

# Medical Laboratory Science, BS

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**Chairperson:** Erik Munson, Ph.D., D (ABMM)

*Department of Medical Laboratory Science website*

The mission of the Department of Medical Laboratory Science (MLSC) is to educate persons who will be highly skilled in laboratory medicine and who will possess those professional qualities necessary for the practice of medical laboratory science. The degree awarded in this department qualifies one to work as a medical laboratory scientist or technologist (aka, clinical laboratory scientist or technologist) in hospital laboratories, clinics, physicians' offices, research and teaching laboratories, as well as in biotechnology and pharmaceutical companies, and public health laboratories. The course work provides the foundations necessary for individuals to qualify for medical school, graduate school and other professional programs.

The Medical 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 laboratories on campus. The teaching laboratories on the university campus are structured to simulate a clinical setting. 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 Medical 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 Medical Laboratory Science major 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.

## Essential Functions

Non-academic requirements of the program include essential functions that the students 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 laboratory environment that often includes:

- Loud noises
- Strong odors
- Biohazardous materials
- Repetitive motions
- Standing for long periods of time

Due to the nature of the content of the following courses, students who have already completed these courses must repeat them if five or more years have lapsed between the time the course was completed and the date of enrollment in the senior year.

Code	Title	Hours
BISC 2070	Biochemistry for the Health Professions	3
BISC 3213	Biochemistry	4
MLSC 4124	Medical Microbiology 1	4
MLSC 4127	Medical Microbiology 2	4

Ordinarily, the following courses are not accepted from other institutions, except with approval of the department chair. These courses must be taken during the year immediately preceding the senior year:

Code	Title	Hours
MLSC 4124	Medical Microbiology 1	4
MLSC 4127	Medical Microbiology 2	4
MLSC 4163	Clinical Chemistry and Concepts 1	4
MLSC 4173	Clinical Chemistry and Concepts 2	4
MLSC 4174	Clinical Hematology 1	4

## Professional Standards

In addition to being evaluated through the use of written examinations and assignments, class participation and practical examinations, medical laboratory science students are also evaluated with respect to their professional qualities. Most medical laboratory science courses include an instructor-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 MLSC 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 medical laboratory science courses, students who in any way acts dishonestly in class assignments or examinations are in violation of the University Academic Misconduct Policy and are subject to the procedures outlined within the policy, and may be subject to dismissal from the program.

For the safety of patients, peers and themselves, students are required to dress appropriately while attending medical 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 students fall out of sequence, they are 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 grades (F or U) are subject to review by the MLSC Progress and Promotions Committee, and they may be dismissed from the MLSC major.

During the senior year, the academic actions are varied in severity dependent upon the scholastic and/or professional deficiency. These actions are the following: written academic warning, clinical academic 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 academic warning or clinical censure, are determined by mutual agreement between the university department chair and the affiliation clinical program director. The MLSC Progress and Promotions 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 MLSC 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 profession's state conference.

## Degree 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.

## Amount and Quality of Work

Candidates for the bachelor of science degree with a major in Medical Laboratory Science must meet the following requirements:

- A minimum of 128 total credit hours that includes completion of the degree requirements listed below. Certain combinations of majors/minors and early/direct admission curricula may exceed the minimum 128 total credit hours.

Area	Credit Hours
Marquette Core Curriculum (MCC)	30
MLSC Foundational Courses	28
MLSC Major Courses (must be completed with C or above)	56
General Electives	to achieve at least 128 total degree credits

- A minimum cumulative (overall) GPA of 2.200.
- A minimum MLSC major GPA of 2.000. Major courses completed with grades below a C will not satisfy major requirements, but credit earned will count towards the 128 total credits required for the B.S. degree.

## University Graduation Requirement

### Undergraduate Graduation Policy

Students are required to graduate at the end of the term in which all degree requirements are completed. Degree requirements are those requirements, including university, college and all other requirements necessary to earn a minimum of one undergraduate degree and any declared degrees/majors/minors/concentrations. That is, additional degrees/majors/minors/concentrations may be earned; however, they must be completed in the same term as the first degree/primary major is completed. Except in the case of readmission, 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 and/or the Marquette Core Curriculum committee.

