Entering freshmen are accepted for the fall term.

Admission into the undergraduate major in speech pathology and audiology qualifies a student for the bachelor of science program; it does not extend to the graduate (master's degree) level. Separate application to the graduate school must be made, usually during a student’s senior year.

Students may enter the Department of Speech Pathology and Audiology as a freshman, or may transfer into the program from another university division or another institution later in their academic program. Applicants for advanced standing admission into the Speech Pathology and Audiology program should understand that a grade point average of 3.000 or better is required to be considered for admission into most graduate programs.

Since admission requirements for master’s degree programs may vary from one university to another, the applicant is responsible for meeting those requirements of the institution he or she desires to enter.
Professional Standards

All papers produced by students in all classes under department jurisdiction are expected to conform to professional standards of lucidity, coherence, grammar, spelling, and punctuation. All oral presentations produced by students in all classes under department jurisdiction are expected to conform to professional standards of lucidity, coherence, and grammar. All instructors in all classes under department jurisdiction consider the factors listed above, as well as substance, in grading written and oral presentations.

Undergraduate Practicum in Speech Pathology and Audiology

The student majoring in Speech Pathology and Audiology may complete up to 50 clock hours of direct work with individuals with speech/language/hearing problems. This practicum experience is closely supervised by university personnel who hold the Certificate of Clinical Competence in Speech-Language Pathology or Audiology awarded by the American Speech-Language-Hearing Association. This practicum begins second semester of the junior year and is generally completed in two semesters.

Laboratories

The Marquette University Speech and Hearing Clinic serves as a working laboratory for students in the speech pathology and audiology program. The clinic has individual therapy rooms for adults and children, three diagnostic suites, a hearing testing suite and rooms designed for specialized speech/language therapy: developmental treatment room, adult language room, augmentative/alternate communication room and sensory integration room. Other speech pathology and audiology laboratories include communication, movement and learning lab, child language and literacy lab, phonology and language analysis lab, speech and swallowing lab, neurolinguistics lab and student computer room.

Candidates for a Bachelor of Science degree must earn a minimum of 128 semester hours of credit. Students are required to have a GPA of at least 2.800 at the conclusion of their sophomore year to continue in the program.

Courses completed with a grade of CD or D do not count toward the total hour requirement for a major or minor but do fulfill the subject matter requirement and do count toward the total number of credit hours for graduation.

Credits include the following requirements:

UCCS and Department Curriculum Requirements

Students majoring in Speech Pathology and Audiology must complete a minimum of 49 semester hours of core curriculum requirements. The University Core of Common Studies (UCCS) (http://mu.edu/programs/core/list.shtml) curriculum is included in the Speech Pathology and Audiology (SPPA) Core Curriculum requirements.

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<td>PSYC 2001  Psychological Measurements and Statistics</td>
<td></td>
</tr>
<tr>
<td><strong>UCCS Diverse Cultures (DC)</strong></td>
<td>3</td>
</tr>
<tr>
<td>Any approved UCCS DC course</td>
<td></td>
</tr>
<tr>
<td><strong>UCCS Histories of Cultures and Societies (HCS)</strong></td>
<td>6</td>
</tr>
<tr>
<td>Two courses are required, one from each group:</td>
<td></td>
</tr>
<tr>
<td>Western Civilization</td>
<td></td>
</tr>
<tr>
<td>HIST 1001  Growth of Western Civilization to 1715</td>
<td></td>
</tr>
<tr>
<td>HIST 1002  Growth of Western Civilization since 1715</td>
<td></td>
</tr>
<tr>
<td>American History</td>
<td></td>
</tr>
<tr>
<td>HIST 1101  Introduction to American History</td>
<td></td>
</tr>
<tr>
<td>HIST 2101  Growth of the American Nation 1</td>
<td></td>
</tr>
<tr>
<td>HIST 2102  Growth of the American Nation 2</td>
<td></td>
</tr>
<tr>
<td><strong>UCCS Individual and Social Behavior (ISB)</strong></td>
<td>6</td>
</tr>
<tr>
<td>PSYC 1001  General Psychology</td>
<td></td>
</tr>
<tr>
<td>PSYC 3101  Developmental Psychology: Conception Through Adolescence</td>
<td></td>
</tr>
<tr>
<td><strong>UCCS Literature and Performing Arts (LPA)</strong></td>
<td>5</td>
</tr>
<tr>
<td>Three credits in either English literature or foreign language literature (original or translation)</td>
<td></td>
</tr>
<tr>
<td>Two to three credits in performing arts</td>
<td></td>
</tr>
</tbody>
</table>
At least one of the literature or fine arts courses must be an approved UCCS LPA course

**UCCS Science and Nature (SN)** 3

Choose one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1001</td>
<td>General Biology 1</td>
</tr>
<tr>
<td>BIOL 1009</td>
<td>Biology for Non-Science Majors</td>
</tr>
<tr>
<td>BIOL 1410</td>
<td>Biology of Human Disease</td>
</tr>
<tr>
<td>BISC 1015</td>
<td>Principles of Human Anatomy and Physiology</td>
</tr>
</tbody>
</table>

**UCCS Human Nature and Ethics (HNE)** 7

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 1001</td>
<td>Philosophy of Human Nature</td>
</tr>
<tr>
<td>PHIL 2310</td>
<td>Theory of Ethics</td>
</tr>
<tr>
<td>PHIL 4336</td>
<td>Applied Ethics for the Health Sciences (or other medical ethics course)</td>
</tr>
</tbody>
</table>

**UCCS Theology (T)** 6

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>THEO 1001</td>
<td>Introduction to Theology</td>
</tr>
</tbody>
</table>

One additional UCCS approved second-level THEO course

**Physical Science** 3

Choose one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 1001</td>
<td>General Chemistry 1</td>
</tr>
<tr>
<td>CHEM 1080</td>
<td>Chemistry in the World</td>
</tr>
<tr>
<td>PHYS 1001</td>
<td>General Physics 1</td>
</tr>
<tr>
<td>PHYS 1005</td>
<td>Perspectives in Physical Sciences</td>
</tr>
<tr>
<td>PHYS 1009</td>
<td>Earth and Environmental Physics</td>
</tr>
</tbody>
</table>

**Foreign Language** 0-8

All students must demonstrate one-year college competency in a foreign language — foreign language 1001-1002. This may be accomplished by placement or course. Students who have never studied a foreign language or wish to pursue a new language must take levels 1001 and 1002 to complete the requirement. Students who have earned high school credit in French, German or Spanish, and who plan to continue with the study of that language must take the WebCAPE Placement Examination to determine placement in the appropriate course. On the basis of the achieved score, students will be placed in the appropriate language course. Students who are placed in 2001 or higher are exempt from the foreign language requirement. For further details, see the university section on Placement Credit in Foreign Languages.

**Total Credit Hours** 48-56

---

**Supplemental Course work**

The selection of elective courses will be determined by the professional goals of the student. An academic adviser should be consulted for recommendations concerning the appropriate program to follow.

The student planning to continue graduate work in Speech-Language Pathology is advised to prepare for meeting requirements for licensure as a public school speech and language pathologist. This significantly broadens the scope of professional employment opportunities upon completion of training. Undergraduate courses recommended are:

- EDUC 4931 Topics in Education: Methods for Teaching Students with Exceptional Needs
- SPPA 4610 Multicultural Issues for Speech-Language Pathologists

A minor is not required of students majoring in speech pathology and audiology. If the student chooses to select a minor, an interdisciplinary minor of his or her choice may be formulated, or a minor may be selected in any department of the university. In the latter instance, the minor requirements are subject to the regulations of the department involved. Minors in psychology, foreign language (particularly Spanish) or family studies have been found to be particularly useful to students seeking a career in speech-language pathology or audiology. Students should consult with their academic adviser about pursuing a minor.

**Related Fields**

Students wishing to pursue graduate studies in Deaf Education, Learning Disabilities, Special Education, and other related areas may need to supplement their program of studies with additional course work. Students interested in these areas should consult institutions conferring such degrees for prerequisites and requirements.

**Speech Pathology and Audiology Major**

The Speech Pathology and Audiology major consists of a minimum of 38 semester credits. The following courses constitute the Speech Pathology and Audiology major:
### Typical Program for Speech Pathology and Audiology Majors

#### Freshman

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPPA 1001</td>
<td>3</td>
<td>Introduction to Speech-Language Pathology and Audiology</td>
</tr>
<tr>
<td>SPPA 1100</td>
<td>3</td>
<td>Anatomy and Physiology of the Speech Mechanism</td>
</tr>
<tr>
<td>SPPA 2120</td>
<td>3</td>
<td>Phonetics and Phonology</td>
</tr>
<tr>
<td>SPPA 2130</td>
<td>3</td>
<td>Child Language Development</td>
</tr>
<tr>
<td>SPPA 2210</td>
<td>3</td>
<td>Child Language Disorders</td>
</tr>
<tr>
<td>SPPA 2220</td>
<td>3</td>
<td>Child Speech Sound Disorders</td>
</tr>
<tr>
<td>SPPA 3140</td>
<td>3</td>
<td>Speech Science</td>
</tr>
<tr>
<td>SPPA 3510</td>
<td>3</td>
<td>Introduction to Audiology</td>
</tr>
<tr>
<td>SPPA 3710</td>
<td>3</td>
<td>Intervention Methods in Speech-Language Pathology</td>
</tr>
<tr>
<td>SPPA 3964</td>
<td>1</td>
<td>Practicum in Speech-Language Pathology 1: Campus Clinic</td>
</tr>
<tr>
<td>SPPA 4230</td>
<td>3</td>
<td>Stuttering and Other Fluency Disorders</td>
</tr>
</tbody>
</table>

And an additional 7 hours, chosen from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPPA 2002</td>
<td>3</td>
</tr>
<tr>
<td>SPPA 4310</td>
<td></td>
</tr>
<tr>
<td>SPPA 4520</td>
<td></td>
</tr>
<tr>
<td>SPPA 4530</td>
<td></td>
</tr>
<tr>
<td>SPPA 4610</td>
<td></td>
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<tr>
<td>SPPA 4720</td>
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<tr>
<td>SPPA 4961</td>
<td></td>
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<td>SPPA 4964</td>
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<tr>
<td>SPPA 4965</td>
<td></td>
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<tr>
<td>SPPA 4995</td>
<td></td>
</tr>
<tr>
<td>SPPA 4999</td>
<td></td>
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</tbody>
</table>

Total Credit Hours

38

#### Sophomore

<table>
<thead>
<tr>
<th>Course</th>
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<th>Description</th>
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</thead>
<tbody>
<tr>
<td>SPPA 2120</td>
<td>3</td>
<td>SPPA 2210</td>
</tr>
<tr>
<td>SPPA 2130</td>
<td>3</td>
<td>SPPA 2220</td>
</tr>
<tr>
<td>PHIL 1001 (HNE)</td>
<td>3</td>
<td>THEO 1001</td>
</tr>
<tr>
<td>PSYC 1001 (ISB)</td>
<td>3</td>
<td>UCCS (LPA)**</td>
</tr>
<tr>
<td>Physical Science Cognate</td>
<td>3-4</td>
<td>HIST 1101 (or HIST 2101 or 2102)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Elective</td>
</tr>
</tbody>
</table>

15-16

#### Junior

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPPA 3140</td>
<td>3</td>
<td>SPPA 4230</td>
</tr>
</tbody>
</table>

18
**Speech Pathology and Audiology Minor**

The Speech Pathology and Audiology minor consists of a minimum of 21 semester credits. The following courses constitute the Speech Pathology and Audiology minor:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPPA 1001</td>
<td>Introduction to Speech-Language Pathology and Audiology</td>
<td>3</td>
</tr>
<tr>
<td>SPPA 1100</td>
<td>Anatomy and Physiology of the Speech Mechanism</td>
<td>3</td>
</tr>
<tr>
<td>SPPA 2120</td>
<td>Phonetics and Phonology</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td></td>
<td>12</td>
</tr>
</tbody>
</table>

Total Credit Hours: 21

Enrollment in courses required for the Speech Pathology and Audiology Minor requires departmental permission and is dependent on course space availability. Enrollment preference is given to students majoring in Speech Pathology and Audiology.

The Department of Speech Pathology and Audiology offers a post-baccalaureate bridge program for students with completed undergraduate degrees in non-related majors that lack the necessary prerequisite coursework to apply to graduate programs in speech language pathology. This two-semester program (fall/spring semester) is not a degree-granting program. Students who meet the academic criteria upon completion of the program are guaranteed admission to the master of science degree program in speech-language pathology.

**Admission Requirements**

Admission to the SLPB program is on a competitive basis. Due to enrollment limits, not all qualified applicants will be admitted. The minimum requirements to apply to the program are:

1. Completed undergraduate degree from a regionally accredited college/university
2. Minimum GPA of 3.3 in undergraduate studies
3. GRE score in the upper 50% of graduate applicants for year of admission
4. Personal statement and three letters of recommendation
5. An applicant will have completed no more than two of the courses listed below so that a minimum of 19 credits of post-baccalaureate coursework will be completed within the two-semester program.
Students who complete the SLP post-baccalaureate program with a minimum of 3.5 and demonstrate good clinical abilities during the practicum course (SPPA 3964) will be granted admission to the master in speech-language pathology graduate program.

**Tuition and Financial Aid**

Individuals accepted to the SLP post-baccalaureate program are admitted with undergraduate non-degree status and are charged on a per term flat-fee basis as outlined in the Master Fee Schedule. Individuals accepted to this program pay the same rate regardless of the number of credits taken and must obtain approval from the Director of Graduate Studies in Speech Pathology and Audiology for any plan of study that deviates from the curriculum requirements outlined below. A plan of study can include no more than one class per semester beyond the required coursework.

Since students in the PSLP program are completing preparatory coursework to enroll in a graduate or professional program, they may be eligible for financial aid. Completion of the Free Application for Federal Student Aid (FAFSA) is required to apply for financial aid.

**Laboratories and Practicum in Speech Pathology and Audiology**

The Marquette University Speech and Hearing Clinic serves as a working laboratory for students in the speech pathology and audiology program. The clinic has individual therapy rooms for adults and children, three diagnostic suites, a hearing testing suite and rooms designed for specialized speech/language therapy: developmental treatment room, adult language room, augmentative/alternate communication room and sensory integration room. Other speech pathology and audiology laboratories include communication, movement and learning lab, child language and literacy lab, phonology and language analysis lab, speech and swallowing lab, neurolinguistics lab and student computer room.

