

School of Dentistry

School of Dentistry website (<https://www.marquette.edu/dentistry/>)

From the Dean

Marquette University School of Dentistry is pleased to present you with its 2024-2025 bulletin. The School of Dentistry continues to meet the challenges and to grow through the exciting opportunities found in contemporary dental education. In doing so we reaffirm our institutional commitment to provide the finest dental education possible, based on a tradition that invites innovation, and fosters growth and ongoing progress.

Contemporary dental education requires us to adopt new paradigms of instruction and learning, thereby creating an enriched academic, research and clinical culture — preserving the best of the past while integrating the opportunities and challenges of the future. Welcome!

Elsbeth Kalendarian, D.D.S, M.P.H, Ph.D.

Dean
School of Dentistry

Vision

The Marquette University School of Dentistry strives to be a premier academic oral health center.

School of Dentistry Mission Statement

The Marquette University School of Dentistry is committed to excellence in education, research and service, resulting in high quality oral health care.

Dental Competencies

The curriculum of the School of Dentistry is competency based. Competencies are the end products of clinical training and experience that represent the ability to independently perform or provide a particular, but complex, service or task. Students who have achieved competence in all areas should be qualified for the safe, independent practice of dentistry. Defined competencies serve as the goals for the dental program at the School of Dentistry. The school educates and trains a technically competent, socially sensitive practitioner of dentistry who adheres to the highest standards of professional conduct and ethics. The new dental graduate must demonstrate solid problem-solving skills, be biologically oriented and function effectively as a member of the nation's health care delivery system. To meet this purpose, it is necessary to identify the knowledge and skills graduates must possess to be able to promote the oral health of patients. These competencies identify and organize the knowledge and skills that graduates of the School of Dentistry must acquire to become competent and caring dentists who treat the whole patient.

Graduates of the School of Dentistry must be able to:

Diagnosis and Treatment Planning

1. Gather, evaluate and integrate the best available research and biomedical science knowledge to facilitate an evidence-based approach to achieving and maintaining oral health.
2. Gather all pertinent patient information from history, interview, clinical and radiographic examination, and appropriate diagnostic tests to accurately diagnose oral diseases, recognize implications of systemic disease, identify risk factors, and determine prognosis, while collaborating with other members of the healthcare professional team and making referrals, as necessary.
3. Recognize hard and soft tissue abnormalities of the orofacial region, including temporomandibular disorders, and determine appropriate management and follow-up.
4. Apply critical thinking and problem-solving skills to develop comprehensive treatment plans and obtain informed consent for the accepted treatment option.

Oral Health Management

5. Monitor and evaluate therapeutic outcomes and utilize the results to reassess and modify initial diagnosis and treatment, as necessary.
6. Recognize and manage medical and dental emergencies and provide basic life support interventions when needed.
7. Manage pain and anxiety utilizing pharmacological and non-pharmacological methods, recognizing the impact of prescribing practices on substance abuse disorders.
8. Perform a caries risk assessment and restore teeth to proper form, function and esthetics using appropriate treatment strategies.
9. Restore partial or complete edentulism to proper form, function, and esthetics with fixed or removable prostheses including implant procedures by using appropriate materials and techniques, managing the associated laboratory procedures, communicating with laboratory technicians and evaluating the resultant prostheses.
10. Complete a periodontal evaluation, assessment and treatment of early and moderate forms of periodontal disease and manage advanced periodontal disease with a clear recognition of the end points of therapy.
11. Complete an endodontic evaluation, assessment and treatment of uncomplicated endodontic cases.

12. Complete a surgical evaluation, assessment and treatment of uncomplicated cases and manage complicated oral surgical cases.
13. Complete an orthodontic evaluation, assessment and space management analysis of patients differentiating between minor and major malocclusions.

Practice and Profession

14. Apply legal and ethical principles to the provision of oral health care services, with an understanding of the professional obligation to the patient.
15. Using a patient-centered, humanistic approach, apply appropriate communication and behavioral principles to effectively interact with diverse populations, including patients from various cultural backgrounds, with special needs, and in varying stages of the lifespan.
16. Provide care for all patient populations including patients from various cultural backgrounds, special needs and in varying stages of the lifespan emphasizing prevention of oral diseases and promoting the maintenance of existing systemic and oral health of individuals, families and groups in the community.
17. Apply the basic principles and philosophies of practice management, evaluate models of oral health care delivery, assess emerging resources and trends in healthcare, and provide leadership to the dental health care team.
18. Complete a self-assessment of skills, performance, and knowledge for the construction of a personal development plan to improve professional competencies.

Degrees Offered

Doctor of Dental Surgery

The degree of Doctor of Dental Surgery is conferred upon completion of the four-year curriculum. The candidate must demonstrate competency as defined in "Dental Competencies". In addition, the candidate must have successfully completed all course work and have met all graduation requirements.

Master of Science

The School of Dentistry offers graduate programs in dental biomaterials, endodontics, orthodontics, periodontics and prosthodontics. These programs can be modified to allow conjoint interdisciplinary graduate work to be undertaken in any other unit of the university.

Academic Accreditation

The School of Dentistry and its recognized advanced education programs are approved by the Commission on Dental Accreditation of the American Dental Association. The School of Dentistry is a member of the American Dental Education Association.

Location

The School of Dentistry is located at 1801 West Wisconsin Ave., Milwaukee, WI 53233. The phone numbers for the School of Dentistry are (414) 288-3532 and (800) 445-5385. A map and directions to the School of Dentistry can be found at <https://www.marquette.edu/visit/map.php>

School of Dentistry Programs

- Dentistry, DDS (<https://bulletin.marquette.edu/dental/thecurriculum/>)

Dental School Policies

Dental students are responsible for complying with the regulations and/or procedures of the School of Dentistry, as described in such documents as the *Handbook on Academic Policies and Procedures*, *Clinic Operations Manual* and *Comprehensive Patient Care Group Manual*, as well as those set forth in the *At Marquette* student handbook. Copies of these are found online. Violations of regulations found in *At Marquette* are handled by the Office of Student Development. Copies of *At Marquette* are obtained at the Office of Student Development. If there is a conflict between the two applicable regulations or procedures, the School of Dentistry regulation/procedure governs. If there are multiple components to a case, the components of the case may be separated and reviewed independently by the appropriate authority (e.g., School of Dentistry, Office of Student Development).

The following policies apply to students in all Dental School programs.

University Policies

- Academic Program Definitions (<https://bulletin.marquette.edu/policies/academic-programs-defined/>)
- 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/>)
- Credit Load - Dental School (<https://bulletin.marquette.edu/policies/credit-load/dental/>)
- Family Education Rights and Privacy Act-FERPA (<https://bulletin.marquette.edu/policies/ferpa/>)
- Grading System - Dental School (<https://bulletin.marquette.edu/policies/grading-system/dental/>)
- Graduation - Dental School (<https://bulletin.marquette.edu/policies/graduation/dental/>)
- 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/>)
- Military Call to Active Duty or Training (<https://bulletin.marquette.edu/policies/militarycall-active-duty-training/>)
- Registration - Dental School (<https://bulletin.marquette.edu/policies/registration/dental/>)
- Repeated Courses - Dental School (<https://bulletin.marquette.edu/policies/repeated-courses/dental/>)
- Student Consumer Complaints (<https://bulletin.marquette.edu/policies/student-complaints/>)
- Withdrawal - Dental School (<https://bulletin.marquette.edu/policies/withdrawals/dental/>)

School of Dentistry Policies

- Awards (<https://bulletin.marquette.edu/dental/policies/awards/>)
- Commencement (<https://bulletin.marquette.edu/dental/policies/commencement/>)
- Dean's List (<https://bulletin.marquette.edu/dental/policies/deans-list/>)
- Licensure Information (<https://bulletin.marquette.edu/dental/policies/licensure-information/>)
- Student Code of Ethics and Professional Conduct (<https://bulletin.marquette.edu/dental/policies/student-code-ethics-professional-conduct/>)
- Student Evaluation (<https://bulletin.marquette.edu/dental/policies/student-evaluation/>)
- Transmissible Disease Policy (<https://bulletin.marquette.edu/dental/policies/transmissible-disease-policy/>)
- Working with Minors (<https://bulletin.marquette.edu/dental/policies/working-minors/>)

Student Resources

School of Dentistry Alumni Association

The association is an affiliate of the Marquette University Alumni Association. Alumni reunions and meetings are held, often in conjunction with the American Dental Association annual meeting and other state and regional dental meetings.