Students who have interrupted their enrollment from the university, are normally obliged to follow the degree/major/minor/concentration requirements in effect at the time of readmission. Policies that are in effect at the time of the return, apply to all students, regardless of the term of initial enrollment. Students are responsible for keeping themselves informed of the requirements which apply in their particular cases. Students have faculty advisers available who assist in planning and implementing their 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 track their degree progress until graduation. It is the responsibility of students to immediately bring any discrepancies found in Academic Advisement to the attention of their 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 earned and a cumulative grade point average of 2.000 is required for a Marquette undergraduate degree.
2. Credits required to be completed in residence at Marquette:
  - a. A minimum of 45 total credits must be completed at Marquette. Up to 15 of the 45 credits may be completed through an approved study abroad program.
  - b. A minimum of 32 upper-division credits must be completed at Marquette. This may include upper-division credits from an approved study abroad program.
  - c. The final 30 credits needed to complete a Marquette undergraduate degree must be completed at Marquette, unless those credits are earned in an approved study abroad program, or are earned as part of a written/contractual agreement with another institution, in which Marquette students participate during the final year of their degree program.
  - d. A minimum of one-half of credits in the major, minor, and concentration not attached to a major must be completed at Marquette.
3. Students must attend all courses, lectures, or any other exercises that are required, even though, in some cases such activities receive no recognition in terms of credit hours.
4. Students' records must be cleared of all grades that are not permanent, i.e., grades of I, IC, IE and NG.
5. Students must file the online application for a degree by the deadline published in the Academic Calendar (<https://www.marquette.edu/central/registrar/calendars-exams-schedules.php>); however, because students are required to graduate at the end of the term in which all university, degree requirements are complete, the university reserves the right to graduate a student without a graduation application on file. If the university exercises this option, there is no guarantee students will be able to participate in Commencement.
6. Commencement is held in May, after the spring term. Participation in Commencement does not mean students are graduated. See the Commencement Policy (<https://bulletin.marquette.edu/policies/commencement/>) in this section for further details.
7. Exceptions to this Graduation Requirements policy must be approved by the Office of the Provost, except:
  - the course and bulletin year exceptions listed in the 'Graduation Requirements' section above (as approved by the college)
  - number 3 above (as approved by the college)
  - the dean's office in the college where the student's program resides may exempt up to 6 of the final 30 credits from being completed in residence (number 2c above)

For additional college requirements, consult the Degree Requirements listed for each undergraduate program in this bulletin.

**Special Note for 2023-2024:** Students who attended Cardinal Stritch University in a bachelor's degree program during the 2022-2023 year and directly transfer to a bachelor's degree program at Marquette University in Fall 2023 or Spring 2024 with fewer than 45 credits remaining in their Marquette program are exempted from the standard Marquette residency requirement (items 2-6 listed above). In lieu of the standard residency requirement, exempted students must complete all remaining credits for their undergraduate degree at Marquette. Exempted students are expected to remain continuously enrolled (fall and spring terms) at Marquette until the completion of their bachelor's degree.

### Graduation Latin Honors

The grade point average is used to compute graduation Latin 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 is not rounded up or down for any reason. To graduate with Latin honors, candidates must be pursuing their first bachelor's degree, earned at least 60 grade point hours and 60 degree hours at Marquette University, normally as a junior and senior. First bachelor's degree is

defined as the first bachelor's degree earned from any institution. When students earn a concurrent additional bachelor's degree (i.e., finish in the same term as the first bachelor's degree), the additional degree is also eligible for Graduation Latin Honors, if the first bachelor's degree qualifies.

Graduates whose grade point average is 3.500, graduate with cum laude (Latin for 'with honor'); graduates whose grade point average is 3.700, graduate with magna cum laude (Latin for 'with great honor'); and graduates whose grade point average is 3.900, graduate with summa cum laude (Latin for 'with highest honor'). Graduation Latin honors are recorded on diplomas, noted in the published lists of graduates at Commencement and recorded on students' transcript.

## Graduation Record

The academic record of students is frozen once the degree is posted and may not be altered thereafter, unless required to do so by law and/or a documented university error is discovered after the degree is posted. This includes, but is not limited to: all relevant grade point averages, grades, additional information relating to the degree(s), major(s), minor(s), concentration(s), Latin Honors and academic censure.

## Marquette Core Curriculum (MCC) - 30 Credits

### Foundation Tier - 15 Credits

Code	Title	Hours
ENGL 1001 or HOPR 1955H	Foundations in Rhetoric Core Honors First-Year Seminar	
PHIL 1001 or PHIL 1001H	Foundations in Philosophy Honors Foundations in Philosophy	
THEO 1001 or THEO 1001H	Foundations in Theology: Finding God in all Things Honors Foundations in Theology: Finding God in all Things	
CORE 1929 or CORE 1929H	Foundations in Methods of Inquiry Honors Foundations in Methods of Inquiry	
Engaging Social Systems and Values 1 (ESSV1)		

### Engaging Social Systems and Values 1 (ESSV 1) Course Options

Some faculty-led study abroad courses have also been approved for ESSV1, consult the MCC website (<https://www.marquette.edu/core-curriculum/mcc-study-abroad.php>) for a complete list.

Code	Title	Hours
ANTH 1001	Being Human	3
EDUC 1001	Child and Adolescent Development and Learning	3
ENGL 2020	Texts, Social Systems and Values	3
ENGL 2030	Global Literatures	3
HEAL 1025	Culture and Health <sup>1</sup>	3
HIST 1101	Introduction to American History	3
HIST 1601	Difference and Democracy	3
HIST 1701	Engaging the World	3
HOPR 2956H	Honors Engaging Social Systems and Values 1: Engaging the City	3
INGS 1001	Introduction to Gender and Sexualities Studies	3
SOCI 1001	Principles of Sociology	3
SOWJ 1001	Introduction to Social Welfare and Justice	3
SPAN 3300	Peoples and Cultures of Spain	3
SPAN 3310	Peoples and Cultures of Latin America	3

<sup>1</sup> Honors (H) designation of same course number also fulfills MCC requirement.