Students in the Speech Language Pathology Bridge Program may complete up to 50 clock hours working with individuals with speech/language/hearing problems through the Speech and Hearing Clinic. This practicum experience is closely supervised by university personnel who hold the Certificate of Clinical Competence in Speech-Language Pathology or Audiology awarded by the American Speech-Language-Hearing Association. This practicum is offered in the second term of the program.

**Prerequisite Program for Speech Language Pathology**

**Curriculum Requirements**

<table>
<thead>
<tr>
<th></th>
<th>First Term</th>
<th>Hours</th>
<th>Second Term</th>
<th>Hours</th>
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<tbody>
<tr>
<td>SPPA 2120</td>
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<td>SPPA 1100</td>
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<tr>
<td>SPPA 2130</td>
<td></td>
<td>3</td>
<td>SPPA 2210</td>
<td>3</td>
</tr>
<tr>
<td>SPPA 3140</td>
<td></td>
<td>3</td>
<td>SPPA 2220</td>
<td>3</td>
</tr>
<tr>
<td>SPPA 3710</td>
<td></td>
<td>3</td>
<td>SPPA 3510</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>SPPA 3964</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total credit hours: 25</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Courses**

**SPPA 1001. Introduction to Speech-Language Pathology and Audiology. 3 cr. hrs.**

An introduction to the disorders of speech, language, and hearing with emphasis on types, etiology, and symptoms.

**SPPA 1100. Anatomy and Physiology of the Speech Mechanism. 3 cr. hrs.**

Anatomy and physiology of the speech production mechanism, including bases for phonation, articulation, breathing, and neural control. Prereq: SPPA major; or SPPA minor; or SPLA major; or cons. of dept. ch.

**SPPA 2001. American Sign Language I. 3 cr. hrs.**

Introduction to understanding of and acquisition of conversational skills in American Sign Language. Study the historical, cultural, and psychological aspects of the American Deaf Community. Prereq: SPPA majors or cons. of dept.

**SPPA 2002. American Sign Language II. 3 cr. hrs.**

Expand vocabulary and conversational skills learned in ASL I. Engage with Deaf Community and explore further into the Deaf Culture. SPPA majors may use to fulfill foreign language requirement. Prereq: SPPA 2001 and SPPA major, or consent of department.

**SPPA 2120. Phonetics and Phonology. 3 cr. hrs.**

Introduction to the study of speech sound production. Descriptive systems for characterizing production of speech sounds and speech errors. Phonetic transcription of normal and disordered speech. Phonetic variation associated with dialects of English. Manual and computerized methods of phonological analysis. Prereq: SPPA major; or SPPA minor; or SPLA major; or cons. of dept. ch.
SPPA 2130. Child Language Development. 3 cr. hrs.
Overview of general linguistic concepts and their application to the acquisition of language by young children. Stages of language development from infancy to early school age. Contributions of biological, social, linguistic, and cognitive factors to language learning. The role of input from conversation and media sources. Prereq: SPPA major; or SPPA major; or SPPA major; or cons. of dept. ch.

SPPA 2210. Child Language Disorders. 3 cr. hrs.
Survey of the linguistic and developmental characteristics of children with special needs who have primary or secondary difficulties acquiring their native language. An overview of descriptive assessment of language profiles, and language intervention issues. Multicultural issues related to child language differences and disorders also are studied. Prereq: SPPA major and SPPA 1001 and SPPA 2130; or SPPA major and SPPA 1001 and SPPA 2130; or cons. of dept. ch.

SPPA 2220. Child Speech Sound Disorders. 3 cr. hrs.
Overview of normal speech sound development and characterization of children with speech sound disorders. Introduction to methods of standardized testing, linguistic assessment, and treatment of speech sound disorders. Dialectal variation and its effect on clinical procedures. Prereq: SPPA major and SPPA 1001 and SPPA 2120 and SPPA 1100; or SPLA major and SPPA 1001 and SPPA 2120 and SPPA 1100; or cons. of dept. ch.

SPPA 3140. Speech Science. 3 cr. hrs.
Study of the speech code. Linguistic, physiological, and acoustical components of the code are considered in relation to both speech production and recognition. Instrumentation useful in the clinical and laboratory analysis of speech is considered. Prereq: SPPA major and SPPA 1100; or SPLA major and SPPA 1100; or cons. of dept. ch.

SPPA 3510. Introduction to Audiology. 3 cr. hrs.
Principles and techniques of audiometric testing; study of basic acoustics; review of anatomy and physiology of the hearing mechanism; introduction to pathologic conditions of the hearing mechanism; laboratory work in basic audiometric test procedures. Prereq: SPPA major and SPPA 1100 and SPPA 3140; or SPLA major and SPPA 1100 and SPPA 3140; or cons. of dept. ch.

SPPA 3710. Intervention Methods in Speech-Language Pathology. 3 cr. hrs.
Introduction of clinical procedures and management techniques for serving clients with a variety of communication disorders in a variety of settings. Topics include: issues, ethics, legislation, evidence based practice, cultural-linguistic diversity, AAC, written and oral documentation/reporting. Prereq: Cons. of dept. ch.; SPPA major, SPPA 2220, and SPPA 3964 must be taken concurrently; or SPLA major and SPPA 2220.

SPPA 3964. Practicum in Speech-Language Pathology 1: Campus Clinic. 1 cr. hr.
S/U grade assessment. Prereq: SPPA major; or SPLA major; or cons. of dept. ch.; SPPA major, SPPA 2220, and SPPA 3964 must be taken concurrently; or SPLA major and SPPA 2220.

SPPA 4230. Stuttering and Other Fluency Disorders. 3 cr. hrs.
Introduction to the symptomatology, phenomenology, etiology, assessment and management of stuttering and other fluency disorders in children and adults. Prereq: SPPA major and SPPA 1001; or SPLA major and SPPA 1001; or cons. of dept. ch.

SPPA 4310. Introduction to Neurological Disorders. 3 cr. hrs.
The basics of neurology and an overview of common neurogenic disorders of communication including aphasia, apraxia, dysarthria, dementia and linguistic sequelae of traumatic brain injuries will be presented. Prereq: SPPA major and SPPA 1100; or SPLA major and SPPA 1100; or cons. of dept. ch.

SPPA 4310. Introduction to Neurological Disorders. 3 cr. hrs.
The basics of neurology and an overview of common neurogenic disorders of communication including aphasia, apraxia, dysarthria, dementia and linguistic sequelae of traumatic brain injuries will be presented. Prereq: SPPA major and SPPA 1100; or SPLA major and SPPA 1100; or cons. of dept. ch.

SPPA 4510. Stuttering and Other Fluency Disorders. 3 cr. hrs.
Extensive study of hearing disorders and the psychological and social implications of hearing impairment. Habilitation/rehabilitation strategies are discussed. Prereq: SPPA major and SPPA 3510; or SPLA major and SPPA 3510; or cons. of dept. ch.

SPPA 4530. Audiological Rehabilitation. 3 cr. hrs.
An in-depth look at the process of adult aural rehabilitation and how amplification, assistive listening devices, sensory aids, visual communication training, auditory training and counseling contribute to that process. Prereq: SPPA major and SPPA 4520; or SPLA major and SPPA 4520; or cons. of instr. and cons. of dept. ch.

SPPA 4610. Multicultural Issues for Speech-Language Pathologists. 3 cr. hrs.
Offered for undergraduate or graduate credit. The study of culture and communication in linguistically diverse populations [i.e., Non-Standard American English speakers, Native Americans, (with emphasis on Wisconsin Native tribes) Asians, and Latinos]. The course will include L1 and L2 acquisition profiles and information pertaining to service delivery with non-native English speakers. The U.S. Latino population will be emphasized. Students’ knowledge and understanding of racism will be explored. This course will meet the multicultural requirements for the Wisconsin Department of Public Instruction licensing in speech-language pathology. Prereq: SPPA major, Jr. stdng.

SPPA 4720. Diagnostic Methods in Speech-Language Pathology. 3 cr. hrs.
The purpose of this course is to provide the students with an understanding of the components inherent in the diagnostic process. These include but are not limited to: a) an overview of diagnostic models, b) sources of delays and disorders, c) purposes of assessment, d) interviewing techniques, e) testing and measurement caveats, f) framework for analysis of the data, g) interpretation of results to families or referral sources, and h) report writing. Prereq: SPLA student standing or cons. of dept. ch.

SPPA 4961. Special Institute/Workshop/Project. 1-3 cr. hrs.
Project 1-3 sem. hrs.

SPPA 4964. Practicum in Speech-Language Pathology 2: Campus Clinic. 1 cr. hr.
S/U grade assessment. Prereq: Overall GPA of at least 3.0, SPPA 3964 AND one of the following: SPPA major, SPLA major or cons. of dept. ch.
SPPA 4965. Practicum in Audiology: Campus Clinic. 1 cr. hr.
Supervised clinical experience with hearing-impaired individuals both on campus and in off-campus affiliated centers. May be repeated up to a maximum of three credits. S/U grade assessment. Prereq: SPPA major and SPPA 3510 and cons. of instr.; or SPLA major and SPPA 3510 and cons. of instr.; or cons. of instr. and cons. of dept. ch.

SPPA 4995. Independent Study in Speech-Language Pathology and Audiology. 1-3 cr. hrs.
Prereq: Cons. of dept. ch.

SPPA 4999. Senior Thesis. 1-3 cr. hrs.
The application of rigorous methodology in developing and writing a thesis under the direction of an adviser. Prereq: Cons. of dept. ch.
# Neuroscience Minor

The neuroscience minor is designed to enable students in a variety of majors to explore the important and rapidly expanding field of neuroscience. The minor enhances a student's preparation for a variety of careers and/or graduate study in health-related professions and enriches undergraduate student involvement in neuroscience research.

## Neuroscience Minor

Complete a total of 18 credit hours.

Complete at least 2 out of the 3 required courses (6-9 cr. hrs.)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BISC 4140</td>
<td>Functional Neuroanatomy</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 3501</td>
<td>Neurobiology</td>
<td>3</td>
</tr>
<tr>
<td>BISC 3850</td>
<td>Systems Neuroscience</td>
<td>3</td>
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Elective Courses (9-12 cr. hrs.)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
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<tr>
<td>BISC 4155</td>
<td>Diseases of the Brain</td>
<td>3</td>
</tr>
<tr>
<td>BISC 4170</td>
<td>Biology, Moral Behavior and Policy</td>
<td>3</td>
</tr>
<tr>
<td>BISC 4275</td>
<td>Modern Plagues: Addiction, Obesity and Stress</td>
<td>3</td>
</tr>
<tr>
<td>BISC 4325</td>
<td>Endocrinology</td>
<td>3</td>
</tr>
<tr>
<td>BISC 4995</td>
<td>Independent Study in Biomedical Sciences (with approval of topic)</td>
<td>1-3</td>
</tr>
<tr>
<td>SPPA 4310</td>
<td>Introduction to Neurological Disorders</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 3502</td>
<td>Experimental Neurobiology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 4956</td>
<td>Laboratory Research Project in Biological Sciences (with approval of project)</td>
<td>1-3</td>
</tr>
<tr>
<td>PSYC 3320</td>
<td>Cognition</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 3601</td>
<td>Biopsychology</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 3650</td>
<td>Affective Neuroscience</td>
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</tr>
<tr>
<td>PSYC 4320</td>
<td>Learning and Memory</td>
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</tr>
<tr>
<td>PSYC 4330</td>
<td>Human Factors Engineering</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 4960</td>
<td>Advanced Undergraduate Seminar</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 4995</td>
<td>Independent Study in Psychology (with approval of topic)</td>
<td>1-3</td>
</tr>
<tr>
<td>BIEN 4500</td>
<td>Medical Imaging Physics</td>
<td>3</td>
</tr>
<tr>
<td>BIEN 4510</td>
<td>Image Processing for the Biomedical Sciences</td>
<td>3</td>
</tr>
<tr>
<td>BIEN 4600</td>
<td>Neural Engineering</td>
<td>3</td>
</tr>
<tr>
<td>BIEN 4620</td>
<td>Rehabilitation Science and Engineering</td>
<td>3</td>
</tr>
<tr>
<td>BIEN 4995</td>
<td>Independent Study in Biomedical Engineering (with approval of topic)</td>
<td>1-3</td>
</tr>
</tbody>
</table>

**NOTE:**

- No more than 6 cr. hrs. for students from the College of Health Sciences and College of Arts and Sciences and no more than 9 cr. hrs. for students from the College of Engineering can count towards both the neuroscience minor and their primary major (e.g., only 6 credits from the minor can also apply towards the 33 credits required for the BISC major).
College of Nursing

From the Dean

College of Nursing website (http://www.marquette.edu/nursing/index.shtml)

Welcome!

Marquette University College of Nursing, founded in 1936, has more than 8,000 alumni making a difference in health care every day, nationwide. Marquette nurses embody the Jesuit traditions of living lives of faith, promoting excellence, becoming leaders and serving others. As such, Marquette nursing is an integral part of the university's Catholic, Jesuit mission.

Marquette faculty are expert teachers, recognized clinicians and accomplished researchers. They are at the forefront of developing evidence on which nurses base their practice. All of these individuals come together in the classroom to teach, mentor and demonstrate the highest level of professional nursing practice for our students.

Marquette offers many innovative programs that address the challenges seen in health care today: bachelor of science in nursing, master of science in nursing, post-master’s certificates, doctorate of nursing practice and doctor of philosophy. All programs uniquely qualify the Marquette graduate to assume leadership roles in the profession.

Marquette nursing programs are accredited by the Commission on Collegiate Nursing Education, as well as specialty accreditation from the American College of Nurse-Midwifery for the Nurse-Midwifery program. Marquette meets the quality standards for initial licensure as a registered nurse and certification for roles as health care systems leaders, clinical nurse leaders, or advanced practice nurses in: adult, older adult, children or nurse-midwifery.

Donna McCarthy, PhD, RN, FAAN
Interim Dean, College of Nursing

College Mission Statement

Through a transformational Catholic, Jesuit education, Marquette University College of Nursing prepares nurse leaders to promote health, healing and social justice for all people through clinical practice and development of nursing knowledge.
Degrees Offered

Marquette University confers the degree bachelor of science in nursing on those students who have satisfactorily completed the prescribed curriculum of the College of Nursing. Students who successfully complete the Comprehensive Honors (p. 47) curriculum may earn a degree of honors bachelor of science in nursing.