The Dental Alumni Association hosts activities for freshman dental students and provides assistance with many student-related programs. For information regarding the Dental Alumni Association, contact the Alumni Relations Office, School of Dentistry, P.O. Box 1881, Milwaukee, WI 53201-1881, (414) 288-3093.

Continuing Education

The Marquette University School of Dentistry offers courses for graduate dentists throughout the year in virtually all phases of dentistry. These courses vary in length and content and are designed to accommodate the general practitioner and specialist.

Course announcements are mailed regularly to all Wisconsin dentists and other interested parties.

Information may be obtained by writing the Marquette University School of Dentistry, Director of Continuing Education and Alumni Relations; P.O. Box 1881; Milwaukee, WI 53201-1881; (414) 288-3093; or by visiting the website (<http://www.marquette.edu/dentistry/professionals/continuing-education.php>).

Extramural Affiliations in Community Dentistry

Dental students are provided opportunities to participate in extramural community dental health programs throughout their four years at Marquette University School of Dentistry. Among the sites available are various schools in the Milwaukee Public School system. Students also participate in community-based sites in local day care centers, geriatric centers, nursing homes, handicapped facilities and ambulatory care settings in the greater Milwaukee area. They also participate in rural outreach clinics located in Appleton, Lac du Flambeau, Stevens Point and Eau Claire, Wisconsin.

Dental Informatics

Dental Informatics is integrated throughout the curriculum of the School of Dentistry. Academic technology includes lecture halls, presentation rounds rooms, audio and video recorded lectures, eportfolios, a custom website for rounds presentations and an Informatics lab equipped with computers and document scanners for student use. Healthcare technology is available to students throughout the dental clinic and preclinical areas consisting of an electronic health record, digital radiology (2D and CBCT), digital and intra-oral cameras and electronic dental and drug resources available at each operatory. Dental Informatics topics, such as secure and productive use of technology, are addressed within didactic presentations and small group, hands-on presentations.

Dental Informatics also features dental operatories equipped for dental research and continuing education. These resources are available for use by students, faculty, staff and community dentists.

Office of Diversity and Inclusion

The School of Dentistry's Office of Diversity and Inclusion is responsible for the identification, recruitment and retention of underrepresented minority students and socioeconomically disadvantaged students interested in attending dental school. This office also provides services such as application

assistance, tutorial assistance and academic and personal advising. The Diversity Office, in collaboration with the Health Careers Opportunity Program (HCOP), offers summer enrichment programs and programs that expose high school and college students to the dental field.

Additionally, the office provides a variety of academic and personal support services as well as oversees the activities of the Student National Dental Association. This collaborative effort allows the School of Dentistry to be active in the community with programs geared toward outreach and recruitment targeting underrepresented minority and socioeconomically disadvantaged students. For more information, contact the Office of Diversity and Inclusion at the School of Dentistry (<https://www.marquette.edu/dentistry/current-students/office-of-diversity.php>), (414) 288-1445 or (800) 445-5385, ext. 2.

Publications

The School of Dentistry publishes a magazine, *Dental Images*, twice a year, and distributes it to all dental alumni, faculty, staff and students. A general viewbook, which includes a synopsis of the school, admission criteria, a class profile and financial aid information, is available through the Office of Dental Admissions.

Student Organizations

Honorary

Omicron Kappa Upsilon

National dental honor society. Twelve percent of the entire class is eligible to be elected. Election to this society is based upon scholarship and professional attitude. Candidates are chosen from among the highest-ranking senior students.

Alpha Sigma Nu

The Jesuit honor society for men and women. Membership is determined based on a candidate's scholastic record, plus service and loyalty to Marquette. Appointment is made by present members of the society, school deans and ultimately the president of the university.

Social and Professional

Alpha Omega

National dental fraternity.

American Dental Education Association

The American Dental Education Association (ADEA) is the organization that represents all dental schools throughout the United States. The Council of Students represents student interests within the organization. Students who are interested in future careers as dental educators are encouraged to become student members of ADEA and the school sends representatives to the Council of Students meetings. Opportunities exist for students to work with faculty on educational projects and to present the results of these projects at the ADEA annual session through posters and symposia.

American Student Dental Association

A students' branch of the American Dental Association was established in the school in 1934. The aim of the American Student Dental Association is to promote and stimulate interest in the various fields of dentistry and in the American Dental Association. The A.S.D.A. offers regional conferences and programs in insurance, summer externships, minority recruitment and international student exchange.

The American Society of Dentistry for Children and the American Society of Preventive Dentistry also have student units at the school.

Delta Sigma Delta Dental Fraternity

As the nation's oldest and largest professional dental fraternity with international ties, Delta Sigma Delta prides itself on promoting excellence. As a member of Delta Sigma Delta, one furthers their dental knowledge through service and networking with others in the dental profession. The annual regional meeting serves as a place for all DSD chapters from central region dental schools to get to know one another and share ideas. Our commitment to helping one another excel in dentistry is unsurpassed. We pride ourselves on our mentorship of underclassmen, assisting Eta Eta's with schoolwork, waxing projects and other lab work. Aside from schoolwork and dentistry, our various social events keep life fun amidst the sometimes-stressful times in dental school.

Hispanic Dental Student Association (HDSA)

The Hispanic Dental Student Association was founded in 1989 because of the increasing number of Hispanic students studying dentistry at Marquette University. The organization is mainly concerned with developing and maintaining the Hispanic culture within the university; promoting the recruitment, enrollment, retention and graduation of Hispanic dental students; and serving as role models and ambassadors to the Hispanic community by promoting good oral health care.

Psi Omega Dental Fraternity

Psi Omega is a coed dental fraternity focused on service, social and professional development. Psi Omega is passionate about service and makes it a priority to do our part to better the community and the school. As an organization, we cultivate relationships between first year students, upperclassmen and alumni. During our professional meetings, we invite local practicing dentists and specialists to come in and speak to us about various topics of our choosing. Psi Omega also holds various members-only, social events including a river rafting trip and an annual ski trip. Psi Omega is a fraternity

centered on becoming competent healthcare providers who contribute to their communities while simultaneously developing lasting relationships with peers and faculty.

Special Care Dentistry Association (SCDA)

Special Care Dentistry Association is a unique international organization of oral health professionals and other individuals who are dedicated to promoting oral health and wellbeing for people with special needs. SCDA provides educational opportunities and information exchange for oral health care professionals who treat patients with special needs. Members of SCDA have complete access to useful resources, important industry news and exclusive networking and educational events. SCDA recognizes the need for broad coalitions of individuals and groups to work together to share information and shape public policies to stimulate change.

Student National Dental Association (SNDA)

The Student National Dental Association (SNDA) was founded and incorporated as a nonprofit organization in Pennsylvania in 1972 by a group of minority dental students. Today there are 46 chapters located in dental schools across the United States. The founders of SNDA sought to develop an organization that would speak to such issues as recruitment and retention of minority students, the dental health needs of minority communities and future issues confronting organized dentistry. SNDA also serves as a supportive mechanism for minority dental students in providing a national network of communication between students as a means of improving the health manpower distribution among minority ethnic groups.