### Discovery Tier - 12 Credits

Students must complete **four** Discovery Tier courses, all from the **same** Discovery Theme. These four courses must include one course from each of the three content areas (Humanities, Natural Science and Mathematics, and Social Science), and one elective (an additional course from any of the three content areas). A maximum of two courses in the Discovery Tier can be applied toward a primary major. Additional dual counting may be allowed towards college-level requirements.

Students declare their Discovery Theme using the Discovery Tier Declaration Form (<https://www.marquette.edu/central/registrar/how-do-i-declare-change-mcc-discovery-tier-theme.php>) in CheckMarq.

For students who participate in a full-time (12 credits or more) Marquette-approved study abroad program, one study abroad course (minimum 2.5 transfer credits awarded) may fulfill the elective requirement of the Discovery Tier. Any additional MCC requirements may be fulfilled only when the approved transfer equivalent is an exact match to a specific MCC course.

### Discovery Themes

The five discovery theme options are listed below. See additional information and course listings (<https://bulletin.marquette.edu/resources-opportunities/marquette-core-curriculum/#discoverythemestext>).

- Basic Needs and Justice
- Cognition, Memory and Intelligence
- Crossing Boundaries: The Movement of People, Goods and Ideas
- Expanding Our Horizons
- Individuals and Communities

### Culminating Course - 3 Credits

Code	Title	Hours
CORE 4929	The Service of Faith and Promotion of Justice	
or CORE 4929H	Honors Service of Faith and Promotion of Justice	

### ENGAGING SOCIAL SYSTEMS AND VALUES 2 (ESSV2) - ONE COURSE or Experience Required

Students must complete a course or approved experience that is designated "ESSV2." This requirement can be completed via one of the four Discovery Tier courses or through other degree requirements.

Some faculty-led study abroad courses have also been approved for ESSV2, consult the MCC website (<https://www.marquette.edu/core-curriculum/mcc-study-abroad.php>) for a complete list.

Code	Title	Hours
ADPR 4750	Strategic Communication in a Culturally Diverse Marketplace	3
ADVE 3986	Internship in Advertising	3
ANTH 3100	Urban Anthropology	3
ANTH 3986	Internship in Anthropology	3
ANTH 4986	Advanced Internship in Anthropology	3
ARBC 3200	Culture and Civilization of the Middle East (WRIT)	3
ARBC 3220	Arab and Muslim Women in the United States (WRIT)	3
ARSC 4953	Seminar In Urban Social Issues	3
BISC 3929	Reflective Analysis of Global Dental Brigade	0
BISC 4460	Practical Cases in Medicine	3
BULA 4001	Business Law for Accounting	3
CCOM 4986	Corporate Communication Internship	0-3
CHNS 3215	Chinese Cuisine and Culture	3
CMST 3120	Interpersonal Communication	3
CMST 4986	Internship in Communication Studies	0-3
CNEN 3860	Construction Materials and Methods	3
COMM 4986	Internship in Communication	0-3
CRLS 2540	Surveillance, Law and Society	3
CRLS 3150	Reentry and Life After Incarceration	3
CRLS 3170	Policy and Practice for Children Impacted by Incarceration	3
CRLS 3986	Internship and Seminar in Criminology and Law Studies	3
CRLS 4986	Advanced Internship and Seminar in Criminology and Law Studies	3