The degrees master of science in nursing, doctor of nursing practice and doctor of philosophy are offered through the Marquette University Graduate School. Several post-master's certificates are also offered. Details on the graduate programs in nursing are contained in the Graduate Bulletin (http://bulletin.marquette.edu/grad/programs/nursing).
Major and Minor Overview

Major in Nursing

Marquette offers five bachelor of science in nursing curriculum options. Students may also choose to minor in an area of study (e.g., foreign language). Specialized program plans are developed for the minor in conjunction with the academic adviser.

Minor in Health Studies

The College of Nursing offers an 18 credit hour minor in health studies open to all other undergraduate students at Marquette University. The minor is not available to students in the College of Nursing.
Admission Requirements

Applicants to the College of Nursing are expected to fulfill the admission requirements listed in the university Admission and Readmission (p. 19) section of this bulletin. Acceptance as a freshman in the College of Nursing assures placement in clinical nursing courses provided the student remains in good standing and follows the prescribed program plan.

Students who interrupt their academic program for two or more consecutive terms must meet the graduation requirements, which prevail at the date of their readmission.
Graduation Requirements

Amount and Quality of Work

A candidate for a baccalaureate degree in nursing is required to complete 128 credits including all the requirements in the University Core of Common Studies (UCCS) and the College of Nursing curriculum. The candidate shall have earned grade points equal to at least 2.5 times the number of credit hours required and shall have at least a 2.500 cumulative grade point average. In addition, the college adheres to the University Graduation Policy (p. 68) and the University Commencement Policy (p. 60).
# Degree Requirements

## University Core of Common Studies and College Curriculum Requirements

The College of Nursing builds on the foundational educational experience provided by the University Core of Common Studies. It does this through a college curriculum that amplifies and deepens the knowledge, skills and values imparted to students in the nine knowledge areas of the UCCS.

<table>
<thead>
<tr>
<th>Knowledge Area</th>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rhetoric (R)</strong></td>
<td>ENGL 1001 Rhetoric and Composition 1</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>ENGL 1002 Rhetoric and Composition 2</td>
<td></td>
</tr>
<tr>
<td><strong>Mathematical Reasoning (MR)</strong></td>
<td>Any approved UCCS MR course; Statistics recommended for students considering graduate education.</td>
<td>3</td>
</tr>
<tr>
<td><strong>Individual and Social Behavior (ISB)</strong></td>
<td>PSYC 1001 General Psychology</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>PSYC 2101 Introduction to Life-Span Developmental Psychology for Nursing Students</td>
<td></td>
</tr>
<tr>
<td><strong>Diverse Cultures (DC)</strong></td>
<td>HEAL 1025 Culture and Health</td>
<td>3</td>
</tr>
<tr>
<td><strong>Literature and Performing Arts (LPA)</strong></td>
<td>Any approved UCCS LPA course.</td>
<td>3</td>
</tr>
<tr>
<td><strong>Histories of Cultures and Societies (HCS)</strong></td>
<td>Any approved UCCS HCS course.</td>
<td>3</td>
</tr>
<tr>
<td><strong>Science and Nature (SN)</strong></td>
<td>BISC 1015 Principles of Human Anatomy and Physiology</td>
<td>5</td>
</tr>
<tr>
<td><strong>Human Nature and Ethics (HNE)</strong></td>
<td>PHIL 1001 Philosophy of Human Nature</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>PHIL 2310 Theory of Ethics</td>
<td></td>
</tr>
<tr>
<td><strong>Theology (T)</strong></td>
<td>THEO 1001 Introduction to Theology</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Any additional approved second-level UCCS T course.</td>
<td></td>
</tr>
<tr>
<td><strong>General Electives</strong></td>
<td>Any two General Elective courses.</td>
<td>6</td>
</tr>
<tr>
<td><strong>Additional Required Science Courses</strong></td>
<td>BISC 1060 Chemistry for the Health Professions</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>BISC 2070 Biochemistry for the Health Professions</td>
<td></td>
</tr>
</tbody>
</table>

**Total Credit Hours**: 53
Academic Regulations

Students in the College of Nursing are expected to comply with the academic requirements and regulations listed in the university section of this bulletin.

Academic Dismissal/Probation/Academic Alert (CAA)

Academic Dismissal

The College of Nursing adheres to the University Academic Censure Policy. (p. 55)

College Academic Probation

Undergraduate students in the College of Nursing may be placed on academic probation for the following:

- A single term grade point average below 2.500
- One withdrawal due to failing from a required nursing, HEAL or cognate course.
- One grade of F or failure to meet the minimum course grade requirement in any course during a single term.
- Failure to enroll in courses per established plan of study consistent with primary major, including major cognates.

College Academic Alert (CAA)

Students admitted to the College of Nursing are expected to meet college academic standards and maintain good academic standing. Academic performance is monitored carefully by the Undergraduate and Curriculum Subcommittee on Progression, and students either not maintaining steady progress or not demonstrating adequate achievement will be barred from future registration by a College Academic Alert (CAA) registration hold.

The bases for committee review are:

- grade point average (GPA) deficiency
- inadequate progress (includes but is not limited to: earning less than the required grades and/or withdrawing for academic reasons in two required courses).
- grades of CD, D, F, I, W, WA, UW or ADW
- the violation of special conditions

Special conditions may be prescribed in writing at the time of the student's admission, readmission or transfer into the college. Conditions may also be prescribed in writing in the case of a student whose course performance or failure to follow academic advice warrants such action. All students to whom conditions have been specified will be subject to committee review and possible CAA restriction should they fail to fulfill the specified terms. It is possible that a student be barred from registration for academic reasons even though the student's cumulative GPA exceeds the College of Nursing's minimum of 2.500. Students concerned about their academic progress should consult the college office.

Students placed on College Academic Alert status will be notified by letter or email of the committee's decision and of the appeal process. If a student's appeal is denied, the student may request to enroll in another college via the process outlined in the University Academic Censure Policy (p. 55) in this bulletin, and if accepted, the CAA hold will be removed after admission into the new college.

Unless the CAA is removed via the individual colleges' appeal process, the student may not register for courses at Marquette and may be dropped from any classes for future terms in which he/she is registered.

Degree Progression Requirements

Grade Requirements

The following grade requirements must be met for progression into and through the clinical portion of the nursing major.

1. A grade of C or better in all required NURS and HEAL courses and in the following courses: BISC 1015 Principles of Human Anatomy and Physiology, BISC 1060 Chemistry for the Health Professions, BISC 2070 Biochemistry for the Health Professions, PHIL 2310 Theory of Ethics, PSYC 1001 General Psychology, PSYC 2101 Introduction to Life-Span Developmental Psychology for Nursing Students.
2. A grade of D or better for all other required courses not listed above.
3. Any incomplete grade which is not removed by the required time (see Academic Calendar (p. 824)) will be changed to an F. See the University Incomplete Grades Policy (p. 65), in this bulletin.
4. A student who earns less than the required grades in two required courses as defined above will be required to withdraw from the College of Nursing.

Additional Requirements

1. Students must have a 2.500 cumulative grade point average to enroll in NURS 2001 Foundations I: Health Assessment and Fundamentals I or NURS 2002 Foundations II: Health Assessment and Fundamentals II and to continue to progress in the nursing program.
2. No required cognate or required nursing course may be repeated more than one time, and a student may only repeat two classes.
3. Pre-licensure students can only withdraw from or take audit status in a required course for academic reasons one time. This option can only be applied to a maximum of two courses.
4. Permission to repeat a required nursing course must be formally requested from the associate dean for undergraduate programs by the student, before beginning the repeated course. See the University Repeated Courses Policy (p. 72) in this bulletin.
5. All students are required by the Undergraduate Program and Curriculum Committee to complete external, standardized, comprehensive nursing examinations as a condition of graduation. (Fee required for these examinations.)
6. Students must meet Health Requirements, Criminal Background check and CPR certification as specified in section below.

**Course Progression Requirements**

**Progression into NURS 2001 Foundations I: Health Assessment and Fundamentals I**

The following required courses or their equivalents must be completed prior to entering NURS 2001 Foundations I: Health Assessment and Fundamentals I:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 1001</td>
<td>Nursing and Health in the Jesuit Tradition</td>
<td>3</td>
</tr>
<tr>
<td>NURS 1002</td>
<td>Dimensions of the Nursing Profession in the Jesuit Tradition</td>
<td>3</td>
</tr>
<tr>
<td>BISC 1060</td>
<td>Chemistry for the Health Professions</td>
<td>3</td>
</tr>
<tr>
<td>BISC 2070</td>
<td>Biochemistry for the Health Professions</td>
<td>3</td>
</tr>
<tr>
<td>BISC 1015</td>
<td>Principles of Human Anatomy and Physiology</td>
<td>5</td>
</tr>
<tr>
<td>PSYC 1001</td>
<td>General Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours: 20

**Progression into NURS 2002 Foundations II: Health Assessment and Fundamentals II**

The following required courses or their equivalents must be completed prior to entering NURS 2002 Foundations II: Health Assessment and Fundamentals II:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 2001</td>
<td>Foundations I: Health Assessment and Fundamentals I</td>
<td>3</td>
</tr>
<tr>
<td>NURS 2100</td>
<td>Pathophysiology I</td>
<td>3</td>
</tr>
<tr>
<td>HEAL 2045</td>
<td>Normal and Therapeutic Nutrition</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours: 9

**Progression into NURS 3201 Evidence Based Practice and Nursing Research through NURS 3984 Nursing Care for Patients with Chronic Conditions-Practicum**

The following required courses or their equivalents must be completed prior to entering courses NURS 3201 Evidence Based Practice and Nursing Research through NURS 3984 Nursing Care for Patients with Chronic Conditions-Practicum:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 2002</td>
<td>Foundations II: Health Assessment and Fundamentals II</td>
<td>4</td>
</tr>
<tr>
<td>NURS 2200</td>
<td>Pathophysiology II</td>
<td>3</td>
</tr>
<tr>
<td>NURS 2500</td>
<td>Concepts and Interventions for the Promotion of Mental Health - Theory</td>
<td>3</td>
</tr>
<tr>
<td>HEAL 1025</td>
<td>Culture and Health</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 2101</td>
<td>Introduction to Life-Span Developmental Psychology for Nursing Students</td>
<td>3</td>
</tr>
<tr>
<td>NURS 2110</td>
<td>Pharmacotherapeutics for Nursing Practice</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours: 19

**Progression into NURS 4000 Quality and Safety in Nursing or Higher Nursing Courses**

The following required cognate and nursing courses or their equivalents must be completed prior to entering NURS 4000 Quality and Safety in Nursing and other higher-level nursing courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 3201</td>
<td>Evidence Based Practice and Nursing Research</td>
<td>3</td>
</tr>
<tr>
<td>NURS 3600</td>
<td>Community and Population Health Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NURS 3700</td>
<td>Nursing Concepts and Interventions for the Care of Adults/older Adults I-Theory</td>
<td>3</td>
</tr>
<tr>
<td>NURS 3800</td>
<td>Maternity Nursing and Women’s Health Theory</td>
<td>3</td>
</tr>
<tr>
<td>NURS 3900</td>
<td>Family Centered Nursing of Children-Theory</td>
<td>3</td>
</tr>
<tr>
<td>NURS 3964</td>
<td>Family and Community Centered Nursing-Practicum</td>
<td>4</td>
</tr>
</tbody>
</table>
All other required courses must be completed prior to graduation.

Note: A student who withdraws from a theory course that has a corresponding clinical course must also withdraw from that clinical course.

Withdrawal from the Nursing Program

In addition to the University Academic Censure Policy (p. 55), the following criteria are used in requiring a student to withdraw from the nursing program for lack of degree progress or lack of professional conduct:

1. If the student has earned less than the required grades in two required courses as defined in the general progression requirements.
2. If the student has less than a 2.500 cumulative grade point average effective at the end of the freshman year or at any time thereafter.
3. If the student’s performance suggests that the student is unlikely to succeed in the program.

No student in nursing is required to withdraw without a careful review of his or her entire record and total overall performance as well as any extenuating circumstances that might exist.

If a student does not meet criteria for progression or conduct the student will be required to withdraw or be terminated from the College of Nursing. A student who is asked to terminate from the program may submit a petition, in writing, to the Undergraduate Program and Curriculum Subcommittee on Progression requesting exemption from the stated policies or regulations of the program. The student is expected to identify the unique, unusual or uncontrollable circumstances which led to the petition and to formulate a plan to resolve issues. The petition is to be submitted as indicated in the notification of termination and before late registration. A student may petition the committee only once for a specific situation.

Once a decision has been made by the committee regarding the student’s petition, a recommendation will be forwarded to the associate dean for undergraduate programs. The associate dean for undergraduate programs will make a decision based on the student’s record and the committee’s recommendation. The student will be notified of the associate dean’s decision. If the student is dissatisfied with this decision, the final recourse within the College of Nursing is a petition to the dean. The dean will make a decision based on review of evidence and notify the student in writing of the decision. The student may not be eligible to register for the next semester until the petition decision is made.

Attendance

In addition to the University Attendance Policy (p. 58), the College of Nursing specifies that attendance is mandatory in all scheduled classes and practica. Absences place students in academic jeopardy. If absent, progress and continuation in the course may be at risk. Students who anticipate missing one or more class periods should contact the instructor ahead of time, just as they should contact their instructor as soon as possible after an absence. Students are responsible for monitoring their absences during the term.

Theory Courses

An instructor or college office may withdraw a student from a nursing theory (non-clinical) course due to excessive absences and assign a grade of WA (Withdrawn-Excessive Absences) if the following maximums are exceeded:

Absence: In a 2 credit course, maximum of two class hours.
In a 3 credit course, maximum of three class hours.
In a 4 credit course, maximum of four class hours.

Tardiness: Tardiness of greater than ten minutes is counted as one absence.

Laboratory/Clinical Courses

An instructor or college office may withdraw a student from a nursing laboratory or clinical course due to excessive absences and assign a grade of WA (Withdrawn-Excessive Absences). Generally any absence in an undergraduate lab or clinical course is considered excessive.

Tardiness: Tardiness of greater than 30 minutes in a scheduled nursing laboratory or clinical experience to be counted as one absence at the discretion of the instructor.

Note: Regardless of attendance, a student may fail a practicum at any time during the semester for either a pattern of unsafe nursing behavior or a particularly serious incident of unsafe nursing behavior. At the faculty’s discretion a learning plan may be put in place based upon the student’s performance. Once a student is informed that s/he is failing a clinical course withdrawal from that course is no longer an option.