Student Research Group (SRG)

A component of the American Association of Dental Research National Student Research Group (AASDR NSRG). This was established in the school in 1999 and seeks to promote interest in student research and discovery. The SRG offers many seminars, assistance with research projects and sponsors travel to national meetings and competitions. They also sponsor several social events and an annual Student Research Day to recognize all students involved in scholarly activities. Officers are elected each year from the student body.

The Student Council

The council consists of elected representatives from each dental class and representatives from each recognized student organization in the school. The council serves in an advisory capacity to the Administrative Council of the school.

Student Facilities

Biomedical Sciences

The Department of Biomedical Sciences, which includes the disciplines of anatomical sciences, biochemistry, general pathology, microbiology, pharmacology and physiology, is part of Marquette University's College of Health Sciences. Departmental laboratories provide faculty and students with the necessary facilities to conduct basic biomedical research.

Biomaterials

Research facilities are available to Marquette University faculty, graduate and undergraduate students in the Walter F. Joyce, Jr., Memorial Biomaterials Laboratory. Located in the William Wehr Physics Building on the Central Mall, the laboratory serves as the focus for interdisciplinary biomaterials research, combining the expertise of materials specialists from the School of Dentistry and the College of Engineering.

Clinical Facilities

The classrooms, laboratories and clinical facilities of the School of Dentistry are located in a state-of-the-art dental building located at 1801 W. Wisconsin Ave. This facility was designed to promote comprehensive dental care delivered in a patient-centered environment. The clinical programs are under the supervision of faculty from four departments: General Dental Sciences, Surgical Sciences, Developmental Sciences and Clinical Services. These four departments include programs in General Dentistry, Oral Medicine and Oral Radiology, Dental Biomaterials and Prosthodontics, Endodontics, Oral and Maxillofacial Surgery, Periodontics, Orthodontics, Pediatric Dentistry, Behavioral Sciences and Dental Public Health.

Hospital Affiliations

Hospital experiences constitute an important part of the dental educational program. Students receive experience at a variety of local and regional hospitals and medical facilities. These programs provide students with a wide variety of experiences in dental care for patients with special treatment needs.

Dental Clinical Services

DECS 7310 Special Patient Care (1 credits)

An introduction to the multifaceted aspects of disabling conditions and their implications for oral health care. Conditions addressed include the developmental disabilities, sensory disability, cardiovascular and neuromuscular deficits. Emphasis is on clinical management of patients with such conditions. Aging is also studied in regard to the relationship between normal aging, chronic disease and oral health.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DECS%207310>)

DECS 7314 Comprehensive Patient Care Practicum 1 (5 credits)

Third year dental students interact with members of the dental team and deliver care under circumstances which are similar to a large group practice. Dental students are expected to demonstrate a satisfactory level of proficiency in the assigned CPMG and during block rotation assignments. Each CPMG meets once weekly for general dental rounds where students present cases or topics and are asked to defend treatment-planning decisions with reference to the literature. Emphasis is placed on relatively simple restorations within the student's capabilities. Students are expected to perform clinically acceptable procedures on manikins in unguided situations as an assessment of competency. S/U grade assessment.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DECS%207314>)

DECS 7320 Dental Practice Dynamics 1 (1 credits)

Provides the student with an understanding of the dynamics of patient management and clinical practice systems that will allow them to effectively manage the practice environment. Topics include: the psychology of the clinic patient, effective appointment strategies, attracting clinic patients and creating ideal systems for the private practice among others. S/U grade assessment.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DECS%207320>)

DECS 7324 Comprehensive Patient Care Practicum 2 (5 credits)

The second course in a three-course series builds upon the initial Comprehensive Patient Care Practicum. Third-year dental students interact with members of the dental team and deliver care under circumstances similar to a large group practice. Focus is on increasing clinical skills and completing appraised clinical experiences, demonstrating clinical competency in a variety of areas. S/U grade assessment.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DECS%207324>)

DECS 7334 Comprehensive Patient Care Practicum 3 (5 credits)

The third course in a three-course series builds upon the initial Comprehensive Patient Care Practicum. Third-year dental students are expected to provide comprehensive clinical care across various disciplines of dentistry. Focus is on increasing clinical skills and completing appraised clinical experiences, demonstrating clinical competency in a variety of areas. S/U grade assessment.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DECS%207334>)

DECS 7410 Dental Practice Dynamics 2 (2 credits)

Builds on the initial course in the sequence, Dental Practice Dynamics 1, and provides the students with the background to be successful practitioners. Topics include: Creating a compelling philosophy of care, preparing for financial viability, leadership and change, the future of dental practice and developing the practice environment. S/U grade assessment.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DECS%207410>)

DECS 7414 Senior Clinical Practicum in Comprehensive Patient Care 1 (5 credits)

The first of two advanced level courses in comprehensive dental care. Students are expected to demonstrate their ability to provide dental services to restore oral health and function for patients requiring a range of skilled care from simple to complex. Students are also assigned to rotational experiences at external clinics, where additional exposure to a variety of populations increases patient management skills. S/U grade assessment.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DECS%207414>)

DECS 7424 Senior Clinical Practicum in Comprehensive Patient Care 2 (5 credits)

The second of two advanced level courses in comprehensive dental care. Students are expected to demonstrate their ability to provide a broad range of dental services to a diverse population of patients requiring a range of skilled care from simple to complex. Students are expected to provide care in a variety of community and rural settings. Students are expected to complete all appraised clinical experiences (ACE), demonstrating clinical competency and the ability to be a safe entry-level dental healthcare provider. Students also provide service to the school and the community. S/U grade assessment.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DECS%207424>)

DECS 7996 Extended Clinical Practice (0 credits)

Allows students to fulfill clinical requirements necessary for graduation. Requires completion of all course work in D.D.S. program. S/U grade assessment.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DECS%207996>)

Dental Developmental Sciences

DEDS 7222 Orthodontic Principles and Techniques (3 credits)

Designed to prepare the general dentist to recognize developmental issues and provide limited-focus "hands-on" orthodontic care for specific types of malocclusions in the permanent dentition including principles of impression making, clinical evaluation and diagnosis.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEDS%207222>)

DEDS 7234 Developmental Sciences Introductory Clinical Practicum (1 credits)

Orientation of the student to the pediatric clinic. Students are introduced to operations and procedures regarding the clinical management and treatment of the child patient. S/U grade assessment.

Prerequisite: Enrolled in the School of Dentistry.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEDS%207234>)

DEDS 7310 Orthodontic Management (1 credits)

Stresses the complexities of comprehensive orthodontic treatment. Emphasizes road-based considerations in the diagnosis, treatment planning and provision of competent orthodontic care for resolving complex malocclusions. Focuses on the interaction between generalist and orthodontic specialist.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEDS%207310>)

DEDS 7314 Developmental Sciences Clinical Practicum 1 (1 credits)

Provides the dental student's first experience in the clinical management and treatment of the child patient. Includes experiences in minor tooth movement. S/U grade assessment.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEDS%207314>)

DEDS 7324 Developmental Sciences Clinical Practicum 2 (1 credits)

Provides continuing experience in the clinical management and treatment of the child patient. Includes experiences in minor tooth movement. Students may be assigned more complicated cases as their progress warrants. S/U grade assessment.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEDS%207324>)

DEDS 7334 Developmental Sciences Clinical Practicum 3 (1 credits)

Provides continuing experience in the clinical management and treatment of the child patient. Students may be assigned more complicated cases as their progress warrants. S/U grade assessment.