DGMD 3986	Internship in Digital Media	3
EDUC 4965	Student Teaching: Middle/Secondary	15
EDUC 4966	Student Teaching: Elementary/Middle	15
EDUC 4986	Community-Engaged Internship 1	3
EDUC 4987	Community-Engaged Internship 2	3
ENGL 2001	Ways of Knowing (WRIT)	3
ENGL 3140	Sociolinguistics	3
ENGL 3249	Creativity and Community	3
ENGL 3250	Life-Writing, Creativity and Community (WRIT)	3
ENGL 3261	Poetry and Community (WRIT)	3
ENGL 3780	Water Is Life: Indigenous Art and Activism in Changing Climates (WRIT)	3
ENGL 4221	The Rhetoric of Martin Luther King, Jr. and Malcolm X (WRIT)	3
ENGL 4222	Feminist Rhetorics (WRIT)	3
ENGL 4223	The Rhetoric of Black Protest (WRIT)	3
ENGL 4230	Writing Center Theory, Practice and Research (WRIT)	4
ENGL 4453	Romanticism and Nature (WRIT)	3
ENGL 4631	Toni Morrison (WRIT)	3
ENGL 4825	Native American / Indigenous Literatures (WRIT)	3
ENGL 4826	Global Indigenous Literatures (WRIT)	3
ENGL 4988	Practicum in Literature and Language Arts	1-3
EXPH 4986	Exercise Physiology Practicum 2	6-16
GEEN 2960	Engineering Social Systems and Values	0
GRMN 3540	Heckling Hitler	3
GRMN 3550	German Reunification: The Collision of Two Worlds	3
HESC 3929	Global Brigades Reflective Analysis	0
HIST 4120	American Immigration	3
HIST 4125	Latinx Civil Rights Movements	3
HIST 4135	African-American History	3
HIST 4140	American Urban History	3
HIST 4155	A History of Native America	3
HIST 4247	Comparative Homefronts during the Second World War	3
INPS 2010	Introduction to Peace Studies	3
JOUR 3986	Internship in Journalism	0-3
JOUR 4986	Internship in Journalism	0-3
LLAC 1010	Working Without Borders	3
LLAC 3220	Cultures and Foodways	3
LLAC 3250	Linguistic Diversity and Social Justice	3
MANA 3035	Diversity in Organizations	3
MARQ 3929	Engaging Social Systems and Values Reflective Analysis	0
MARQ 3961	International Service Learning - Living Justice: Accompaniment in an Unjust World	3
NURS 3956H	Honors Nursing Practicum 1	1
NURS 3965	Community and Population Health Nursing - Clinical <sup>1</sup>	2
PHIL 3502	Narrating Freedom: Gender, Race and Mass Incarceration	3
PHIL 3507	Global Justice	3
PHTH 4512	Culture and Disability	3
PSYC 3201	Introductory Social Psychology	3
PSYC 3420	Health Psychology	3
PURE 3986	Internship in Public Relations	0-3
SOCI 3700	Social Movements, Protest and Change	3
SOCI 3986	Internship and Seminar in Sociology	3
SOCI 4986	Advanced Internship and Seminar in Sociology	3
SOWJ 3170	Policy and Practice for Children Impacted by Incarceration	3

SOWJ 3400	Advocacy and Social Change: Theory and Practice	3
SOWJ 3986	Internship in Social Welfare and Justice	3
SOWJ 4700	Global Aid and Humanitarianism	3
SOWJ 4986	Advanced Internship in Social Welfare and Justice	3
SPAN 3001	Advanced Communication in Spanish	3
SPAN 4150	Spanish in the United States	3
THAR 3620	Multicultural Playwrights	3
THAR 4986	Internship in Theatre Arts	0-3
THEO 2500	Theologies of Nonviolence <sup>1</sup>	3
THEO 3250	Contemplation and Action	3
THEO 3350	Christian-Muslim Dialogue	3
THEO 3600	Theology Engaging Culture	3
THEO 4270	The Many Faces of U.S. Catholicism	3
THEO 4400	Christian Faith and Justice <sup>1</sup>	3

<sup>1</sup> Honors (H) designation of same course number also fulfills MCC requirement.

### WRITING INTENSIVE COURSES (WRIT) - ONE COURSE REQUIRED

Students must complete a course that is designated "WRIT." This requirement can be completed via one of their four Discovery Tier courses or through other degree requirements.

Some faculty-led study abroad courses have also been approved, consult the MCC website (<https://www.marquette.edu/core-curriculum/mcc-study-abroad.php>) for a complete list.

Code	Title	Hours
ACCO 4000	Accounting Communications	3
ADPR 2200	Media Writing	3
ANTH 2101	Cultural Anthropology	3
ARBC 3200	Culture and Civilization of the Middle East (ESSV2)	3
ARBC 3210	Arabic Literature in English Translation	3
ARBC 3220	Arab and Muslim Women in the United States (ESSV2)	3
BIOL 4102	Experimental Molecular Biology	3
BIOL 4202	Experimental Genetics	3
BIOL 4302	Experimental Cell Biology	3
BIOL 4402	Experimental Ecology and Field Biology	3
BIOL 4403	Tropical Ecology in Panama	3
BIOL 4502	Experimental Neurobiology	3
BIOL 4702	Experimental Physiology	3
BIOL 4802	Experimental Microbiology	3
BISC 4325	Endocrinology	3
BUAD 4010	Business in Film	3
BULA 3001	Legal and Ethical Environment of Business	3
CCOM 3250	Corporate Writing	3
CMST 3000	Theories in Communication Studies	3
CRLS 3050	Methods of Criminological Research	3
CRLS 3150	Reentry and Life After Incarceration	3
EDUC 4000	Educational Inquiry 2: Advanced Topics	3
EDUC 4540	Philosophy of Education	3
ELEN 3025	Electrical Instrumentation Laboratory	2
ENGL 2001	Ways of Knowing (ESSV2)	3
ENGL 2011	Books that Matter	3
ENGL 2012	Well Versed	3
ENGL 3000	Introduction to Literary Studies	3
ENGL 3210	Writing Practices and Processes	3