The student has the responsibility of notifying the course instructor of any absence and negotiating make-up work where feasible.

For additional information, refer to the University Attendance Policy (p. 58).
Appeals Procedures

Grade Appeals

College of Nursing Undergraduate Program Policy

Undergraduate students may appeal any final course grade that the student believes to be in significant violation of clearly established written policies, a result of improper procedures or discriminatory. Before initiating a formal grade appeal, the student must consult with the instructor assigning the grade and present evidence why the student believes the grade to be in error. If this does not lead to resolution, the student may initiate, in writing, a formal grade appeal. To be considered, the Undergraduate Grade Appeal Form must be submitted no later than ten calendar days after official grades are posted in CheckMarq. The form is located in the Undergraduate Student Handbook. However, it may be in the student’s best interest to appeal sooner than this deadline if his/her academic progress is dependent on the outcome of the appeal. In addition, the student must consult with the college or school offering the course for which the grade is being appealed to determine if other requirements for the written appeal are in force.

The written appeal must be submitted to the associate dean of the undergraduate program. The written appeal must provide the reason(s) the student believes the recorded grade is incorrect. The student may present evidence of his/her performance and may also request that all other pertinent materials be supplied by the instructor. The associate dean will collect and analyze the evidence in a timely manner. Evidence will be gathered through consultations with the instructor, the student and any witnesses. These consultations may be in person, by phone or by electronic means. Hard copies of relevant documents may also be requested. The associate dean will evaluate the appeal or choose to designate an ad hoc committee for this purpose. The associate dean or ad hoc committee will consider the appeal and evidence and make one of the following decisions: the assigned grade should remain, the course instructor is asked to reconsider the grade in light of information collected and the reconsidered grade will stand, or a grade change is warranted. The decision will be communicated in writing via email (as the official method of communication) within thirty days to the student and the instructor with copies of the formal response placed in the student’s file and forwarded to the dean and any indicated grade changes filed with the registrar.

The student has the right to appeal the decision of the associate dean of the undergraduate program or ad hoc committee to the dean. This appeal must be submitted in writing no later than three calendar days from the date of the formal response. The dean will review the procedural evidence, which now includes all the evidence previously gathered the student’s appeal letters and the formal response from the associate dean or ad hoc committee and will render the final decision on the grade appeal. The decision will be communicated in writing via email within thirty days to the student and the instructor with copies of the formal response placed in the student's file and any indicated grade changes filed with the registrar.

Approval of Courses Taken Elsewhere

Except under special circumstances, students are not allowed to take courses at another institution during a semester they are enrolled at Marquette University. In such circumstances, the approval of the associate dean for undergraduate programs must be obtained before the course begins.

Currently enrolled undergraduate students who wish to take courses at another US institution for transfer to Marquette may review established equivalencies at Transfer Central-US Institutions (http://tes.collegesource.com/view/tes_view01.asp?rid=%7B05F434F3-01BE-4437-A846-5F41151AA500%7D&aid=%7B2D5E1832-8D3-4ED0-8845-D911973263BB%7D). This review is unofficial. To obtain an official approval, students must submit an External Transfer Course Request: Undergraduate form (http://www.marquette.edu/mucentral/register/documents/Form-UndergraduateTransferCoursePreapproval.pdf) before enrolling in the external course. The approval form must be submitted as directed. If prior approval is not obtained, there is no guarantee that credits earned will be accepted by Marquette University. Students must earn a grade of at least C in order for the course to be transferable. Only credit will transfer, not grades. Transcripts with the school seal must be sent directly from the school in which the course(s) are taken to the Office of the Registrar after successfully completing the course. Normally, such transcripts should be received before the student enrolls for the next semester at Marquette. If a student takes approved course work at another institution at any time during their Marquette career, particularly in their final semester at Marquette, the final transcripts must be received by Marquette by the “last day to receive official transcripts”, as listed on the academic calendar in order to graduate.

Clinical/Health Requirements and Criminal Background Checks

All pre-licensure students are required to complete a criminal background check and provide proof of health history, physical exam and immunization status prior to entry into the program by August 1st. Proof of CPR certification and Ten Panel Drug Screen is required by November 1st sophomore year. The TB immunization and flu vaccine are to be updated annually. CPR certification is updated every two years. Students are responsible for the cost of these services. The approximate cost is $75 for the first year, $34 for the second year. No further charges will be incurred unless additional background checks or drug tests are required. All students must have required documentation submitted to Certifiedbackground.com (https://www.certifiedbackground.com) by listed dates to be processed and tracked.

Certified Background will be requesting documentation on the following items:

Background Check

Required by the Wisconsin Caregiver Background Check Law. The Office of the General Counsel and the Wisconsin State Board of Nursing will be contacted in all instances of criminal offenses identified to determine if a student is eligible to remain in the program.
CPR Certification

Provide a copy of your card. CPR certification must be maintained throughout the program. Only American Heart Association Health Care provider Basic Life Support (BLS) certification, which includes Automated Electronic Defibrillator (AED), will be accepted, and it must be renewed every two years. Certification at Marquette University is available.

Note: Pre-licensure students must complete the BLS certification prior to November 1st of sophomore year.

Note: Generalist Masters’ (GEM) students must complete the BLS certification at the beginning of their pre-licensure phase.

Health History and Physical Exam

The physical must be within six months of entry into the program with annual verification that health history is updated. A physician, nurse practitioner, or a physician assistant must provide signed documentation of the health history and physical exam. In addition, the provider must attest that the student is in satisfactory health to participate in Marquette University’s College of Nursing Program, including engaging in clinical practice. Any ADA restrictions must be listed. The healthcare practitioner statement is located at Certifiedbackground.com (https://www.certifiedbackground.com). Once completed, the form must be uploaded back to Certifiedbackground.com (https://www.certifiedbackground.com).

Tetanus-Diphtheria Booster within the past 10 years*

TB Skin Test*

To be completed annually. Documentation must include the dates and results of the test. If test results are positive, provide the date of your chest x-ray and results and complete annual report of health/symptom survey. If positive for active TB disease, participation in active treatment plan must be reviewed annually. Students are not eligible to participate in clinical practicum until such time as medical provider determines that they are not communicable. It is the students’ responsibility to turn in documentation of this test to Certifiedbackground.com (https://www.certifiedbackground.com) on a yearly basis. Quantiferon TB test is acceptable in lieu of annual TB skin test.

Chickenpox Varicella Vaccine OR Positive Blood Titer*

Provide documentation of Varicella disease or proof of immunity by titer, or 2 doses of Varicella vaccine, 4 weeks apart.

2 MMR (measles, mumps, rubella) Vaccines OR 2 Measles, 1 Mumps, 1 Rubella Vaccine*

Dose 1 on or after the first birthday; Dose 2 must be at least one month after the 1st dose.

If immunization date is not available, a laboratory report of a blood test (titer) showing immunity to Rubella, Mumps and Rubella will be accepted. Vaccine/Titer not required for those born prior to 1957.

Hepatitis B Virus (HBV/HBSAB Series) OR Titer*

Medical documentation of three dose series of titer and/or declination form signed by student is required. See link for declination form.

Seasonal Influenza Vaccine

Provide documentation of annual immunization. If needed, a medical exemption document must be signed by primary care provider; religious exemption document must be signed by clergy. Declination forms can be found at Certifiedbackground.com (https://www.certifiedbackground.com). If valid documentation is on file, an annual declination form must be signed as self-report. Due by November 1st of every year.

Ten Panel Urine Drug Screen

Must be completed by November 1st of the semester prior to entering clinicals. All nursing students will undergo a ten panel urine drug screen prior to clinical start; a negative result will require no further screens unless indications of impairment are present, in which case additional screens may be requested. If there is a break in a student’s enrollment, the urine drug screen will need to be repeated. If a student has a current positive drug screen result, they will not be able to participate in a clinical placement.

*Acceptable documentation must include the date the immunization was received with provider’s signature.

Note: The preceding documentation is required by the College of Nursing and is to be submitted to Certifiedbackground.com (https://www.certifiedbackground.com). Any health information required by the University must be submitted separately to Marquette University Medical Clinic.

Students will not be permitted to progress in the program and/or continue in clinical practica if the above health reports are not current and on file at Certifiedbackground.com (https://www.certifiedbackground.com). If clinical time is missed due to missing health requirements, students’ progression may be affected.

Note: If a student becomes injured at any time before or during a clinical semester, they must notify the Undergraduate Program Office and their clinical instructor immediately. Each student will be assessed individually to determine if they can continue in the required nursing courses for that semester. Some conditions that may prevent a student from participating in Nursing courses include but are not limited to: head injuries that prevent students
from thinking clearly and hand or leg injuries that prevent students from washing their hands or walking without an assistive device or being full weight bearing.
Special Academic Programs

Master of Science in Nursing

Program for Non-Nursing Graduates

The Generalist Master of Science program for non-nursing graduates is designed for individuals who hold baccalaureate degrees in fields other than nursing. The 75-credit program builds upon previous, broad educational preparation and provides intense, accelerated and specialized nursing curriculum preparing students to take the NCLEX examination upon completion of 63 credits and to earn a Master of Science degree in nursing upon completion of the total 75 credits.

With the additional leadership competencies you will achieve during the last semester of the program, you will be well-positioned to seek employment in many health care settings. You will have the competencies necessary to practice at the microsystem level, providing point-of-care delivery with a focus on safety, quality and improved outcomes. Graduates are also eligible to take the National Certification Examination to be certified as a clinical nurse leader. You may also wish to apply for a post-master’s certificate in one of the many specialties that Marquette offers.

Marquette nursing faculty believe that leadership in providing an academically, fiscally and socially responsible health care system and facilitating educational mobility of individuals are important components of the university’s mission. The Generalist Master of Science curriculum is designed to facilitate graduate nursing education and to accommodate adult learners.

Admission Requirements

For admission requirements, see the Master of Science in Nursing-Second Degree Direct Entry for Non-nurses (http://www.marquette.edu/nursing/academicprograms-msn-direct.shtml) Web page.

Second Degree Direct Entry for A.D.N. Nurses

This program facilitates students who have an associate’s degree in nursing and also have a bachelor’s degree in a discipline other than nursing to complete a master of science in nursing degree.

Admission Requirements

For admission requirements, see the R.N. direct-entry M.S.N. (http://www.marquette.edu/nursing/academicprograms-rn.shtml) Web page.
Student Organizations

MU Student Nurses Association (MUSNA)

The Marquette University College of Nursing Student Nurses Association (MUSNA) functions as a liaison between the college and the Marquette University Student Government. It coordinates and promotes student activities within the college. The association also is the university chapter of the Wisconsin Student Nurses Association, a constituent organization of the National Student Nurses Association.

Honor Society

Sigma Theta Tau, International is an international professional honor society with constituent chapters in collegiate schools of nursing. The Delta Gamma at Large Chapter at the College of Nursing is open to students, faculty and community leaders. Candidates enrolled in the College of Nursing must have junior or senior standing and are selected on the basis of superior scholastic achievement, potential leadership qualities and desirable personal qualifications.

Faculty and registered nurses in the community are selected on the basis of special interest in Sigma Theta Tau, International and marked achievement in the field of nursing.
**Major in Nursing**

Marquette offers five bachelor of science in nursing curriculum options. Students may also choose to minor in an area of study (e.g., foreign language). Specialized program plans are developed for the minor in conjunction with the academic advising coordinator (marissa.wesley@marquette.edu).

### Nursing Major

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Total Credit Hours: 78

### Bachelor of Science in Nursing: Prelicensure

An eight-term program leads to the degree of bachelor of science in nursing. The College of Nursing encourages applications from qualified students from all cultural, racial, religious and ethnic groups of either sex. The curriculum includes course requirements for the UCCS and the nursing major.

The college reserves the right to amend the program and courses offered from year to year.

#### Freshman

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**Junior**

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Total credit hours: 128

+ Indicates University Core of Common Studies requirement

# Indicates courses offered both terms

**Cohort Classes: Junior Year**

- NURS 3600 Community and Population Health Nursing, NURS 3800 Maternity Nursing and Women's Health-Theory and NURS 3964 Family and Community Centered Nursing-Practicum are taken together
- NURS 3700 Nursing Concepts and Interventions for the Care of Adults/ Older Adults I-Theory, NURS 3900 Family Centered Nursing of Children-Theory and NURS 3984 Nursing Care for Patients with Chronic Conditions-Practicum are taken together

**Cohort Classes: Senior Year**

- NURS 3600 Community and Population Health Nursing, NURS 3800 Maternity Nursing and Women's Health-Theory and NURS 3964 Family and Community Centered Nursing-Practicum are taken together
- NURS 3700 Nursing Concepts and Interventions for the Care of Adults/Older Adults I-Theory, NURS 3900 Family Centered Nursing of Children-Theory and NURS 3984 Nursing Care for Patients with Chronic Conditions-Practicum are taken together

**Bachelor of Science in Nursing: Air Force ROTC Curriculum**

**Freshman**

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+ Indicates University Core of Common Studies requirement

# Indicates courses offered both terms

H University Honors Program course
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**Sophomore**

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**Junior**

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**Senior**

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Total credit hours: 138

+ Indicates University Core of Common Studies requirement

# Indicates courses offered both terms
Cohort Classes: Junior Year

- NURS 3600 Community and Population Health Nursing, NURS 3800 Maternity Nursing and Women's Health-Theory and NURS 3964 Family and Community Centered Nursing-Practicum are taken together
- NURS 3700 Nursing Concepts and Interventions for the Care of Adults/Older Adults I-Theory, NURS 3900 Family Centered Nursing of Children-Theory and NURS 3984 Nursing Care for Patients with Chronic Conditions-Practicum are taken together

Bachelor of Science in Nursing: Army ROTC Curriculum

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LPA UCCS# 3  MISL 4002 1
ELEC Nurs/Heal Elective** 3  MISL 4200 2
MISL 4001 1  MISL 4202 0
MISL 4100 2
MISL 4101 0

22 17

Total credit hours: 146

+ Indicates University Core of Common Studies requirement
# Indicates courses offered both terms
** Nurs/Heal Elective may be fulfilled by summer NSTP experience between junior and senior year.