Prerequisite: Enrolled in the School of Dentistry.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEDS%207334>)

DEDS 7414 Senior Clinical Practicum in Developmental Sciences 1 (1 credits)

Provides advanced experience in the clinical management and treatment of the child patient. Includes caries management, sealant placement and application of fluorides. Also includes experiences in minor tooth movement and other Orthodontic procedures that are within the student's scope of care. S/U grade assessment.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEDS%207414>)

DEDS 7424 Senior Clinical Practicum in Developmental Sciences 2 (1-2 credits)

Provides additional advanced experiences in the clinical management and treatment of the child patient. Includes caries management, sealant placement and application of fluorides. Also includes experiences in minor tooth movement and other Orthodontic procedures that are within the student's scope of care. S/U grade assessment.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEDS%207424>)

Dental General Science

DEGD 7110 Introduction to Dental Disease and Diagnosis (1 credits)

Encompasses practical and clinical correlations of foundational restorative dentistry and biomaterials knowledge. Didactic lectures cover the biologic basis of operative dentistry, classification and measurement of dental caries, cariology and epidemiology. The laboratory portion emphasizes the introduction to dental materials/armamentarium and hand skill development in the field of operative dentistry.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEGD%207110>)

DEGD 7113 Dental Anatomy and Occlusion 1 (2 credits)

Presents techniques to identify the proper name of deciduous or permanent teeth per quadrant, arch and in total. Students provide the proper or select the correct definition or description for any morphological structure presented in the sections covering general anatomy and anatomical structures. Students make applications of these terms to diagrams or situations and also perform laboratory exercises in which they duplicate the form and function of selected anterior and posterior teeth in wax as it relates to dental prosthodontics of the teeth. Serves as the foundation for subsequent restorative dentistry courses, including the fixed prosthodontic and removable prosthodontic preclinical courses.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEGD%207113>)

DEGD 7122 Preservation and Restoration of Tooth Structure 2 (3 credits)

This didactic and laboratory course introduces first year dental students to principles and dental biomaterials necessary for the preservation and restoration of a tooth that has been adversely affected by dental disease or other processes. In laboratory settings, students prepare artificial and natural teeth for different types of dental restorations. While hand skill development is emphasized, the importance of proper diagnosis and treatment planning, including material selection is also stressed. The didactic portion of the course provides the scientific and clinical basis for laboratory projects. This is a continuation of DEGD 7113.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEGD%207122>)

DEGD 7123 Dental Anatomy and Occlusion 2 (2 credits)

Presents occlusion as part of the biomechanical system, emphasizing the mechanical relationships between anterior and posterior anatomy, anterior guidance and certain parameters of the jaw joint. Students perform laboratory exercises in which they duplicate the form and function of selected anterior and posterior teeth in wax as it relates to mandibular movement. Serves as the foundation for subsequent restorative dentistry courses, including the fixed prosthodontic and removable prosthodontic preclinical courses. Continuation of DEGD 7113.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEGD%207123>)

DEGD 7125 Preservation and Restoration of Tooth Structure 1 (3 credits)

Encompasses practical and clinical correlations of foundational restorative dentistry and biomaterials knowledge. Didactic lectures cover the biologic basis of operative dentistry, in addition to the principles of direct preparation and restoration placement for both dental amalgam and light-cured composite resin. Laboratory work emphasizes hand skill development in the area of operative dentistry for the adult patient.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEGD%207125>)

DEGD 7134 Digital Dentistry 1 (2 credits)

Designed to build on the basic principles presented in the dental anatomy and the operative dentistry course. Consists of a series of lectures and laboratory projects. Presents various aspects of digital dentistry including intraoral/laboratory scanning, computer-aided design of dental restorations. Also introduces a basic concept of indirect partial coverage restorations (inlay/onlay).

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEGD%207134>)

DEGD 7135 Preservation and Restoration of Tooth Structure 2 (3 credits)

A continuation of DEGD 7125. Encompasses practical and clinical correlations of foundational restorative dentistry and biomaterials knowledge. Didactic lectures cover the biologic basis of operative dentistry, in addition to the principles of direct preparation and restoration placement for both dental amalgam, light-cured composite resins, glass ionomer-based materials and dental bonding systems. The laboratory emphasizes hand skill development in the area of operative dentistry for the adult patient.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEGD%207135>)

DEGD 7212 Preclinical Fixed Prosthodontics 1 (3 credits)

Designed to provide a comprehensive knowledge of the basic principles and techniques of fixed prosthodontics, occlusion and related dental materials with a clinical correlation to achieve competency in the fabrication of fixed single tooth supported restorations. Provides instruction and experience in the necessary clinical and laboratory procedures using conventional and digital workflows involved in the fabrication of full coverage ceramic and zirconia restorations and provisional crowns for the restoration of extensively debilitated teeth. Lays the foundation for advanced work involving fabrication of fixed prosthodontic restorations on multiple units.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEGD%207212>)

DEGD 7213 Preclinical Removable Prosthodontics 1 (4 credits)

Introduces students to the clinical and laboratory steps necessary to fabricate conventional complete dentures for a patient. Emphasis is placed on accurate diagnosis, the ability to formulate a treatment plan and understanding the clinical and laboratory aspects of each step in the complete denture fabrication process. Students are able to demonstrate cognitive skills by showing the ability to evaluate laboratory work and procedures associated with complete denture prosthesis fabrication. Students learn to demonstrate psychomotor (hand) skills through the satisfactory completion of simulation laboratory projects. Provides the basis for the treatment of edentulous patient rehabilitation. Covers the clinical and laboratory aspects of conventional complete denture treatment using lectures, required readings, and classroom, laboratory and homework assignments. Introduces students to new digital denture technology, helping them understand the differences between conventional and digital workflows.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEGD%207213>)

DEGD 7215 Preservation and Restoration of Tooth Structure 3 (3 credits)

A continuation of DEGD 7135, encompasses practical and clinical correlations of foundational restorative dentistry and biomaterials knowledge. Didactic lectures cover the biologic basis of operative dentistry, in addition to the principles of direct preparation and restoration placement for dental amalgam, composite resins, glass ionomer based materials and dental bonding systems. Laboratory work emphasizes hand skill development in the area of operative dentistry and fixed prosthodontics for the adult patient. Students are taught the fundamentals of direct and indirect preparations and restorations.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEGD%207215>)

DEGD 7222 Preclinical Fixed Prosthodontics 2 and Clinical Occlusion (3 credits)

Builds on the fundamentals taught in preclinical fixed prosthodontics. Students achieve competency in the clinical procedures involved in the fabrication of full-coverage cast metal and porcelain fused to metal restorations, and the restoration of partial edentulous areas with a fixed tooth supported restoration involving multiple units. Provides instruction and/or experience in the restoration of endodontically treated teeth, indirect esthetic restorations and laboratory communication.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEGD%207222>)

DEGD 7223 Preclinical Removable Prosthodontics 2 (2 credits)

A continuation of DEGD 7213; introduces students to the clinical and laboratory steps necessary to fabricate removable partial dentures for a patient. Students perform all the steps from diagnosis through post-placement management in a patient-simulation environment. A newly designed edentulous dentoform is fabricated to be utilized. Designed as a manikin-based course in a state-of-the-art simulation lab. Emphasis is on placement and treatment planning, selection of correct abutment teeth, analysis of occlusal relationships, surveying and design.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEGD%207223>)

DEGD 7234 Digital Dentistry 2 (2 credits)

Builds on the basic principles presented in the Preclinical Fixed and Preclinical Removable Prosthodontics courses. Consists of a series of lectures and advanced hands-on scanning exercises. Covers various aspects of digital dentistry including advanced intraoral/laboratory scanning, manufacturing of dental restorations and clinical applications of CAD/CAM technology.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEGD%207234>)