ENGL 3220	Writing for Workplaces	3
ENGL 3221	Technical Writing	3
ENGL 3222	Writing for Health and Medicine	3
ENGL 3240	Introduction to Creative Writing	3
ENGL 3241	Crafting the Short Story	3
ENGL 3242	Writing Science Fiction and Fantasy	3
ENGL 3245	Creative Nonfiction	3
ENGL 3250	Life-Writing, Creativity and Community (ESSV2)	3
ENGL 3261	Poetry and Community (ESSV2)	3
ENGL 3301	Here Be Monsters	3
ENGL 3302	Crossing Over	3
ENGL 3410	Drama	3
ENGL 3462	Introduction to Gothic Fiction	3
ENGL 3513	Modern Irish Literature	3
ENGL 3514	Contemporary Irish Literature	3
ENGL 3517	Memory and Forgetting in Contemporary Historical Fiction	3
ENGL 3751	The Art of War	3
ENGL 3761	Medicine and Literature	3
ENGL 3762	Disability and Literature	3
ENGL 3780	Water Is Life: Indigenous Art and Activism in Changing Climates (ESSV2)	3
ENGL 3785	LGBTQ+ Narratives: Literature, Film, Theory	3
ENGL 3841	Global Hip Hop	3
ENGL 3860	The Russian Novel and the Search for Meaning	3
ENGL 4210	Writing, Literacy, and Rhetoric Studies	3
ENGL 4220	Rhetorical Theories and Practices <sup>1</sup>	3
ENGL 4221	The Rhetoric of Martin Luther King, Jr. and Malcolm X (ESSV2)	3
ENGL 4222	Feminist Rhetorics (ESSV2)	3
ENGL 4223	The Rhetoric of Black Protest (ESSV2)	3
ENGL 4224	Radical Writing: An Invitation to the Self	3
ENGL 4230	Writing Center Theory, Practice and Research (ESSV2)	4
ENGL 4250	Creative Writing: Fiction	3
ENGL 4260	Creative Writing: Poetry	3
ENGL 4303	Studies in the Medieval Imagination	3
ENGL 4311	Themes in Medieval Literature	3
ENGL 4331	Shakespeare	3
ENGL 4402	The Novel to 1900	3
ENGL 4412	Transatlantic Literature, 1700-1900	3
ENGL 4422	British Literature of the Long 18th Century	3
ENGL 4423	Legal Fictions of the Enlightenment	3
ENGL 4453	Romanticism and Nature (ESSV2)	3
ENGL 4472	British Literature of the Victorian Period, 1837-1900	3
ENGL 4616	Moby-Dick	3
ENGL 4631	Toni Morrison (ESSV2)	3
ENGL 4715	Children's Literature	3
ENGL 4730	What Is a Book?	3
ENGL 4734	The Epic	3
ENGL 4738	Poetry	3
ENGL 4739	Words to Worlds	3
ENGL 4755	Law and Literature	3
ENGL 4765	Material Cultures	3
ENGL 4786	Women Writers	3
ENGL 4810	Comparative Race and Ethnic Studies	3

ENGL 4820	Studies in Critical Race and Ethnic Studies	3
ENGL 4825	Native American / Indigenous Literatures (ESSV2)	3
ENGL 4826	Global Indigenous Literatures (ESSV2)	3
ENGL 4830	Africana Literatures	3
ENGL 4932	Topics in Writing	3
ENGL 4954	Seminar in Creative Writing	3
ENGL 4997	Capstone	3
EXPH 4020	Clinical Case Management in Exercise Science	3
FREN 4110	Advanced Grammar and Written Expression in French	3
FREN 4270	French Holocaust Writings in English Translation	3
FREN 4280	Creative Writing in French	3
GRMN 3500	The Modern German Short Story	3
GRMN 3505	The Modern German Short Story in English	3
HIST 1301	History of Latin America	3
HIST 3104	The Civil War Era	3
HIST 4210	The Black Death	3
HIST 4460	Race and History of South Africa	3
HIST 4955	Undergraduate Seminar in History	3
JOUR 4150	Investigative Reporting	3
MANA 3002	Business and Its Environment	3
MLSC 4180	Concepts in Clinical Education Methods and Practicum	2
NURS 4000	Quality and Safety in Nursing	3
PHIL 3505	Philosophy and Film	3
PHIL 3610	Ancient Philosophy	3
PHIL 4540	Philosophy of Education	3
PHTH 7505	Patient/Client Management 3 <sup>2</sup>	2
PHTH 7974	Clinical Education Experience 1 <sup>3</sup>	4
POSC 3101	Writing and Argumentation in Political Science	3
PURE 3600	Public Relations Writing	3
SOCI 3050	Methods of Social Research	3
SPAN 3001	Advanced Communication in Spanish	3
SPAN 3005	Advanced Communication in Spanish for Heritage Speakers	3
SPAN 3500	Texts, Images and Critical Thinking in Spanish	3
SPAN 3505	Texts, Images, and Critical Thinking in Spanish for Heritage and Native Speakers	3
SPAN 4700	Creative Writing in Spanish	3
STCM 3400	Writing for Strategic Communication	3
THAR 4600	Playwriting	3
THEO 3130	Miracles <sup>1</sup>	3
THEO 3530	Theology and Economics <sup>1</sup>	3
THEO 4210	History and Theology of the Christian East	3
THEO 4300	The Question of God in a Secular Age <sup>1</sup>	3
THEO 4460	Religion, Science and Ethics	3

<sup>1</sup> Honors (H) designation of same course number also fulfills MCC requirements.