Cohort Classes: Junior Year

- NURS 3600 Community and Population Health Nursing, NURS 3800 Maternity Nursing and Women's Health-Theory and NURS 3964 Family and Community Centered Nursing-Practicum are taken together
- NURS 3700 Nursing Concepts and Interventions for the Care of Adults/Older Adults I-Theory, NURS 3900 Family Centered Nursing of Children-Theory and NURS 3984 Nursing Care for Patients with Chronic Conditions-Practicum are taken together

Bachelor of Science in Nursing: Navy ROTC Curriculum

Freshman

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Sophomore

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### Junior

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### Senior

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16 17

Total credit hours: 133

+ Indicates University Core of Common Studies requirement
#
Indicates courses offered both terms
** See adviser for list of Navy Cultural elective courses (may also count for THEO UCCS or HIST UCCS course.

### Curricular Requirements

#### Disciplinary Honors Required Courses:

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<td>NURS 4984H</td>
<td>Honors Transition into Professional Nursing Practice - Practicum</td>
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Total Credit Hours 26

### Bachelor of Science in Nursing: Comprehensive Honors Degree

(Requires both Core and Disciplinary Honors)
### Freshman

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**Total Hours:** 16

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**Total Hours:** 16

### Senior

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**Total Hours:** 16

**Total credit hours: 129**

\+ Indicates University Core of Common Studies requirement  
\# Indicates courses offered both terms  
\H Indicates University Honors Program course
Cohort Classes: Junior Year

- NURS 3600H Honors Community and Population Health Nursing, NURS 3800H Honors Maternity Nursing and Women's Health - Theory and NURS 3964 Family and Community Centered Nursing Practicum are taken together
- NURS 3700H Honors Nursing Concepts and Interventions for the Care of Adults/Older Adults I - Theory, NURS 3900H Honors Family Centered Nursing of Children - Theory and NURS 3984 Nursing Care for Patients with Chronic Conditions Practicum are taken together

Academic Standards

Students must achieve a 3.200 cumulative GPA and a 3.500 cumulative Nursing GPA in order to complete Nursing Disciplinary Honors and the Comprehensive Honors degree. If a student drops below a 3.200 cumulative GPA in any given term during the second term sophomore year, junior year or any subsequent year, the student receives a letter of warning from the University Honors Program director. If a student drops below a 3.200 cumulative GPA, they are placed on Honors Program academic probation; if they do not achieve a 3.200 cumulative by the end of the following term, they are removed from the program. Students must earn a grade of C or better in a course for it to count toward the Comprehensive Honors degree.

Eligibility

The program is structured to be completed over the last two and one-half years of a student’s academic career. Sophomores are eligible to apply to the program at the beginning of the fall term and must have a 3.200 minimum cumulative GPA requirement.

Application

The application requires a personal statement with rationale that addresses the three core honors themes: Academic Excellence, Research, and Community Engagement. The Disciplinary Honors Program in Nursing Committee reviews and approves the applications and selects a limited number of honors applicants to participate in the program.

Courses

NURS 1001. Nursing and Health in the Jesuit Tradition. 3 cr. hrs.
Introduction to health and wellness in populations. With respect to Jesuit principles this course focuses on health disparities in vulnerable populations. Prereq: NURS major.

NURS 1002. Dimensions of the Nursing Profession in the Jesuit Tradition. 3 cr. hrs.
Exploration of the professional nursing role and select practice concepts including Jesuit principles, caring, communication, quality, safety and informatics. Prereq: NURS 1001.

NURS 1931. Topics in Nursing. 2-3 cr. hrs.
Various topics in nursing and health care as identified in the Schedule of Classes. Prereq: NURS major.

Knowledge and skills needed for comprehensive and focused patient-centered assessments and select nursing interventions to be applied in simulated patient care environments. Emphasis on the development of clinical reasoning skills in the provision of culturally appropriate, ethical and safe evidence-based care. Prereq: NURS major; NURS 1002, BISC 2070, BISC 1015 and PSYC 1001; concurrent enrollment with HEAL 2045, NURS 2100.

Further development of knowledge and skills needed for comprehensive and focused patient-centered assessments and select nursing interventions to be applied in simulated and actual patient care environments. Emphasis on the development of clinical reasoning skills and the role of the professional nurse in the provision of culturally appropriate, ethical and safe evidence-based care. Prereq: NURS 2001, NURS 2100 and HEAL 2045; taken concurrently with NURS 2110, NURS 2200 and NURS 2500.

NURS 2100. Pathophysiology I. 3 cr. hrs.
Study of physiologic and pathophysiologic mechanisms of health disorders and responses across the lifespan as a basis for nursing practice. Focuses on etiology, risk factors, manifestations, and pathogenesis. Prereq: NURS major, BISC 2070 and BISC 1015.

NURS 2110. Pharmacotherapeutics for Nursing Practice. 3 cr. hrs.
Basic principles of pharmacology and pharmacotherapeutics as applied to patients across the lifespan. Includes nursing implications for administration, patient teaching, and evaluation of safety and effectiveness. Prereq: HEAL 2045, NURS 2001 and NURS 2100; concurrent enrollment with NURS 2002, NURS 2200 and NURS 2500.

NURS 2110H. Honors Pharmacotherapeutics for Nursing Practice. 3 cr. hrs.
Basic principles of pharmacology and pharmacotherapeutics as applied to patients across the lifespan. Includes nursing implications for administration, patient teaching, and evaluation of safety and effectiveness. Prereq: BISC 2070 and BISC 1015; admission to Marquette University Honors Program.

NURS 2200. Pathophysiology II. 3 cr. hrs.
Continued study of physiologic and pathophysiologic mechanisms of health disorders and responses across the lifespan as a basis for nursing practice. Focuses on etiology, risk factors, manifestations, and pathogenesis. Prereq: NURS 2001, NURS 2100, and HEAL 2045.
NURS 2500. Concepts and Interventions for the Promotion of Mental Health - Theory. 3 cr. hrs.
Focuses on understanding the biological, environmental, cultural, intrapersonal and interpersonal factors influencing mental health; development of skills for assessment of mental status and emotional state and intervention modalities; simulated practice responding to common psychiatric problems and immediate interventions for psychiatric emergencies. Prereq: HEAL 2045, NURS 2001, NURS 2100 and PSYC 2101 which may be taken concurrently; concurrent enrollment with NURS 2002, NURS 2110 and NURS 2200.

NURS 2500H. Honors Concepts and Interventions for the Promotion of Mental Health - Theory. 3 cr. hrs.
Focuses on understanding the biological, environmental, cultural, intrapersonal and interpersonal factors influencing mental health; development of skills for assessment of mental status and emotional state and intervention modalities; simulated practice responding to common psychiatric problems and immediate interventions for psychiatric emergencies. Prereq: NURS major; HEAL 2045, NURS 2001 and NURS 2100; admission to Marquette University Honors Program.

NURS 2964. Individual Study and Practice. 1-3 cr. hrs.
Individual study and practice with a client or a selected group of clients. Arrangements for guidance of a preceptor must be made prior to registration. May be taken twice. Prereq: Cons. of instr. and enrolled in the College of Nursing.

NURS 3201. Evidence Based Practice and Nursing Research. 3 cr. hrs.
Focuses on how scientific evidence is developed and applied to nursing practice. Includes the research process. Prereq: NURS 2002, NURS 2110, NURS 2200, NURS 2500, HEAL 1025 and PSYC 2101.

NURS 3600. Community and Population Health Nursing. 3 cr. hrs.
Integration of community health nursing theory and public health sciences to provide a theoretical basis for aggregate level care in partnership with communities. Prereq: NURS 2200, NURS 2002, NURS 2500, HEAL 1025, NURS 2110 and PSYC 2101; Must be taken concurrently with NURS 3800 and NURS 3964.

NURS 3600H. Honors Community and Population Health Nursing. 3 cr. hrs.
Integration of community health nursing theory and public health sciences to provide a theoretical basis for aggregate level care in partnership with communities. Prereq: NURS 2200, NURS 2002, NURS 2500, HEAL 1025 and NURS 2110H; must be taken concurrently with NURS 3800H and NURS 3964; admission to Marquette University Honors Program.

NURS 3700. Nursing Concepts and Interventions for the Care of Adults/ Older Adults I - Theory. 3 cr. hrs.
Focuses on holistic nursing care and clinical reasoning in prevention, assessment and management of select health issues including end of life care. Includes concepts and evidence based practice across the care continuum related to problems with select cardiac, respiratory, digestive and endocrine conditions. Prereq: NURS 2002, NURS 2200, NURS 2500, HEAL 1025, PSYC 2101; must be taken concurrent with NURS 3984 and NURS 3900.

NURS 3700H. Honors Nursing Concepts and Interventions for the Care of Adults/Older Adults I - Theory. 3 cr. hrs.
Focuses on holistic nursing care and clinical reasoning in prevention, assessment and management of select health issues including end of life care. Includes concepts and evidence based practice across the care continuum related to problems with select cardiac, respiratory, digestive and endocrine conditions. Prereq: NURS 2002, NURS 2110H (which may be taken concurrently), NURS 2200, NURS 2500H, HEAL 1025, PSYC 2101; must be taken concurrently with NURS 3984 and NURS 3900H; admission to Marquette University Honors Program.

NURS 3800. Maternity Nursing and Women’s Health - Theory. 3 cr. hrs.
Focuses on nursing, health promotion, families in transition and adaptation from preconception through postpartum, perinatal loss, intrapartum care, genetics and women’s health in a global perspective. Prereq: NURS 2002, NURS 2110, NURS 2200, NURS 2500, HEAL 1025, PSYC 2101; must be taken concurrent with NURS 3964 and NURS 3600.

NURS 3800H. Honors Maternity Nursing and Women’s Health - Theory. 3 cr. hrs.
Focuses on nursing, health promotion, families in transition and adaptation from preconception through postpartum, perinatal loss, intrapartum care, genetics and women’s health in a global perspective. Prereq: NURS 2002, NURS 2110H (which may be taken concurrently), NURS 2200, NURS 2500H, HEAL 1025, PSYC 2101; must be taken concurrently with NURS 3964 and NURS 3600H; admission to Marquette University Honors Program.

NURS 3900. Family Centered Nursing of Children - Theory. 3 cr. hrs.
Family centered nursing of children and adolescents in diverse populations. Focus on health promotion, maintenance, acute, and chronic problems including end of life care. Prereq: NURS 2002, NURS 2110, NURS 2200, NURS 2500, HEAL 1025, PSYC 2101; must be taken concurrently with NURS 3700 and NURS 3984.

NURS 3900H. Honors Family Centered Nursing of Children - Theory. 3 cr. hrs.
Family centered nursing of children and adolescents in diverse populations. Focus on health promotion, maintenance, acute, and chronic problems including end of life care. Prereq: NURS 2002, NURS 2110H (which may be taken concurrently), NURS 2200, NURS 2500H, HEAL 1025, PSYC 2101; must be taken concurrently with NURS 3700H and NURS 3984; admission to the University Honors Program.

NURS 3964. Family and Community Centered Nursing-Practicum. 4 cr. hrs.
A clinical course that focuses on family-centered nursing care in both acute care and community settings. Students use and apply theoretical concepts from maternity and women’s health nursing, community health nursing and mental health nursing in the care of patients, families and communities. Includes simulation. Prereq: must be taken concurrently with NURS 3800 and NURS 3600.

NURS 3984. Nursing Care for Patients with Chronic Conditions - Practicum. 4 cr. hrs.
Comprehensive patient centered nursing care of adults or children with chronic conditions across the care continuum. Emphasis is on health promotion, health maintenance and palliation. Includes simulations. Prereq: must be taken concurrently with NURS 3700 and NURS 3900.
NURS 4000. Quality and Safety in Nursing. 3 cr. hrs.
Emphasis on the knowledge, skills and attitudes necessary to deliver quality and safe patient care. Includes quality improvement, informatics, safety, patient-centered care, teamwork/collaboration and evidence-based practice. Prereq: NURS 3201, NURS 3800, NURS 3900, NURS 3964, NURS 3600, NURS 3700, and NURS 3984.

NURS 4350. Critical Care Nursing. 3 cr. hrs.
Integration of pathophysiologic concepts and psychosocial variables unique to caring for critically ill adults. Prereq: NURS 3201, NURS 3600, NURS 3700, NURS 3800, NURS 3900, NURS 3964 and NURS 3984.

NURS 4700. Nursing Concepts and Interventions for the Care of Adults/Older Adults II - Theory. 3 cr. hrs.
Focuses on holistic nursing care and clinical reasoning in prevention, assessment and management of adults and older adults with select health issues including end of life care. Includes concepts and evidence based practice across the care continuum related to problems with select endocrine, fluid and electrolytes, neurological, renal, oncologic, and orthopedic conditions as well as operative and trauma care. Prereq: NURS 3201, NURS 3800, NURS 3600, NURS 3964, NURS 3700, NURS 3900, NURS 3984; must be taken concurrent with NURS 4964.

NURS 4700H. Honors Nursing Concepts and Interventions for the Care of Adults/Older Adults II - Theory. 3 cr. hrs.
Focuses on holistic nursing care and clinical reasoning in prevention, assessment and management of adults and older adults with select health issues including end of life care. Includes concepts and evidence based practice across the care continuum related to problems with select endocrine, fluid and electrolytes, neurological, renal, oncologic, and orthopedic conditions as well as operative and trauma care. Prereq: NURS 2110H, NURS 3201, NURS 3800H, NURS 3600H, NURS 3964, NURS 3700H, NURS 3900H, NURS 3984; must be taken concurrent with NURS 4964 (practicum); admission to Marquette University Honors Program.

NURS 4800. Leadership in Professional Nursing Practice - Theory. 3 cr. hrs.
Analysis of organizational, management and leadership theories as applied to nursing. Focus on development of leadership roles in complex health care environments. Prereq: NURS 4700, NURS 4964; must be taken concurrent with NURS 4984 (practicum).

NURS 4931. Topics in Nursing. 3 cr. hrs.
Selected topics in Nursing. The topics will be designated in the Schedule of Classes.

NURS 4951. Marquette Led Travel and Study Abroad in Nursing. 1-4 cr. hrs.
Course taught in an international setting by Marquette professors and where students earn Marquette credit. Prereq: Cons. of dept. ch.

NURS 4964. Nursing Care for Patients with Acute Conditions-Practicum. 4 cr. hrs.
Comprehensive patient centered nursing care of adults or children with acute conditions. Emphasis is on health promotion, health maintenance, restoration, palliation and end of life. Includes simulation. Prereq: Must be taken concurrently with NURS 4700.