DEGD 7310 Clinical Restorative Procedures 1 (2 credits)

Builds on the material presented in the preclinical restorative dentistry courses. Includes contemporary clinical techniques for intracoronal restoration, restorative of endodontically treated teeth, treatment planning and design for fixed partial dentures and diagnosis and clinical techniques for complete and removable partial dentures. Also presents a significant applied dental biomaterials segment.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEGD%207310>)

DEGD 7320 Clinical Restorative Procedures 2 (1 credits)

A continuation of clinical restorative procedures focusing on dental materials and clinical application of these materials in procedures related to fixed and removable prosthodontics. Involves casting dental alloys, dental ceramics, dental polymers, dental cements, dental gypsum products and dental impression materials. Includes information regarding the clinical procedures for dental impressions, cementation and fabrication of ceramic veneers, resin bonded and cantilever restorations, implant-assisted removable partial dentures, implant-assisted fixed prosthesis, immediate dentures, single complete denture, repairs/relines for complete dentures and removable partial dentures.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEGD%207320>)

DEGD 7324 Prosthodontic Clinical Practicum 1 (1 credits)

Provides the student's initial experience with the disciplines of Fixed and Removable Prosthodontics. Stresses basic principles, concepts and techniques used to treat complete and partially edentulous patients. Students provide crowns, fixed partial dentures, removable partial dentures and complete dentures to patients according to their physiological, structural and psychological needs under direct supervision of prosthodontic specialists. S/U grade assessment.

Prerequisite: Successful completion of the Prosthodontics Pre-clinical laboratory courses.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEGD%207324>)

DEGD 7330 Clinical Restorative Procedures 3 (1 credits)

Third and final course in the Restorative Dentistry Clinical continuum. Focuses mainly on the management of TMD problems and occlusion in general practice.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEGD%207330>)

DEGD 7414 Senior Clinical Practicum in Prosthodontics 1 (4 credits)

Provides students with advanced experience in the disciplines of Fixed and Removable Prosthodontics. Stresses the principles, concepts and techniques used to treat complete and partially edentulous patients. Students provide appropriate prosthodontic care to patients according to the patient's physiological, structural and psychological needs under direct supervision of prosthodontic specialists. S/U grade assessment.

Prerequisite: Satisfactory completion of first three years of dental curriculum or equiv.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEGD%207414>)

DEGD 7424 Senior Clinical Practicum in Prosthodontics 2 (1-4 credits)

Continuation of DEGD 7414. Provides the students with additional advanced experience in the disciplines of Fixed and Removable Prosthodontics. Stresses the principles, concepts and techniques used to treat complete and partially edentulous patients. Students provide appropriate prosthodontic care to patients according to the patient's physiological, structural and psychological needs under direct supervision of prosthodontic specialists. S/U grade assessment.

Prerequisite: Satisfactory completion of first three years of dental curriculum or its equiv.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEGD%207424>)

DEGD 7434 Senior Honors Clinical Practicum in Digital Dentistry and Radiology (1 credits)

Advanced course for top-performing D4 students, emphasizing advanced digital dentistry technologies and advanced radiology. Includes high-level lectures on modern digital practices such as intraoral scanning, 3D printing, and CAD/CAM systems, with a special focus on Cone Beam Computed Tomography (CBCT). Students gain hands-on clinical experience at the Technological Innovation Center, applying their knowledge to real patient cases. In addition, students participate in original research projects guided by faculty mentors, which involve detailed study and application of digital dentistry and advanced radiology in dental procedures. Augmented with guest lectures from experts and encourages collaboration on interdisciplinary projects. Equips students with the skills to become pioneers in digital dentistry and radiology. Consent required.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEGD%207434>)

Dental Interdisciplinary Courses

DEIN 7110 Foundations of Oral Health 1 (3 credits)

Provides foundational dental knowledge and basic science clinical correlations. Faculty from several disciplines in dentistry provide an integrated approach to the basic principles of the profession. Emphasizes foundational knowledge on public health, evidence-based dentistry, growth and development, radiology, oral pathology, dental biomaterials and nutrition.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207110>)

DEIN 7111 Oral Biology 1 (2 credits)

The first of a two-part series. Covers the biology of the oral cavity and associated structures. Includes a comprehensive study of histology (microanatomy). Microscopic appearances of developing and mature structures are observed. Clinical cases illustrating normal and abnormal oral conditions are used to bring clinical relevance to the areas under study.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207111>)

DEIN 7114 Introduction to Clinical Practice 1 (4 credits)

The first of three courses in the first-year clinical practice sequence. Core modules have been designed to provide fundamental knowledge, skills and experiences that enable first-year students to become directly involved in interactions with patients. Students are provided extensive laboratory experience in periodontics which prepares them to deliver oral prophylaxis and basic scaling of teeth. Students also gain sufficient working knowledge of dental radiography to be able to participate in basic delivery of oral health care examinations to patients. S/U grade assessment.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207114>)

DEIN 7117 Research Practicum 1 (1 credits)

Provides structured research experiences in the biomedical, clinical or behavioral sciences. Under the guidance of a faculty mentor, the student designs and/or carries out research projects of appropriate difficulty and scope based on the student's ability. This is the first in a series of possible practicum experiences in research. S/U grade assessment.

Prerequisite: Cons. of instr. Consent required.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207117>)

DEIN 7118 Dental Rounds 1 (1 credits)

Dental Rounds consist of student-driven, case-based presentations that are both multidisciplinary and clinically relevant. Cases are presented by vertically integrated teams of four students, D1-D4, and attended by observer students assigned to their group. Students relate concepts learned in the basic sciences, oral medicine and pathology, general pathology, and physiology to clinical dental correlates and comprehensive treatment planning. Rounds course requirements provide an opportunity for students to develop critical thinking and problem solving skills while expanding their dental knowledge base.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207118>)

DEIN 7120 Foundations of Oral Health 2 (3 credits)

The goal of this colloquia sequence is to provide dental students with a comprehensive overview of the contemporary practice of dentistry and to initiate them in an educational process that will culminate with their entry into the profession. Inter-disciplinary discussions about what dentists actually do when serving patients with a broad range of health problems are used to introduce students to the knowledge, skills, and experience that are fundamental to the delivery of modern oral health care. Emphasis is placed on common disease processes that affect the oral cavity, key aspects of clinical decision making, contemporary treatment modalities. The colloquia are closely coordinated with and complement preclinical laboratory technique courses given in the first and second years. This is a continuation of DEIN 7110.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207120>)

DEIN 7121 Oral Biology 2 (2 credits)

The second of a two-part series. Covers the biology of the oral cavity and associated structures. Includes a comprehensive study of histology (microanatomy), the oral microflora and oral immunology. Microscopic appearances of developing and mature structures are observed. Emphasizes the interaction between oral ecological forces and the acquisition and diversity of the oral microflora. Studies, in detail, microorganisms known to be or suspected of being involved in various oral pathoses. Emphasis is placed on destructive inflammatory conditions of the periodontium and dental caries.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207121>)

DEIN 7124 Introduction to Clinical Practice 2 (4 credits)

The second of three courses in the first-year clinical practice sequence. Designed to provide fundamental knowledge, skills and experience that enable first-year students to become directly involved in interactions with patients. Introduces the student to additional clinical practices including behavioral sciences and the use of the axiUm EHR software system. New core educational components are introduced in small group interactions, rather than lectures, and allow for more hands-on training in these areas to prepare the student for patient care. The core educational components are periodontics, radiology, axiUm and behavioral sciences. The other clinical assignments include, but are not limited to, the screening clinic, the comprehensive patient management groups, public health and the pediatric clinic. S/U grade assessment.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207124>)

DEIN 7127 Research Practicum 2 (1 credits)

Provides structured research experience in the biomedical, clinical or behavioral sciences. Under the guidance of a faculty mentor, the student designs and/or carries out research projects of appropriate difficulty and scope based on the student's ability. This is the second in a series of possible practicum experiences in research. S/U grade assessment.