<sup>2</sup> With PHTH 7974 Clinical Education Experience 1

<sup>3</sup> With PHTH 7505 Patient/Client Management 3

## Grade Minimums & Additional Information

- A grade of C or better is required in Honors MCC courses. A passing grade is required in non-Honors MCC courses.
- Review the Marquette Core Curriculum (<https://bulletin.marquette.edu/resources-opportunities/marquette-core-curriculum/>) section of the bulletin for additional information, including transfer student requirements and Discovery Theme details.

## Medical Laboratory Science Foundational Courses

Code	Title	Hours
General Sciences		18
BIOL 1001	General Biology 1	
BIOL 1002	General Biology 2	
CHEM 1001	General Chemistry 1	
CHEM 1002	General Chemistry 2 <sup>1</sup>	
CHEM 2111	Organic Chemistry 1	
Biochemistry: <sup>1</sup>		3
BISC 2070	Biochemistry for the Health Professions (3 credits)	
BISC 3213	Biochemistry (4 credits)	
Human Physiology: <sup>1</sup>		3
BIOL 4701	Human Physiology (4 credits)	
BISC 2016	Principles of Human Anatomy and Physiology 2 (3 credits)	
BISC 4145	Human Physiology (4 credits)	
EXPH 2045	Principles of Human Physiology (3 credits)	
Statistics:		3
MATH 1700	Modern Elementary Statistics (3 credits)	
MATH 4720	Statistical Methods (3 credits)	
MATH 4740	Biostatistical Methods and Models (3 credits)	
Medical Ethics		1
HEAL 3200	Bioethics for Healthcare: Foundations, Dilemmas and Decision-Making (3 credits)	
PHIL 4335	Biomedical Ethics (3 credits)	
PHIL 4336	Applied Ethics for the Health Sciences (1 credit)	
THEO 4450	Medical Ethics (3 credits)	
<b>Total Credit Hours:</b>		<b>28</b>

<sup>1</sup> Indicates **essential cognate courses (general chemistry 2, biochemistry and physiology)**, the subject matter of which is deemed essential to the understanding of clinical laboratory science course work and 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 MLSC major courses and the essential courses identified above.

MLSC major courses and essential cognate courses in which grades lower than a C are earned must be repeated or students demonstrate proficiency in the discipline by some other method as approved by the Progress and Promotions Committee. Students who complete guided study (MLSC 1100 Guided Study in Medical Laboratory Science) to establish proficiency are issued a grade of SNC/UNC. Students are not normally permitted to repeat more than two of these courses.

## Medical Laboratory Science Major

The following courses constitute the Medical Laboratory Science major:

### Major Course Requirements:

Code	Title	Hours
MLSC 1200	Professional Issues in MLSC	0
MLSC 2200	Concepts in Medical Laboratory Science	3
MLSC 4124	Medical Microbiology 1	4
MLSC 4127	Medical Microbiology 2	4
MLSC 4163	Clinical Chemistry and Concepts 1	4
MLSC 4173	Clinical Chemistry and Concepts 2	4
MLSC 4174	Clinical Hematology 1	4
MLSC 4180	Concepts in Clinical Education Methods and Practicum	2
MLSC 4181	Modern Management Concepts for the Medical Laboratory and Practicum	2
MLSC 4183	Clinical Chemistry and Practicum	6

MLSC 4184	Clinical Hematology 2 and Practicum	4
MLSC 4185	Clinical Hemostasis and Practicum	3
MLSC 4186	Clinical Immunohematology and Practicum	6
MLSC 4187	Clinical Immunology and Practicum	2
MLSC 4188	Clinical Microbiology and Practicum	6
MLSC 4189	Clinical Urinology and Practicum	2

**Total Credit Hours:** **56**

## TYPICAL PROGRAM FOR MEDICAL LABORATORY SCIENCE MAJORS

### Freshman

First Term	Hours	Second Term	Hours
BIOL 1001		3 BIOL 1002	3
CHEM 1001		4 CHEM 1002	4
MLSC 1200		0 MATH 1700 or OTHER APPROVED STATS	3
ENGL 1001 or ESSV1 (MCC)		3 PHIL 1001 or THEO 1001 (MCC)	3
PHIL 1001 or THEO 1001 (MCC)		3 ENGL 1001 or ESSV1 (MCC)	3
Elective		3	
	<b>16</b>		<b>16</b>

### Sophomore

First Term	Hours	Second Term	Hours
MLSC 2200		3 BISC 2070	3
CHEM 2111		4 BISC 2016 (or other physiology cognate)	3
CORE 1929 (MCC)		3 DSCV (MCC) <sup>1,2</sup>	3
DSCV (MCC) <sup>1,2</sup>		3 DSCV (MCC) <sup>1,2</sup>	3
Elective		3 Elective	5
	<b>16</b>		<b>17</b>