NURS 4984. Transition into Professional Nursing Practice-Practicum. 5 cr. hrs.
Comprehensive patient centered nursing care of adults or children with application of leadership and management principles. Emphasis is on the transition to a leader of care as a beginning baccalaureate nurse. Includes simulation. Prereq: Must be taken concurrent with NURS 4800.

NURS 4984H. Honors Transition into Professional Nursing Practice - Practicum. 5 cr. hrs.
Comprehensive patient centered nursing care of adults or children with application of leadership and management principles. Emphasis is on the transition to a leader of care as a beginning baccalaureate nurse. Includes simulation. Prereq: NURS 4700H, NURS 4964; must be taken concurrently with NURS 4800H (theory); admission to Marquette University Honors Program.

NURS 4995. Independent Study in Nursing. 1-3 cr. hrs.
Intensive library search or a research project relative to a specific area of interest. Arrangements for faculty direction must be made prior to registration. May be taken twice. Prereq: Cons. of instr. and enrolled in the College of Nursing.
Minor in Health Studies

The minor in Health Studies affords students in varied disciplines additional avenues for career preparation in that they may be able to obtain knowledge about health and health care delivery issues. Analysis of contemporary problems of health care including health behavior and health care delivery are included within this minor. This minor strengthens future career possibilities within health care for students with majors such as: psychology, social work, biomedical engineering, business administration, communications studies, computer science, journalism, philosophy, political science, and advertising/public relations.

Students should indicate their intention to work toward a minor as early as possible in their academic studies. Students must declare the minor by filling out the minor request/update form (http://mu.edu/mucentral/registrar/documents/Form-UndergraduateMinorRequestUpdate.pdf) via the Marquette Central website and turn the form into their college office.

Health Studies Minor

Students should indicate their intention to work toward a minor as early as possible in their academic studies. Students must declare the minor by filling out the minor request/update form (http://mu.edu/mucentral/registrar/documents/Form-UndergraduateMinorRequestUpdate.pdf) via the Marquette Central website and turn the form into their college office.

The minor requires 18 credit hours. At least six credits must be selected from each of the following groups:

**Group 1: Health Topics for Individuals, Families, Communities and Populations**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BISC 3110</td>
<td>Nutritional Aspects of Health</td>
<td>3</td>
</tr>
<tr>
<td>HEAL 1001</td>
<td>Personal Health and Fitness</td>
<td>3</td>
</tr>
<tr>
<td>HEAL 1025</td>
<td>Culture and Health</td>
<td>3</td>
</tr>
<tr>
<td>HEAL 1200</td>
<td>Women's Health</td>
<td>3</td>
</tr>
<tr>
<td>HEAL 1300</td>
<td>Substance Abuse</td>
<td>3</td>
</tr>
<tr>
<td>HEAL 1400</td>
<td>Veteran Health and Culture</td>
<td>3</td>
</tr>
<tr>
<td>HEAL 1931</td>
<td>Topics in Health Care</td>
<td>2-3</td>
</tr>
<tr>
<td>HEAL 2045</td>
<td>Normal and Therapeutic Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>HEAL 4931</td>
<td>Topics in Health</td>
<td>3</td>
</tr>
<tr>
<td>SOCI 3570</td>
<td>Men, Masculinities and Health</td>
<td>3</td>
</tr>
</tbody>
</table>

**Group 2: Interdisciplinary Topics for health of Individuals, Families, Communities and Populations**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>BISC 4930</td>
<td>Special Topics in Biomedical Science (Prior Nursing approval required)</td>
<td>3</td>
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<tr>
<td>CLLS 2060</td>
<td>Public Health</td>
<td>3</td>
</tr>
<tr>
<td>CMST 4500</td>
<td>Health Communication</td>
<td>3</td>
</tr>
<tr>
<td>or CMST 5500</td>
<td>Health Communication</td>
<td>3</td>
</tr>
<tr>
<td>COMM 4330</td>
<td>Health, Science and Environmental Communication</td>
<td>3</td>
</tr>
<tr>
<td>HEAL 2100</td>
<td>Primary Health Care Concepts</td>
<td>3</td>
</tr>
<tr>
<td>HEAL 4901</td>
<td>Interdisciplinary Palliative Care</td>
<td>3</td>
</tr>
<tr>
<td>SOCI 3500</td>
<td>Culture, Health and Illness</td>
<td>3</td>
</tr>
<tr>
<td>SOCI 3550</td>
<td>Race, Gender and Medicine</td>
<td>3</td>
</tr>
<tr>
<td>SOCI 4300</td>
<td>Sociology of Aging</td>
<td>3</td>
</tr>
</tbody>
</table>

**Note:** This minor is not open to Nursing students.

**Courses**

**HEAL 1001. Personal Health and Fitness. 3 cr. hrs.**

Introduces models of health behavior to initiate and maintain health behavior changes. Identifies components of physical activity and nutritional intake and describes their health consequences. Prepares students to pursue a healthier lifestyle equipped with the knowledge gained from the course.

**HEAL 1025. Culture and Health. 3 cr. hrs.**

Cultural perspective of concepts of health and illness including the relationship of health care behaviors and beliefs to culture and social structure. Foster an appreciation for human diversity related to culture and health.

**HEAL 1200. Women's Health. 3 cr. hrs.**

A self-care approach to health maintenance, the physical and psychosocial changes during the life cycle, and the health care system as these pertain to women in our society.
HEAL 1300. Substance Abuse. 3 cr. hrs.
A comprehensive overview of substance abuse throughout the life span. Addresses the physiological, psychological, sociological and spiritual perspectives.

HEAL 1400. Veteran Health and Culture. 3 cr. hrs.
Prepares the learner to better understand the unique needs of the Veteran through exposure to elements of sociopolitical, health and culture. Does not focus on the active military perspective.

HEAL 1931. Topics in Health Care. 2-3 cr. hrs.
Various topics in health care as identified in the Schedule of Classes.

HEAL 2045. Normal and Therapeutic Nutrition. 3 cr. hrs.
Nutritional aspects of health promotion. Therapeutic dietary needs of clients with various health status deviations. Prereq: Soph. stndg. and BISC 1060 and BISC 2070 and BISC 1015; not open for credit to students who have completed BISC 3110.

HEAL 2100. Primary Health Care Concepts. 3 cr. hrs.
Exploration of primary health care principles and models. Focus is on multidisciplinary approaches to the examination of interacting factors contributing to the health of populations. Prereq: Soph. stndg.

HEAL 3100. International Health. 3 cr. hrs.
Overview of international health goals, issues, problems and programs. Includes factors influencing health, comparisons of health indicators and health systems, and global health interventions. Prereq: Jr. stndg.

HEAL 3150. Alternative and Complementary Therapies. 3 cr. hrs.
Exploration of alternative approaches to health beyond usual therapies of Western medicine. Emphasis on body-mind-spirit interconnections and multicultural perspectives. Prereq: Jr. stndg.

HEAL 4000. Epidemiology. 3 cr. hrs.
Analysis of occurrence and patterns of disease in populations including prevention and control strategies.

HEAL 4200. Natural Family Planning. 3 cr. hrs.
Physiological, behavioral, and spiritual aspects important to teaching and using natural family planning. Prereq: Jr. stndg.

HEAL 4201. Natural Family Planning Practicum. 3 cr. hrs.
Practical application of theory and skills for teaching natural family planning. Prereq: Jr. stndg.

HEAL 4901. Interdisciplinary Palliative Care. 3 cr. hrs.
Provides an understanding of the breadth and depth of palliative care practices and services available to caregivers, patients and their families. Prereq: Nursing major and Sr. stndg.; or non-nursing major; or cons. of instr.

HEAL 4931. Topics in Health. 3 cr. hrs.
Selected topics in Health. The topics will be designated in the Schedule of Classes.

HEAL 4995. Independent Study in Health. 1-3 cr. hrs.
Intensive library search or a research project relative to a specific area of interest. Arrangements for faculty direction must be made prior to registration. May be taken twice.
Legal Disclosure

Marquette University does not discriminate in any manner contrary to law or justice on the basis of race, color, gender, age, sexual orientation, religion, disability, veteran's status or national origin in its educational programs or activities, including employment and admissions. At the same time, Marquette cherishes its right and duty to seek and retain personnel who will make a positive contribution to its religious character, goals, and mission in order to enhance the Jesuit, Catholic tradition. Federal laws (Titles VI, VII and IX; the Age Discrimination Act in Employment of 1967 as amended, the Rehabilitation Act of 1973 as amended, the Veteran's Readjustment Assistance Act of 1974, and the Americans With Disabilities Act of 1990) prohibit such discrimination.

Employee inquiries concerning the application of Section 503 of the Rehabilitation Act of 1973, Section 402 of the Vietnam Era Veteran's Readjustment Assistance Act of 1974 and Title I of the Americans with Disabilities Act of 1990 may be referred to the Office of Human Resources; Straz Tower; P.O. Box 1881; Milwaukee, WI 53201-1881; (414) 288-7305.

Student inquiries concerning Section 504 of the Rehabilitation Act of 1973 and Title III of the Americans with Disabilities Act of 1990 may be referred to the Office of Student Educational Services; Alumni Memorial Union; P.O. Box 1881; Milwaukee, WI 53201-1881; (414) 288-1645.

Student and employee inquiries concerning the application of Titles VI, VII, the Age Discrimination in Employment Act of 1967, as amended, and Executive Order 11246, as amended, may be referred to Lynn Mellantine, Affirmative Action Officer: Straz Tower, P.O. Box 1881, Milwaukee, WI 53201-1881; (414) 288-3430. Student and employee inquiries concerning the application of Title IX may be referred to Christine Taylor, Title IX Coordinator: Alumni Memorial Union, Room 437, P.O. Box 1881, Milwaukee, WI 53201-1881; (414) 288-3151 OR to the Office for Civil Rights: 500 W. Madison St., Suite 1475, Chicago, IL 60661-4544, (312) 730-1560.

The Marquette University Board of Trustees approved the Affirmative Action Program, formalizing the university's position toward human rights. This program reaffirms and specifies action programs to continue the pledge of promotion and equal opportunity for all qualified persons.

State Authorization: Marquette University is registered as a Private Institution with the Minnesota Office of Higher Education pursuant to sections 136A.61 to 137A.71. Registration is not an endorsement of the institution. Credits earned at the institution may not transfer to all other institutions.
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Honorary Consul General of the Republic of Honduras

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Provost Ex-Officio
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Klingler College of Arts and Sciences Annual
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College of Business Administration Annual
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Joseph Domblesky, Ph.D.
Opus College of Engineering elected faculty-2017
Ana Garner, Ph.D.
Diederich College of Communication elected faculty-2019
Kurt Gering
Business Administration Part time faculty elected at large-2017
Noreen Haas-Lephardt, Ph.D.
Business Administration Participating faculty elected at large-2018
Brian Hodgson, D.D.S.
School of Dentistry elected faculty-2018
Richard Holz, Ph.D.
Dean, Klingler College of Arts and Sciences Per Statutes
Ronda Hughes, Ph.D.
College of Nursing elected faculty-2017
Janier Ibanez-Noe, Ph.D.
Klingler College of Arts and Sciences elected faculty-2016
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College of Health Sciences elected faculty-2018
Adam Kouel
MUSG 2017
Scott Mandernack
Library faculty elected at large-2017
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College of Business Administration elected faculty-2017
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Professional/Graduate School Student 2017
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College of Education elected faculty-2018
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Klingler College of Arts and Sciences elected faculty-2018

Abraham Ortiz Tapia
MUSG 2017

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Law School elected faculty-2016

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Klingler College of Arts and Sciences elected faculty-2018

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Opus College of Engineering elected faculty-2019

Dawn Smith
College of Health Sciences elected faculty-2019

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Vice Provost for Academic Affairs Per Statutes

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Academic Library Assembly elected faculty librarian-2018

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Diederich College of Communication faculty elected at large-2017

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College of Business Administration Dean's Representative

Doris Walker Dalhouse, Ph.D.
College of Education elected faculty-2018

Jennica Webster, Ph.D.
College of Business Administration elected faculty-2019

Janice Welburn, Ph.D.
Dean, Libraries Dean's Representative

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College of Health Sciences Faculty elected at large-2016

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Klingler College of Arts and Sciences elected faculty-2019

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Klingler College of Arts and Sciences elected faculty-2019

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School of Dentistry

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College of Nursing

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Office of the Provost

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Associate Professor of Philosophy

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University of Wisconsin-Madison
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Georgetown University
Professor of Spanish

Raquel Aguilu de Murphy, Ph.D.
University of Wisconsin-Madison
Associate Professor Emerita of Spanish

Sheikh Ahamed, Ph.D.
Arizona State University
Professor of Mathematics, Statistics and Computer Science
Sabbatical: Spring 2017

Karen Andeen, Ph.D.
University of Wisconsin-Madison
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Associate Professor of Biological Sciences

Thomas C. Anderson, Ph.D.
Marquette University
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Rev. Thomas Anderson, S.J., Ph.D.
Marquette University
Lecturer

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Purdue University
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Wesleyan University
Assistant Professor of Biological Sciences

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Professor Emeritus of Philosophy

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University of Chicago
Professor Emerita of English

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University of Notre Dame
Professor of History
Sabbatical: Spring 2017

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Yale University
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Director, Graduate Studies (Spring 2017)
Sabbatical: Fall 2016

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Lecturer

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Director, Undergraduate Studies

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University of Wisconsin-Madison
Professor Emeritus of Mathematics, Statistics and Computer Science

Naveen K. Bansal, Ph.D.
University of Pittsburgh
Professor of Mathematics, Statistics and Computer Science
Sabbatical: Spring 2017

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Assistant Professor of Spanish

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Chair, Political Science
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Jessica Berzowski, M.S.
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Adjunct Instructor

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Cornell University
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Yale University
Associate Professor of Biological Sciences
Chair, Biological Sciences

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Professor Emerita of English

Janet K. Boles, Ph.D.
University of Texas-Austin
Professor Emerita of Political Science

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Lecturer

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Lecturer

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Director, Undergraduate Studies

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Director, Undergraduate Studies

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Lilly Campbell, Ph.D.
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Marissa Carpenter, M.A.
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Professor Emeritus of Spanish

Curtis L. Carter, Ph.D.
Boston University
Professor of Philosophy

Belen S. Castaneda, Ph.D.
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Sabbatical: Spring 2017

Virginia A. Chappell, Ph.D.
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Jesse Cheng, Ph.D.
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Lecturer