Prerequisite: Cons. of instr. Consent required.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207127>)

DEIN 7128 Dental Rounds 2 (1 credits)

Dental Rounds consist of student-driven, case-based presentations that are both multidisciplinary and clinically relevant. Students relate concepts learned in the basic sciences, oral medicine and pathology, general pathology, and physiology to clinical dental correlates and comprehensive treatment planning. Rounds course requirements provide an opportunity for students to develop critical thinking and problem-solving skills while expanding their dental knowledge base.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207128>)

DEIN 7130 Oral Medicine and Diagnosis 1 (4 credits)

The first in a sequence of courses that provides the framework for diagnosis and evaluation of the dental patient. It deals with physical evaluation including basic interviewing skills, taking a comprehensive medical history, taking and evaluating vital signs, ordering appropriate laboratory tests and an overview of infectious diseases. Students learn where modification of dental treatment is necessary in the presence of various systemic diseases and conditions. Basic radiographic interpretation is introduced, as well as rudiments of dental pharmacology.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207130>)

DEIN 7134 Introduction to Clinical Practice 3 (4 credits)

The third of three courses in the first-year clinical practice sequence. Students gain broader experience and sufficient working knowledge of basic periodontics, dental radiography, infection control, how to interact with patients, dental assisting and related topics to be able to participate in a meaningful role in the delivery of oral health care to patients. S/U grade assessment.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207134>)

DEIN 7137 Research Practicum 3 (1 credits)

Provides structured research experience in the biomedical, clinical or behavioral sciences. Under the guidance of a faculty mentor, the student designs and/or carries out research projects of appropriate difficulty and scope based on the student's ability. This is the third in a series of possible practicum experiences in research. S/U grade assessment.

Prerequisite: Cons. of instr. Consent required.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207137>)

DEIN 7138 Dental Rounds 3 (1 credits)

The summer session of Dental Rounds continues in a case-based format, building upon material covered during the preceding fall and spring terms. Treatment planning and delivery is evaluated within the context of treatment outcomes, patient and operator safety and current health care environment. Discusses unintended consequences, near-misses, response and preventive measures. Provides an opportunity for students to analyze and troubleshoot procedural issues from actual cases so they may learn from the actions of other providers to avoid adverse outcomes for their patients. The impact of current events upon clinical dental practice are addressed from a "learn as the lessons are being learned" perspective. Presenters are faculty, residents and guest speakers.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207138>)

DEIN 7210 Oral Medicine and Diagnosis 2 (2 credits)

Continuation of the Oral Medicine and Diagnosis sequence. It includes behavioral and pharmacological management of the patient including anxiety and pain management. The student is also exposed to basic diagnostic procedures including taking an appropriate patient history, patient interviewing, selection and application of radiographs and conducting a comprehensive oral examination. The student will also be introduced to identification of oral lesions.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207210>)

DEIN 7214 Introduction to Clinical Practice 4 (1 credits)

Moves the student from a novice student to becoming a competent dental practitioner. Requires the student to assimilate and utilize information and skills introduced during the first-year clinical practice sequence. Emphasizes, through various clinical assignments, further development of clinical and patient management skills. S/U grade assessment.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207214>)

DEIN 7217 Research Practicum 4 (1 credits)

Provides structured research experience in the biomedical, clinical or behavioral sciences. Under the guidance of a faculty mentor, the student designs and/or carries out research projects of appropriate difficulty and scope based on the student's ability. This is the fourth in a series of possible practicum experiences in research. S/U grade assessment.

Prerequisite: Cons. of instr. Consent required.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207217>)

DEIN 7218 Dental Rounds 4 (1 credits)

Dental Rounds consist of advanced student-driven, case-based presentations that are both multidisciplinary and clinically relevant. Cases are presented by vertically integrated teams of four students, D1-D4, and attended by observer students assigned to their group. Students relate concepts learned in the basic sciences, oral medicine and pathology, general pathology, and physiology to clinical dental correlates and comprehensive treatment planning. Rounds course requirements provide an opportunity for students to develop critical thinking and problem-solving skills while expanding their dental knowledge base.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207218>)

DEIN 7221 Care of the Pediatric Patient (2 credits)

Designed to provide a comprehensive overview of pediatric dentistry by integrating several clinical disciplines. Prepares the general dentist to provide dental care to children from infancy to early adolescence. Includes topics focused on the pediatric patient, such as diagnosis and treatment planning, child abuse and neglect, orthodontic diagnosis and treatment in the mixed dentition, non-pharmacological behavior management, trauma, gingival and periodontal disease, growth and development, oral surgery, management of the medically compromised/disabled, oral pathology and hospital dentistry, among others.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207221>)

DEIN 7223 Oral Medicine and Diagnosis 3 (2 credits)

Continuation of the Oral Medicine and Diagnosis sequence. Includes behavioral sciences and advanced treatment planning of the patient. Examines the details of the systemic, definitive and maintenance phases of treatment, mainly through small workshops. Students interact and brainstorm different cases in order to finalize treatment plans for any patient. Students discover the importance of an effective case presentation and identify the parts of a case presentation from a communication perspective.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207223>)

DEIN 7224 Intermediate Clinical Practice (4 credits)

Continuation of DEIN 7214 and the beginning of more direct patient care. Students are given clinical assignments to the Comprehensive Patient Management Groups to provide supportive periodontal therapy (type 1 and 2 cases) for the populations they serve. Students rotate to the Milwaukee Public Schools to place sealants on young children. Students provide comprehensive examinations, treatment plans and simple restorative procedures on assigned patients in their Group. S/U grade assessment.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207224>)

DEIN 7227 Research Practicum 5 (1 credits)

Provides structured research experience in the biomedical, clinical or behavioral sciences. Under the guidance of a faculty mentor, the student designs and/or carries out research projects of appropriate difficulty and scope based on the student's ability. This is the fifth in a series of possible practicum experiences in research. S/U grade assessment.

Prerequisite: Cons. of instr. Consent required.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207227>)

DEIN 7228 Dental Rounds 5 (1 credits)

Dental Rounds course continues student-driven, case-based presentations that are both multidisciplinary and clinically relevant. Students relate concepts learned in the basic sciences, oral medicine and pathology, general pathology and physiology to clinical dental correlates and comprehensive treatment planning. Rounds course requirements provide an opportunity for students to develop critical thinking and problem-solving skills while expanding their dental knowledge base.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207228>)

DEIN 7230 Introduction to Implants (3 credits)

Provides a comprehensive overview of diagnosing and treatment planning for dental implants. Includes surgical placement, restoring and maintaining of dental implants. Students plan and restore a single implant supported crown and a two-implant retained overdenture. Emphasis is on pre-clinical simulation of clinical and laboratory procedures required for successful implant restoration.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207230>)

DEIN 7231 Professionalism 1: Community Dentistry (1 credits)

Introduces students to the relationships and obligations that the dental profession and practitioners have to the entire community. Covers professionalism, service learning and dental public health topics (e.g., dental workforce, dental care financing, access to dental care, community preventive programs, health economics). Includes an interactive session on the dental professions' role in advocating for optimal oral health for the whole population.