### Junior

First Term	Hours	Second Term	Hours
MLSC 4124		4 MLSC 4127	4
MLSC 4163		4 MLSC 4173	4
Medical Ethics		1 MLSC 4174	4
DSCV (MCC) <sup>1,2</sup>		3 CORE 4929 (MCC)	3
Elective		3	
	<b>15</b>		<b>15</b>

### Senior

First Term	Hours	Second Term	Hours
MLSC 4180 (MCC Writing Intensive) <sup>3</sup>		2 MLSC 4186	6
MLSC 4181 <sup>3</sup>		2 MLSC 4187	2
MLSC 4183 <sup>3</sup>		6 MLSC 4188	6
MLSC 4184 <sup>3</sup>		4 MLSC 4189	2

MLSC 4185 <sup>3</sup>	3		
	<b>17</b>		<b>16</b>

**Total Credit Hours: 128**

- <sup>1</sup> The four courses in the Discovery Tier (DSCV) of the MCC must be completed in the same theme and include the following content areas: Humanities (HUM), Social Science (SSC), Natural Science and Mathematics (NSM) and one elective (ELE), which is an additional course from any of the three content areas. A maximum of two courses in the Discovery Tier can apply towards a primary major.
- <sup>2</sup> Students must also complete the Writing Intensive (WRIT) and Engaging Social System and Values 2 (ESSV2) requirements of the MCC. These requirements can be fulfilled through designated courses in the Discovery Tier or other degree requirements.
- <sup>3</sup> All courses listed for senior year are ongoing for both the fall and spring term and involve clinical rotations in laboratories in the Metro Milwaukee area.

**Typical Program for Medical Laboratory Science Majors - Pre-medical****Freshman**

<b>First Term</b>	<b>Hours</b>	<b>Second Term</b>	<b>Hours</b>
BIOL 1001		3 BIOL 1002	3
CHEM 1001		4 CHEM 1002	4
MLSC 1200		0 MATH 1700 or OTHER APPROVED STATS	3
ENGL 1001 (MCC)		3 PHIL 1001 or THEO 1001 (MCC)	3
PHIL 1001 or THEO 1001 (MCC)		3 CORE 1929 (MCC)	3
SOCI 1001 (ESSV1 MCC)		3	
	<b>16</b>		<b>16</b>

**Sophomore**

<b>First Term</b>	<b>Hours</b>	<b>Second Term</b>	<b>Hours</b>
CHEM 2111		4 BIOL 2001	3
MLSC 2200		3 CHEM 2112	4
PHYS 1001		4 PHYS 1002	4
DSCV (MCC) <sup>1,2</sup>		3 DSCV (MCC) <sup>1,2</sup>	3
DSCV (MCC) <sup>1,2</sup>		3 DSCV (MCC) <sup>1,2</sup>	3
	<b>17</b>		<b>17</b>

**Junior**

<b>First Term</b>	<b>Hours</b>	<b>Second Term</b>	<b>Hours</b>
BISC 3213		4 BISC 4145	4
MLSC 4124		4 MLSC 4127	4
MLSC 4163		4 MLSC 4173	4
PSYC 1001		3 MLSC 4174	4
CORE 4929 (MCC)		3 PHIL 4336	1
	<b>18</b>		<b>17</b>

**Senior**

<b>First Term</b>	<b>Hours</b>	<b>Second Term</b>	<b>Hours</b>
MLSC 4180 (MCC Writing Intensive) <sup>3</sup>		2 MLSC 4186 <sup>3</sup>	6
MLSC 4181 <sup>3</sup>		2 MLSC 4187 <sup>3</sup>	2
MLSC 4183 <sup>3</sup>		6 MLSC 4188 <sup>3</sup>	6

MLSC 4184 <sup>3</sup>	4 MLSC 4189 <sup>3</sup>	2
MLSC 4185 <sup>3</sup>	3	
<b>17</b>		<b>16</b>

**Total Credit Hours: 134**

- <sup>1</sup> The four courses in the Discovery Tier (DSCV) of the MCC must be completed in the same theme and include the following content areas: Humanities (HUM), Social Science (SSC), Natural Science and Mathematics (NSM) and one elective (ELE), which is an additional course from any of the three content areas. A maximum of two courses in the Discovery Tier can apply towards a primary major.
- <sup>2</sup> Students must also complete the Writing Intensive (WRIT) and the Engaging Social System and Values 2 (ESSV2) requirements of the MCC. These requirements can be fulfilled through designated courses in the Discovery Tier or other degree requirements.
- <sup>3</sup> All courses listed for senior year are ongoing for both the fall and spring term and involve clinical rotations in laboratories in the Metro Milwaukee area.