Yoon Choi, Ph.D.
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Abdur R. Chowdhury, Ph.D.
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Professor of Economics

Dariusz Ciemniewski, Ph.D.
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Rev. Michael Class, S.J., Ed.D.
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Director, M.S. Bioinformatics
Sabbatical: Fall 2016

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Assistant Professor of Economics

Jeffrey Coleman, Ph.D.
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Director, Graduate Studies

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D. Lyle Dabney, Dr. Theol.
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Sabbatical: Spring 2017

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Scott Dale, Ph.D.
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Tara Daly, Ph.D.
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Chair, Economics

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Director, Undergraduate Studies

Joseph M. Defalco, Ph.D.
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Associate Professor of Theology
Director, Undergraduate Studies (Fall 2016)
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Darrell D. Dobbs, Ph.D.
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Professor of Political Science

Christopher Dockendorff, Ph.D.
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Sabbatical: Spring 2017

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Rev. John P. Donnelly, S.J., Ph.D.
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Professor Emeritus of History

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Sabbatical: 2016-2017

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Sabbatical: 2016-2017

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Sabbatical: Spring 2017

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Sabbatical: Spring 2017

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Msg. Richard Lane
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Chair, History
Director, Undergraduate Studies (Fall, 2016)

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Chair, Department of Theology

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Rev. Donald R. Matthys, S.J., Ph.D.
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Sabbatical: Fall 2016

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Professor Emeritus of English

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Barrett L. McCormick, Ph.D.
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Lecturer

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Visiting Assistant Professor of History

Rita T. McDonald, Ph.D.
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James M. McGibany, Ph.D.
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Lecturer

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Sabbatical: Fall 2016

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Patricia Schroeder, M.S.N., R.N., M.B.A., F.A.A.N.  
Marquette University  
Clinical Assistant Professor of Nursing

Kathryn Schroeter, Ph.D., R.N., C.N.O.R.  
University of Wisconsin-Milwaukee  
Clinical Associate Professor of Nursing

Deborah Schwallie, Ph.D., A.P.N.P., B.C.  
Marquette University  
Clinical Instructor of Nursing

Margaret Sebern, Ph.D., R.N.  
University of Illinois-Chicago  
Associate Professor of Nursing

Christine Shaw, Ph.D., A.N.P.-B.C., F.N.P.-B.C.  
University of Wisconsin-Milwaukee  
Clinical Associate Professor of Nursing

Megan A. Sheffer-Czuta, Ph.D., M.P.H.  
University of Iowa  
Clinical Instructor of Nursing

Delbert Slowik, M.S.N., R.N.  
University of Wisconsin-Milwaukee  
Clinical Instructor of Nursing

Pamela Souders, M.S.N., R.N., A.P.N.P.  
California State University  
Clinical Instructor of Nursing

Catherine Stevic, M.S.N., R.N., N.C.C.  
University of Wisconsin-Madison  
Clinical Instructor of Nursing

Melinda Thompson, M.S.N., R.N.-B.C.  
Alverno College  
Clinical Instructor of Nursing

Terry Tobin, M.S.N., R.N.  
Marquette University  
Clinical Associate Professor of Nursing

Dulce Torres, B.S.N., R.N.-B.C.  
Alverno College  
Clinical Instructor of Nursing

Katherine Tsiampas, M.S.N., R.N.  
Cardinal Stritch University  
Clinical Instructor of Nursing

Leona G. VandeVusse, Ph.D., R.N., C.N.M., F.A.C.N.M.  
University of Wisconsin-Milwaukee  
Associate Professor Emerita of Nursing

Patricia Varga, M.S.N., R.N.  
Marquette University  
Clinical Instructor of Nursing

Geralyn Voboril, M.S.N., R.N.  
Regis University  
Clinical Instructor of Nursing

Pat Volkert, M.S.N., R.N.  
Marquette University
Clinical Instructor of Nursing

Madeline Wake, Ph.D., R.N., F.A.A.N.
University of Wisconsin-Milwaukee
Dean Emerita

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Clinical Instructor of Nursing

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Marquette University
Clinical Instructor of Nursing

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Marquette University
Associate Professor Emerita of Nursing

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University of San Diego
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Marquette University
Clinical Instructor of Nursing

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Alverno College
Clinical Instructor of Nursing

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University of Wisconsin-Milwaukee
Associate Professor Emerita of Nursing

Aimee Woda, Ph.D., R.N.
Marquette University
Assistant Professor of Nursing

Caroline Xiong, B.S.N., R.N.
Milwaukee School of Engineering
Clinical Instructor of Nursing

Amber Young-Brice, Ph.D., R.N.
University of Wisconsin-Milwaukee
Clinical Assistant Professor of Nursing
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Bus Ad '92, Grad '96, Law '96
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Arts '79
Operating Partner, Baird Capital

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Ben Tracy
Comm '98, Grad '04
National Correspondent, CBS News

Peggy Troy
Nurs '74
President and CEO, Children's Hospital of Wisconsin

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Special Advisor, Morgan Stanley

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Eng '60, Grad '65
Retired Vice Chairman, Ameritech Corp.

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Grad '72
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Managing Director and Director of Asset Management, Robert W. Baird Company

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Sp '62, Grad '66

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Ambassador at Large
Honorary Consul General of the Republic of Liberia
Honorary Consul General of the Republic of Honduras

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Jesuit Assistant to the Law School Dean, Seattle University

Rhona Vogel
Bus Ad '76
President, Vogel Consulting Group

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Vice President for Marketing and Communication

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College of Business Administration Annual
Daniel Myers, Ph.D. (Co-Chair)
Provost Ex-Officio
Anne Pasero, Ph.D. (Vice Chair)
Klingler College of Arts and Sciences Annual
Noreen Haas-Lephardt, Ph.D. (Secretary)
College of Business Administration Annual
Julia Azari, Ph.D.
Klingler College of Arts and Sciences faculty elected at large-2018
Abir Beket, Ph.D.
College of Nursing elected faculty-2018
Pradeep Bhagavatula, Ph.D.
School of Dentistry elected faculty-2017
Bruce Boyden, J.D.
Law School elected faculty-2014
Sumana Chattopadhyay, Ph.D.
Diederich College of Communication elected faculty-2018
Joseph Domblesky, Ph.D.
Opus College of Engineering elected faculty-2017
Ana Garner, Ph.D.
Diederich College of Communication elected faculty-2019
Kurt Gering
Business Administration Part time faculty elected at large-2017
Noreen Haas-Lephardt, Ph.D.
Business Administration Participating faculty elected at large-2018
Brian Hodgson, D.D.S.
School of Dentistry elected faculty-2018
Richard Holz, Ph.D.
Dean, Klingler College of Arts and Sciences Per Statutes
Ronda Hughes, Ph.D.
College of Nursing elected faculty-2017
Janier Ibanez-Noe, Ph.D.
Klingler College of Arts and Sciences elected faculty-2016
Kristof Kipp, Ph.D.
College of Health Sciences elected faculty-2018
Adam Kouel
MUSG 2017
Scott Mandernack
Library faculty elected at large-2017
Cheryl Maranto, Ph.D.
College of Business Administration elected faculty-2017
David Marra
Professional/Graduate School Student 2017
Timothy Melchert, Ph.D.
College of Education elected faculty-2018
Michelle Mynlieff, Ph.D.
Klingler College of Arts and Sciences elected faculty-2018

Abraham Ortiz Tapia
MUSG 2017

David Papke, Ph.D.
Law School elected faculty-2016

Anne Pasero
Klingler College of Arts and Sciences elected faculty-2018

James Richie, Ph.D.
Opus College of Engineering elected faculty-2019

Dawn Smith
College of Health Sciences elected faculty-2019

John Su, Ph.D.
Vice Provost for Academic Affairs Per Statutes

Michelle Sweetser
Academic Library Assembly elected faculty librarian-2018

William Thorn, Ph.D.
Diederich College of Communication faculty elected at large-2017

Brian Till, Ph.D.
College of Business Administration Dean's Representative

Doris Walker Dalhouse, Ph.D.
College of Education elected faculty-2018

Jennica Webster, Ph.D.
College of Business Administration elected faculty-2019

Janice Welburn, Ph.D.
Dean, Libraries Dean's Representative

Mary Jo Wiemiller
College of Health Sciences Faculty elected at large-2016

Susan Wood, Ph.D.
Klingler College of Arts and Sciences elected faculty-2019

Douglas Woods, Ph.D.
Vice Provost for Graduate and Professional Studies and Dean of the Graduate School Per Statutes

Wanda Zemler-Cizewski, Ph.D.
Klingler College of Arts and Sciences elected faculty-2019

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James (Kimo) Ah Yun, Ph.D. (Dean)
Diederich College of Communication

William E. Cullinan, Ph.D. (Dean)
College of Health Sciences

William A Henk, Ed.D. (Dean)
College of Education

Richard Holz, Ph.D. (Dean)
Klingler College of Arts and Sciences

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Law School
William K. Lobb, D.D.S. (Dean)
School of Dentistry

Donna McCarthy, Ph.D. (Interim Dean)
College of Nursing

Kristina (Kris) Ropella, Ph.D. (Opus Dean)
Opus College of Engineering

Brian Till, Ph.D. (James H. Keyes Dean)
College of Business Administration/Graduate School of Management

Janice Welburn (Dean)
Libraries

Douglas Woods, Ph.D. (Dean)
Graduate School

Georgia McRae (University Registrar)
Office of the Provost

University Board of Undergraduate Studies 2016-17

M. Behnam Ghasemzadeh, Ph.D. (Chair)
College of Health Sciences 2018

John Borg, Ph.D.
Opus College of Engineering 2018

Scott D'Urso, Ph.D.
Diederich College of Communication 2019

Sarah Feldner, Ph.D.
Director University Core of Common Studies (Non-voting) Ex-Officio

Michelle Frederick
Undergraduate Student (MUSG) 2017

Susanne Foster, Ph.D.
Klinger College of Arts and Sciences/Humanities 2017

Jill Gutormson, Ph.D.
College of Nursing 2017

Michelle Mynlief, Ph.D.
Senate Liason: Klinger College of Arts and Sciences Annual

Stephanie Quade, Ph.D.
Sr. Associate Vice President
Dean of Student Development Ex-Officio

Michael Slattery
Klinger College of Arts and Sciences/Natural Sciences 2018

Christopher John Smith
Undergraduate Student (MUSG) 2017

Doug Smith, J.D.
College of Business Administration 2019

John Su, Ph.D.
Vice Provost for Academic Affairs Ex-Officio

Norman Sullivan, Ph.D.
Klinger College of Arts and Sciences/Social Sciences 2017

Joan Whipp, Ph.D.
Faculty and Administration 2016-17

Klingler College of Arts and Science

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Dean, Klingler College of Arts and Sciences
Professor of Chemistry

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Sandra Cleveland, M.Ed.
Assistant Dean

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Associate Professor of Philosophy

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Senior Assistant Dean, Advising

Kristy A. Nielson, Ph.D.
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Professor of Psychology

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Associate Dean
Associate Professor of Philosophy

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Associate Dean
Professor of Biological Sciences

Faculty and Department Administrators

Allison L. Abbott, Ph.D.
Tufts University
Associate Professor of Biological Sciences

Ibitisam Abujad, M.A.
University of Wisconsin-Milwaukee
Visiting Instructor

Noel S. Adams, Ph.D.
University of Wisconsin-Madison
Associate Professor of Philosophy

Eugenia V. Afionoguenova, Ph.D.
Georgetown University
Professor of Spanish

Raquel Aguilu de Murphy, Ph.D.
University of Wisconsin-Madison
Associate Professor Emerita of Spanish

Sheikh Ahamed, Ph.D.
Arizona State University
Professor of Mathematics, Statistics and Computer Science
Sabbatical: Spring 2017

Karen Andeen, Ph.D.
University of Wisconsin-Madison
Assistant Professor of Physics

James T. Anderson, Ph.D.
University of Florida-Gainesville
Associate Professor of Biological Sciences

Thomas C. Anderson, Ph.D.
Marquette University
Professor Emeritus of Philosophy

Rev. Thomas Anderson, S.J., Ph.D.
Marquette University
Lecturer

Elizabeth Angeli, Ph.D.
Purdue University
Assistant Professor of English

Edwin Antony, Ph.D.
Wesleyan University
Assistant Professor of Biological Sciences

Robert B. Ashmore, Ph.D.
University of Notre Dame
Professor Emeritus of Philosophy

Carolyn A. Asp, Ph.D.
University of Chicago
Professor Emerita of English

Rev. Steven M. Avella, Ph.D.
University of Notre Dame
Professor of History
Sabbatical: Spring 2017

Julia Azari, Ph.D.
Yale University
Associate Professor of Political Science
Director, Graduate Studies (Spring 2017)
Sabbatical: Fall 2016

Maha Baalbaki, B.A.
University of Wisconsin-Madison
Lecturer

Dmitri Babikov, Ph.D.
Moscow Institute of Physics and Technology
Professor of Chemistry
Director, Undergraduate Studies

Alan M. Ball, Ph.D.
University of North Carolina-Chapel Hill
Professor of History

Paul J. Bankston, Ph.D.
University of Wisconsin-Madison
Professor Emeritus of Mathematics, Statistics and Computer Science

Naveen K. Bansal, Ph.D.
University of Pittsburgh
Professor of Mathematics, Statistics and Computer Science
Sabbatical: Spring 2017

Claire Barber-Stetson, Ph.D.
University of Illinois at Urbana-Champaign
Lecturer

Michel R. Barnes, Ph.D.
University of St. Michael's College-Toronto
Associate Professor of Theology

Sonia Barnes, Ph.D.
The Ohio State University
Assistant Professor of Spanish

Lowell W. Barrington, Ph.D.
University of Michigan
Associate Professor of Political Science
Chair, Political Science
Directory, Graduate Studies (Fall 2016)

Milton J. Bates, Ph.D.
University of California-Berkeley
Professor Emeritus of English

Edward T. Baumann, B.S.
St. Norbert College
Lecturer

SFC Travis Baumann
Assistant Professor of Military Science and Leadership

Gretchen Baumgardt, Ph.D.
Marquette University
Visiting Assistant Professor

Stephen Beall, Ph.D.
University of California-Berkeley
Associate Professor of Classics

Jonathan Bechtel, M.A.
Marquette University
Adjunct Instructor

Pilar Bellver, Ph.D.
University of Pittsburgh
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Department Chair, Physics

Mark Berlin, Ph.D.
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Assistant Professor of Political Science