Prerequisite: Enrolled in the School of Dentistry.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207231>)

DEIN 7234 Clinical Dental Practice (4 credits)

Students interact with the dental team and deliver dental care under circumstances similar to a large group practice. Following a selection of patients by the group leader, a wide range of patients is assigned, assuring a broad clinical experience in general dentistry. Student progress is closely monitored and is measured by daily performance assessments and several competency examinations. S/U grade assessment.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207234>)

DEIN 7237 Research Practicum 6 (1 credits)

Provides structured research experience in the biomedical, clinical or behavioral sciences. Under the guidance of a faculty mentor, the student designs and/or carries out research projects of appropriate difficulty and scope based on the student's ability. This is the sixth in a series of possible practicum experiences in research. S/U grade assessment.

Prerequisite: Cons. of instr. Consent required.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207237>)

DEIN 7238 Dental Rounds 6 (1 credits)

Summer session of Dental Rounds continues in a case-based format, building upon material covered during the preceding fall and spring terms. Treatment planning and delivery is evaluated within the context of treatment outcomes, patient and operator safety, and current health care environment. Discusses unintended consequences, near-misses, response and preventive measures. Provides an opportunity for students to analyze and troubleshoot procedural issues from actual cases so they may learn from the actions of other providers to avoid adverse outcomes for their patients. The impact of current events upon clinical dental practice are addressed from a "learn as the lessons are being learned" perspective. Presenters include faculty, residents and guest speakers.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207238>)

DEIN 7239 Basic and Pre-Clinical Science Review (2 credits)

Provides a comprehensive review of the various basic science and selected preclinical (pathology and dental anatomy) courses. Presents an overview of these areas focused on their application to the practice of dentistry. Designed to prepare students for the Part I National Board Examinations. S/U grade assessment.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207239>)

DEIN 7310 Professionalism 2: Ethics and Jurisprudence (1 credits)

Introduces students to the relationships and obligations that the dental profession and practitioners have to the entire community. Aids students in developing personal and professional standards governing their interactions with patients, peers and the public. Concentrates on demonstrating how legal guidelines and ethical codes, principles and reasoning can help a professional understand and act on their obligations to the community.

Prerequisite: Enrolled in the School of Dentistry.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207310>)

DEIN 7317 Research Practicum 7 (1 credits)

Provides structured research experience in the biomedical, clinical or behavioral sciences. Under the guidance of a faculty mentor, the student designs and/or carries out research projects of appropriate difficulty and scope based on the student's ability. This is the seventh in a series of possible practicum experiences in research. S/U grade assessment.

Prerequisite: Cons. of instr. Consent required.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207317>)

DEIN 7318 Dental Rounds 7 (1 credits)

Dental Rounds consist of more advanced student-driven, case-based presentations that are both multidisciplinary and clinically relevant. Cases are presented by vertically integrated teams of four students, D1-D4, and attended by observer students assigned to their group. Students relate concepts learned in the basic sciences, oral medicine and pathology, general pathology and physiology to clinical dental correlates and comprehensive treatment planning. Rounds course requirements provide an opportunity for students to develop critical thinking and problem-solving skills while expanding their dental knowledge base.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207318>)

DEIN 7320 Clinical Radiology and Oral Pathology (2 credits)

The object of this course is to present the various clinical, histopathologic and radiographic appearance of oral pathologies. Emphasis will be placed on differential diagnosis and the correlation between clinical, microscopic and radiographic findings. In addition, the student will be introduced to advanced imaging modalities as they relate to the head and neck.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207320>)

DEIN 7327 Research Practicum 8 (1 credits)

Provides structured research experiences in the biomedical, clinical or behavioral sciences. Under the guidance of a faculty mentor, the student designs and/or carries out research projects of appropriate difficulty and scope based on the student's ability. This is the eighth in a series of possible practicum experiences in research. S/U grade assessment.

Prerequisite: Cons. of instr. Consent required.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207327>)

DEIN 7328 Dental Rounds 8 (1 credits)

Dental Rounds consist of more advanced student-driven, case-based presentations that are both multidisciplinary and clinically relevant. Students relate concepts learned in the basic sciences, oral medicine and pathology, general pathology and physiology to clinical dental correlates and comprehensive treatment planning. Rounds course requirements provide an opportunity for students to develop critical thinking and problem-solving skills while expanding their dental knowledge base.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207328>)

DEIN 7330 Foundations of Professional Development (2 credits)

Capstone course within the curriculum for instruction on professionalism. It combines the areas of ethics, jurisprudence, service learning and public health into professionalism themes and engages students in interactive learning. Themes are built around the American Dental Association's Principles of Ethics and Code of Professional Conduct, including such topics as: Respect for Autonomy, Beneficence, Nonmaleficence, Justice and Veracity. The interplay between professional obligations, social justice and the law is emphasized in the course, with the goal of fostering a culture of professionalism among future dental healthcare providers.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207330>)

DEIN 7337 Research Practicum 9 (1 credits)

Provides structured research experiences in the biomedical, clinical or behavioral sciences. Under the guidance of a faculty mentor, the student designs and/or carries out research projects of appropriate difficulty and scope based on the student's ability. This is the ninth in a series of possible practicum experiences in research. S/U grade assessment.

Prerequisite: Cons. of instr. Consent required.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207337>)

DEIN 7338 Dental Rounds 9 (1 credits)

The summer session of Dental Rounds continues in a case-based format, building upon material covered during the preceding fall and spring terms. Treatment planning and delivery is evaluated within the context of treatment outcomes, patient and operator safety, and current health care environment. Discusses unintended consequences, near-misses, response and preventive measures. Provides an opportunity for students to analyze and troubleshoot procedural issues from actual cases so they may learn from the actions of other providers to avoid adverse outcomes for their patients. The impact of current events upon clinical dental practice are addressed from a "learn as the lessons are being learned" perspective. Presenters include faculty, residents and guest speakers.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207338>)

DEIN 7410 Senior Colloquium 1 (1 credits)

Provides an opportunity for Senior students to select from a variety of short-term experiences of varying advanced content. Selections are available from most of the specialty areas of dentistry and from other content areas that may be helpful in the practice of dentistry.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207410>)

DEIN 7417 Research Practicum 10 (1 credits)

Provides structured research experiences in the biomedical, clinical or behavioral sciences. Under the guidance of a faculty mentor, the student designs and/or carries out research projects of appropriate difficulty and scope based on the student's ability. This is the tenth in a series of possible practicum experiences in research. S/U grade assessment.

Prerequisite: Cons. of instr. Consent required.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207417>)

DEIN 7418 Dental Rounds 10 (1 credits)

Dental Rounds consist of high-level advanced student-driven, case-based presentations that are both multidisciplinary and clinically relevant. Cases are presented by vertically integrated teams of four students, D1-D4, and attended by observer students assigned to their group. Students relate concepts learned in the basic sciences, oral medicine and pathology, general pathology and physiology to clinical dental correlates and comprehensive treatment planning. Rounds course requirements provide an opportunity for students to develop critical thinking and problem-solving skills while expanding their dental knowledge base.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207418>)

DEIN 7427 Research Practicum 11 (1 credits)

Provides structured research experiences in the biomedical, clinical or behavioral sciences. Under the guidance of a faculty mentor, the student designs and/or carries out research projects of appropriate difficulty and scope based on the student's ability. This is the eleventh in a series of possible practicum experiences in research. S/U grade assessment.