## University Policies

- Academic Advising (<https://bulletin.marquette.edu/policies/academic-advising/>)
- Academic Censure - Undergraduate (<https://bulletin.marquette.edu/policies/academic-censure/undergraduate/>)
- Academic Integrity (<https://bulletin.marquette.edu/policies/academic-integrity/>)
- Academic Misconduct (<https://bulletin.marquette.edu/policies/academic-misconduct-policy/>)
- Academic Program Definitions (<https://bulletin.marquette.edu/policies/academic-programs-defined/>)
- Academic Standing (<https://bulletin.marquette.edu/policies/academic-standing/>)
- Accelerated Degree Programs (<https://bulletin.marquette.edu/policies/accelerated-degree-programs/>)
- Advanced Standing Credit - Undergraduate (<https://bulletin.marquette.edu/policies/advanced-standing-undergraduate/>)
- Attendance - Undergraduate (<https://bulletin.marquette.edu/policies/attendance/undergraduate/>)
- Audit - Undergraduate (<https://bulletin.marquette.edu/policies/audit/>)
- Awarding Diplomas and Certificates (<https://bulletin.marquette.edu/policies/awarding-diplomas-certificates/>)
- Background Checks, Drug Testing (<https://bulletin.marquette.edu/policies/background-checks-drug-testing/>)
- Class Rank (<https://bulletin.marquette.edu/policies/class-rank/>)
- Classification - Undergraduate (<https://bulletin.marquette.edu/policies/classification-undergraduate/>)
- Commencement (<https://bulletin.marquette.edu/policies/commencement/>)
- Conferral of Degrees and Certificates (<https://bulletin.marquette.edu/policies/conferral-degrees-certificates/>)
- Course Levels (<https://bulletin.marquette.edu/policies/course-levels/>)
- Credit Hour (<https://bulletin.marquette.edu/policies/credit/>)
- Credit Load - Undergraduate (<https://bulletin.marquette.edu/policies/credit-load/undergraduate/>)
- Examinations (Midterm and Final) - Undergraduate (<https://bulletin.marquette.edu/policies/examinations-midterm-final-undergraduate/>)
- Faculty Grading (<https://bulletin.marquette.edu/policies/faculty-grading/>)
- Family Education Rights and Privacy Act-FERPA (<https://bulletin.marquette.edu/policies/ferpa/>)
- Grade Appeals (<https://bulletin.marquette.edu/policies/grade-appeals/>)
- Grading System - Undergraduate and Health Science Professional (<https://bulletin.marquette.edu/policies/grading-system/undergraduate-healthscienceprofessional/>)
- Graduation - Undergraduate (<https://bulletin.marquette.edu/policies/graduation/undergraduate/>)
- Immunization and Tuberculosis Screening Requirements (<https://bulletin.marquette.edu/policies/immunization-and-tuberculosis-screening/>)
- Last Date of Attendance/Activity (<https://bulletin.marquette.edu/policies/last-dateof-attendance-activity/>)
- Major and Minor Declaration - Undergraduate (<https://bulletin.marquette.edu/policies/major-declaration/>)
- Medical Withdrawal (<https://bulletin.marquette.edu/policies/medical-withdrawal/>)
- Military Call to Active Duty or Training (<https://bulletin.marquette.edu/policies/militarycall-active-duty-training/>)
- Non-Degree Undergraduate Students (<https://bulletin.marquette.edu/policies/non-degree-undergraduate-students/>)
- Readmission - Undergraduate (<https://bulletin.marquette.edu/policies/readmission/>)
- Registration - Undergraduate (<https://bulletin.marquette.edu/policies/registration/undergraduate/>)
- Repeated Courses - Undergraduate (<https://bulletin.marquette.edu/policies/repeated-courses/undergraduate/>)
- Second Language Course Placement - Undergraduate (<https://bulletin.marquette.edu/policies/second-language-course-placement-undergraduate/>)
- Second/Additional Bachelor Degree (<https://bulletin.marquette.edu/policies/second-additional-bachelor-degree/>)
- Student Data Use and Privacy (<https://bulletin.marquette.edu/policies/student-data-use-privacy/>)

- Study at Other Institutions - Undergraduate (<https://bulletin.marquette.edu/policies/study-institutions/>)
- Transcripts-Official (<https://bulletin.marquette.edu/policies/transcripts-official/>)
- Transfer (Internal) to Another Undergraduate College within the University (<https://bulletin.marquette.edu/policies/transfer-internal-another-undergraduate-college-within-university/>)
- Transfer Course Credit - Undergraduate (<https://bulletin.marquette.edu/policies/transfer-course-credit-policy/undergraduate/>)
- Withdrawal - Undergraduate (<https://bulletin.marquette.edu/policies/withdrawals/undergraduate/>)

## **College of Health Sciences Policies**

- Academic Dismissal/Probation/Academic Alert (<https://bulletin.marquette.edu/health-sciences/policies/dismissal-probation-alert/>)
- Dean's List Criteria (<https://bulletin.marquette.edu/health-sciences/policies/deans-list-criteria/>)
- Degrees Offered (<https://bulletin.marquette.edu/health-sciences/policies/degrees-offered/>)