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Marquette University
Adjunct Instructor

Lt. Andrew Berry, B.A.
University of Wisconsin-Milwaukee
Assistant Professor of Naval Science

Jessica Berzowski, M.S.
University of Wisconsin-Milwaukee
Adjunct Instructor

Karel D. Bicha, Ph.D.
University of Minnesota-Twin Cities
Professor Emeritus of History

Rev. Ronald Bieganowski, S.J., Ph.D.
Fordham University
Adjunct Associate Professor of English

Amy L. Blair, Ph.D.
Cornell University
Associate Professor of English
Directory, Undergraduate Studies

Corinne Bloch-Mullins, Ph.D.
Tel Aviv University
Assistant Professor of Philosophy

Edwin Block, Ph.D.
Stanford University
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Yale University
Associate Professor of Biological Sciences
Chair, Biological Sciences

Mary-Catherine (M.C.) Bodden, Ph.D.
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University of Texas-Austin
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Yale University
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University of Wisconsin-Milwaukee
Lecturer

Roswitha Both, M.A.
University of Wisconsin-Milwaukee
Lecturer

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Assistant Professor of Mathematics, Statistics and Computer Science

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Director, Undergraduate Studies

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Benjamin L. Brown, Ph.D.
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Director, Undergraduate Studies

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Professor of Biological Sciences
Director, Graduate Studies

David R. Buckholdt, Ph.D.
Washington University at St. Louis
Professor Emeritus of Sociology

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Fordham University
Director, Special Projects in the Graduate School

Joshua Ezra Burns, Ph.D.
Yale University
Associate Professor of Theology
Assistant Chair, Theology

Cedric Burrows, Ph.D.
University of Kansas
Assistant Professor of English

Karl E. Byleen, Ph.D.
University of Nebraska-Lincoln
Associate Professor Emeritus of Mathematics, Statistics and Computer Science

David Cabrera, Ph.D.
Cornell University
Adjunct Assistant Professor of Mathematics, Statistics and Computer Science

Sheng Cai, Ph.D.
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NMR Laboratory Supervisor, Chemistry

Louise A. Cainkar, Ph.D.
Northwestern University
Associate Professor of Social Welfare and Justice

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Duke University
Assistant Professor of English

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Michigan State University
Visiting Assistant Professor

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University of Illinois at Urbana-Champaign
Professor Emeritus of Spanish

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Boston University
Professor of Philosophy

Belen S. Castaneda, Ph.D.
University of Wisconsin-Madison
Associate Professor of Spanish
Sabbatical: Spring 2017

Virginia A. Chappell, Ph.D.
University of Washington
Associate Professor Emerita of English

Jesse Cheng, Ph.D.
University of California-Irvine
Assistant Professor of Criminology and Law Studies

Susan Chmielinski, M.A.
University of Wisconsin-Whitewater
Lecturer

Yoon Choi, Ph.D.
University of Cambridge
Assistant Professor of Philosophy

Abdur R. Chowdhury, Ph.D.
University of Kentucky
Professor of Economics

Dariusz Ciemniewski, Ph.D.
Marquette University
Lecturer

David E. Clark, Ph.D.
Binghamton University
Professor of Economics
Executive Associate Dean, Business Administration

Rev. Michael Class, S.J., Ed.D.
University of Pennsylvania
Adjunct Assistant Professor

Anne V. Clough, Ph.D.
University of Arizona
Professor of Mathematics, Statistics and Computer Science
Director, M.S. Bioinformatics
Sabbatical: Fall 2016

Rev. David M. Coffey, S.T.D.
Theological Faculty of Sydney
Professor Emeritus of Theology

Stephen Cole, Ph.D.
University of California-Irvine
Assistant Professor of Economics

Jeffrey Coleman, Ph.D.
University of Chicago
Assistant Professor of Spanish

Roberta L. Coles, Ph.D.
University of Wisconsin-Madison
Professor of Sociology

Joseph M. Collins, Ph.D.
Illinois Institute of Technology
Associate Professor of Physics

Anthony Correro, M.S.
Marquette University
Lecturer

Dinorah Cortes-Velez, Ph.D.
University of Wisconsin-Madison
Associate Professor of Spanish
Director, Graduate Studies

James B. Courtright, Ph.D.
Johns Hopkins University
Professor Emeritus of Biological Sciences

John Couture, M.A.
University of Wisconsin-Milwaukee
Lecturer

Michael Cover, Ph.D.
University of Notre Dame
Assistant Professor of Theology

Alexandra L. Crampton, Ph.D.
University of Michigan-Ann Arbor
Associate Professor of Social Welfare and Justice

Sheldon E. Cremer, Ph.D.
University of Rochester
Professor Emeritus of Chemistry

Sharon Crowe, M.Ed.
Marquette University
Adjunct Instructor

John E. Curran, Ph.D.
University of Virginia
Professor of English
Director, Graduate Studies

Donald A. Czech, Ph.D.
Syracuse University
Associate Professor Emeritus of Psychology

D. Lyle Dabney, Dr. Theol.
Eberhard-Karls Universität-Tübingen
Associate Professor of Theology
Sabbatical: Spring 2017

Lindsay Daigle, Ph.D.
University of Wisconsin-Milwaukee
Lecturer

Kathleen M. Dale, Ph.D.
University of Wisconsin-Milwaukee
Adjunct Assistant Professor

Scott Dale, Ph.D.
Tara Daly, Ph.D.
University of California-Berkeley
Assistant Professor of Spanish

Daryl Lynn Dance, Ph.D.
University of Kansas
Visiting Assistant Professor

Joseph P. Daniels, Ph.D.
Indiana University-Bloomington
Professor of Economics
Chair, Economics

Cpt. Matthew Davis, B.S.
Shenandoah University
Assistant Professor of Naval Science

John D. Davis, Ph.D.
Michigan State University
Professor of Economics

Ed de St. Aubin, Ph.D.
Northwestern University
Associate Professor of Psychology
Director, Undergraduate Studies

Joseph M. Defalco, Ph.D.
University of Florida
Professor Emeritus of English

Blanca DeLeon, M.S.
University of Wisconsin-Oshkosh
Adjunct Instructor

Deirdre A. Dempsey, Ph.D.
The Catholic University of America
Associate Professor of Theology
Director, Undergraduate Studies (Fall 2016)
Sabbatical: Spring 2017

Jodine L. Deppisch, B.A.
Marquette University
Adjunct Instructor

Boubakary Diakite, Ph.D.
Louisiana State University-Baton Rouge
Assistant Professor of French

Darrell D. Dobbs, Ph.D.
University of Rochester
Professor of Political Science

Christopher Dockendorff, Ph.D.
University of Toronto
Assistant Professor of Chemistry
Sabbatical: Spring 2017

William A. Donaldson, Ph.D.
Dartmouth College
Professor of Chemistry

Rev. John P. Donnelly, S.J., Ph.D.
University of Wisconsin-Madison
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Lecturer

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Sabbatical: Fall 2016

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Academic Calendars/Exam Schedules (http://www.marquette.edu/mucentral/registrar/cal_index.shtml)
# Index

## A

About Marquette University ................................................................. 6
Academic Calendar ............................................................................. 824
Academic Programs ............................................................................ 28
Academic Regulations - Arts and Sciences .......................................... 101
Academic Regulations - Business ...................................................... 366
Academic Regulations - Communication ............................................. 415
Academic Regulations - Education ..................................................... 475
Academic Regulations - Engineering .................................................. 499
Academic Regulations - Health Science ............................................. 569
Academic Regulations - Nursing ....................................................... 634
Academic Regulations - University .................................................... 50
Accelerated Degree Programs ............................................................. 29
Accounting ......................................................................................... 378
Admission and Readmission to the Undergraduate Colleges ................ 19
Admission Requirements - Education ................................................. 471
Admission Requirements - Engineering ............................................. 495
Admission Requirements - Nursing ................................................... 631
Advertising ......................................................................................... 422
Africana Studies ................................................................................. 213
Air Force ............................................................................................. 325
Anthropology ...................................................................................... 335
Applied Mathematical Economics ....................................................... 216
Arabic Language Studies and Culture Minor ....................................... 218
Army .................................................................................................. 327
Asian Studies Minor ............................................................................ 219
Athletic Training .................................................................................. 601

## B

Bilingual Bicultural Minor .................................................................... 488
Bioinformatics ...................................................................................... 220
Biological Sciences ............................................................................ 115
Biomedical Engineering, Department of ............................................ 510
Biomedical Sciences, Department of .................................................. 574
Broad Field Science ............................................................................ 222
Broad Field Social Science Minor ....................................................... 225
Business Administration - Undergraduate ........................................ 381
Business Administration, College of .................................................. 362
Business Courses Offered, Additional ................................................ 409
Business Economics ............................................................................ 382
C
Chemistry .......................................................................................................................... 138
Civil, Construction and Environmental Engineering, Department of ........................................... 522
Classics ................................................................................................................................ 174
Clinical Laboratory Science, Department of ............................................................................ 592
College Curriculum - Arts and Sciences ................................................................................ 105
College of Arts and Sciences ................................................................................................ 93
Communication Studies ....................................................................................................... 426
Communication, J. William and Mary Diederich College of ..................................................... 412
CommUNITY ......................................................................................................................... 30
Concentrations and Minors .................................................................................................... 558
Corporate Communication .................................................................................................... 432
Criminology and Law Studies - Arts and Sciences .................................................................... 339
Culture, Health and Illness Minor .......................................................................................... 227
Curricula Information - Business .......................................................................................... 370

D
Degree Requirements ........................................................................................................... 418
Degree Requirements .......................................................................................................... 474
Degree Requirements .......................................................................................................... 497
Degree Requirements .......................................................................................................... 568
Degree Requirements .......................................................................................................... 633
Degrees Offered - Arts and Sciences .................................................................................... 95
Degrees Offered - Business .................................................................................................. 364
Degrees Offered - Communication ....................................................................................... 413
Degrees Offered - Education ................................................................................................. 469
Degrees Offered - Engineering ............................................................................................... 493
Degrees Offered - Health Sciences ....................................................................................... 565
Degrees Offered - Nursing .................................................................................................... 629
Digital Media ......................................................................................................................... 435

E
Early Adolescence (Grades 6-12) .......................................................................................... 482
Economics ............................................................................................................................. 147
Education Courses, College of .............................................................................................. 489
Education, College of .......................................................................................................... 467
Educational Opportunity Program .......................................................................................... 31
Electrical and Computer Engineering, Department of .......................................................... 536
Engineering, College of ........................................................................................................ 492
English ................................................................................................................................... 152
English as a Second Language Program ................................................................................ 32
Environmental Ethics Minor .................................................................................................. 229
Environmental Studies ......................................................................................................... 230
Ethics Minor .......................................................................................................................... 233
Exercise Physiology ........................................................................................................... 610
Exercise Science ............................................................................................................... 600

F
Faculty and Administrators ............................................................................................ 655
Family Studies Minor ........................................................................................................ 234
Finance ............................................................................................................................. 385
Fine Arts Minors ............................................................................................................... 456
Foreign Languages and Literatures ............................................................................... 173
French .............................................................................................................................. 178
Freshman Frontier Program ............................................................................................. 33

G
General Engineering Courses ......................................................................................... 562
German .............................................................................................................................. 184
Graduation Requirements ............................................................................................... 473
Graduation Requirements - Arts and Sciences ............................................................... 100
Graduation Requirements - Business ............................................................................... 369
Graduation Requirements - Communication ................................................................... 417
Graduation Requirements - Engineering ......................................................................... 496
Graduation Requirements - Health Sciences ................................................................... 567
Graduation Requirements - Nursing ............................................................................... 632

H
Health Sciences, College of ............................................................................................ 564
Health Studies Minor ......................................................................................................... 652
History ............................................................................................................................... 203
Honors Program - Undergraduate Colleges ................................................................. 47
Human Resources ............................................................................................................... 390

I
Information Technology .................................................................................................. 392
Innovation and Entrepreneurship .................................................................................... 394
Interdisciplinary ............................................................................................................... 212
International Affairs ......................................................................................................... 236
International Business ..................................................................................................... 396

J
Journalism ........................................................................................................................ 440

L
Language Courses Offered, Additional .......................................................................... 200
Latin American Studies ..................................................................................................... 245
Law and Society Minor ..................................................................................................... 248
Leadership and Organizations ......................................................................................... 249
Legal Disclosure ................................................................................................................ 654
Les Aspin Center for Government ...................................................................................... 34
M
Major and Minor Overview ........................................................................................................... 630
Majors and Minors - Communication .......................................................................................... 414
Majors and Minors Offered - Arts and Sciences ........................................................................ 96
Majors and Minors Overview ..................................................................................................... 470
Majors and Minors Overview ..................................................................................................... 566
Majors Offered - Business .......................................................................................................... 365
Majors Offered - Engineering ..................................................................................................... 494
Marketing .................................................................................................................................. 398
Mathematics, Statistics and Computer Science - Arts and Sciences ........................................ 271
Mechanical Engineering, Department of .................................................................................. 550
Media Studies ............................................................................................................................ 444
Medical Laboratory Science ...................................................................................................... 592
Medieval Studies Minor ............................................................................................................. 258
Middle Childhood (Grades 1-8) ................................................................................................ 478
Minors Offered - Business .......................................................................................................... 405
N
Navy .......................................................................................................................................... 331
Neuroscience Minor .................................................................................................................. 627
Nursing Major ............................................................................................................................ 642
Nursing, College of .................................................................................................................... 628
O
Operations and Supply Chain Management ............................................................................. 401
Other Arts and Sciences Courses .............................................................................................. 361
Other Communication Courses ............................................................................................... 465
P
Peace Studies .............................................................................................................................. 259
Performing Arts Minors ............................................................................................................. 460
Philosophy .................................................................................................................................. 288
Physics ........................................................................................................................................ 293
Political Science .......................................................................................................................... 309
Pre-Dental Scholars .................................................................................................................... 35
Pre-Law Scholars ........................................................................................................................ 37
Pre-Professional Studies ............................................................................................................ 110
Psychology - Arts and Sciences .................................................................................................. 318
Public History Minor ................................................................................................................ 264
Public Relations .......................................................................................................................... 446
R
Ralph C. Hartman Literacy and Learning Center ...................................................................... 477
Real Estate .................................................................................................................................. 403
Reserve Officers' Training Corps ............................................................................................... 324
Reserve Officers' Training Corps Programs ............................................................................... 40