Prerequisite: Cons. of instr. Consent required.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207427>)

DEIN 7428 Dental Rounds 11 (1 credits)

Dental Rounds consist of highly advanced, student-driven, case-based presentations that are both multidisciplinary and clinically relevant. Students relate concepts learned in the basic sciences, oral medicine and pathology, general pathology and physiology to clinical dental correlates and comprehensive treatment planning. Rounds course requirements provide an opportunity for students to develop critical thinking and problem-solving skills while expanding their dental knowledge base. D4 students are responsible for selection and presentation of case and for leadership of the D1-D4 student team.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207428>)

DEIN 7550 Remediation in Dentistry (0-6 credits)

Remediation is an individualized program of study designed to remedy specific academic deficiencies; therefore, it may take a variety of forms. Students who earn grades of F or U in didactic courses and have a minimum GPA of 1.810 or higher may be eligible for remediation. Eligibility for remediation is at the sole discretion of the Academic Progress Committee and the associate dean for academic affairs. The specific remediation needs are determined by the course director and the method(s) of remediation are those determined by the course director, in consultation with the associate dean for academic affairs. 0 credit will be SNC/UNC grade assessment, 1-6 credit will be S/U grade assessment.

Prerequisite: Cons. of dept. ch. and associate dean for academic affairs. Consent required.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207550>)

DEIN 7931 Topics in Dentistry (1-3 credits)

Taught occasionally when there is need to add a topic of current interest to the curriculum.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207931>)

DEIN 7932 Advanced Topics in Dentistry (1-3 credits)

Taught occasionally when there is need to add a topic of current interest to the curriculum.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207932>)

DEIN 7995 Independent Study in Dental Interdisciplinary (1-3 credits)

Faculty-supervised, independent study/research of a specific area or topic in Interdisciplinary Dental.

Prerequisite: Cons. of academic dean. Consent required.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DEIN%207995>)

Dental Surgical Science

DESS 7210 Clinical Periodontal Therapy (1 credits)

Exposes the student, in a more specific and in-depth manner, to the fundamental information covered in earlier courses. Discusses the diagnosis, pathogenesis and treatment of periodontal diseases. Students learn the principles, indications, contraindications and techniques for each periodontal surgical procedure and appropriate follow-up care. Emphasis is placed on recognizing appropriate case selection and acceptable end points of therapy.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DESS%207210>)

DESS 7211 Introduction to Endodontics (2 credits)

Provides the knowledge and instruction necessary to educate students in the art of executing the technical procedures of nonsurgical root canal therapy. Provides the science that includes the biological, pathological and evidence-based principles and methods that guide the endodontics specialty. Students also gain an understanding of endodontic diagnosis and treatment planning that will aid them in preserving the natural dentition.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DESS%207211>)

DESS 7212 Oral and Maxillofacial Pathology (4 credits)

Integrates oral and maxillofacial pathology into the diagnostic process and involves the study of the diseases and abnormalities of the oral cavity and adjacent regions, including their etiology, epidemiology, clinical and radiographic features, diagnosis, treatment and prognosis.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DESS%207212>)

DESS 7230 Emergency Medical Interventions (1 credits)

Provides the basic information needed to handle medical emergencies in the clinical dental setting. Topics include administration of emergency drugs, identification of patient stress, CPR and advanced support techniques.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DESS%207230>)

DESS 7231 Foundations of Oral and Maxillofacial Surgery (1 credits)

Provides students with the basic surgical knowledge to render the procedures provided by the general practitioner including foundations in special examination, diagnosis and treatment planning for dentoalveolar surgery, and medicolegal issues dealing with oral and maxillofacial surgery. Students assess and provide outcomes, manage minor complications, and provide both routine and special post operative care. Medications commonly used in oral surgery will be presented with regards to selection, dosage administration and prescription writing.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DESS%207231>)

DESS 7234 Surgical Sciences Introductory Clinical Practicum (1 credits)

Orientation of the student to the Surgical Sciences rotations. Students are introduced to operations and procedures regarding the clinical treatment of patients with needs in the areas of periodontal therapy, edodontics, oral surgery and/or pathology.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DESS%207234>)

DESS 7310 Intermediate Oral and Maxillofacial Surgery (1 credits)

Continues the basic course in dentoalveolar surgery to include diagnosis, treatment and post operative care for patients presenting with complications of severe nature, a need for preprosthetic surgery in conjunction with exodontia, contemporary implant surgery, odontogenic infections, complex radiation and chemotherapy patients with oral surgical needs, and management of obstructive salivary gland diseases. Students are also introduced to techniques, protocol and the management of the hospitalized dental patient.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DESS%207310>)

DESS 7314 Surgical Sciences Clinical Practicum 1 (1 credits)

Provides the initial experiences that students have with the clinical treatment of patients with needs in the areas of periodontal therapy, endodontics, oral surgery and oral pathology. Students rotate through controlled experiences in these various areas and provide comprehensive care to patients with certain needs, particularly in the area of periodontics. S/U grade assessment.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DESS%207314>)

DESS 7318 Junior Honors Clinical Practicum in Oral Surgery (1 credits)

An in-depth practicum for students who have applied for or have been accepted into advanced OMS programs. Students are exposed in a more specific and in depth manner to oral and maxillofacial surgical residency programs. Students are assigned additional complex dento-alveolar procedures as they arise and are expected to present case histories, treatment plans, outcomes and assessments of the procedures provided in an outcome based discussion. Enrollment in this course requires special permission of the course director, academic dean, the student's group leader and the clinical director.

Prerequisite: Enrollment in the School of Dentistry.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DESS%207318>)

DESS 7319 Junior Honors Clinical Practicum in Periodontics (1 credits)

Exposes the students, in a more specific and in-depth manner, to periodontal surgical procedures. Focuses on different surgical procedures and incorporates evidence-based dentistry in the treatment planning and end point of therapy. Includes literature review and journal club with emphasis on current literature and surgical technique. Reviews complex periodontal procedures. Discusses research ideas and research projects. S/U grade assessment.

Prerequisite: Cons. of the course dir. and the academic dean.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DESS%207319>)

DESS 7320 Clinical Endodontic Procedures (1 credits)

Designed to aid students in preserving natural dentition by focusing on both the art of executing technical procedures and the science of recognizing biological and pathological conditions. Evidence-based treatments integrate the student's expertise and the needs and preferences of the patient. Students identify and diagnose pulpal and periradicular disease, evaluate case complexity and develop the knowledge base necessary to perform and complete noncomplicated endodontic procedures.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DESS%207320>)

DESS 7321 Advanced Oral and Maxillofacial Surgery (2 credits)

Provides the student with diagnostic skills, surgical management and post operative complications in patients with major deformities requiring preprosthetic surgery, advanced techniques in implant surgery, major odontogenic infections, the principles of biopsy and diagnosis, management of minor and major facial trauma, dentofacial deformities and the diagnosis and management of TMJ and facial pain.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DESS%207321>)

DESS 7323 Clinical Pharmacology and Medicine for Dentistry (1 credits)

Builds on the foundational knowledge provided in an earlier general pharmacology course. Provides clinical correlations to topics and addresses areas that are specific to the practitioner, such as: prescribing medications where appropriate, the management of drug interactions and a full review of anesthesia specific to the dental patient.

Prerequisite: Enrolled in the School of Dentistry.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DESS%207323>)

DESS 7324 Surgical Sciences Clinical Practicum 2 (1 credits)

Second course in a sequence that provides the dental student experiences in the clinical treatment of patients with needs in the areas of periodontal therapy, endodontics, oral surgery and oral pathology. Students rotate through controlled experiences in these various areas and provide comprehensive care to patients with certain needs, particularly in the area of periodontics. Students are expected to have greater skill and to be less dependent at this point. S/U grade assessment.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DESS%207324>)

DESS 7334 Surgical Sciences Clinical Practicum 3 (1 credits)

Third course in a sequence that provides the dental student experiences in the clinical treatment of patients with needs in the areas of periodontal therapy, endodontics, oral surgery and/or pathology. Students rotate through controlled experiences in these various areas and provide comprehensive care to patients with certain needs, particularly in the area of periodontics. Students are expected to have greater skill and to be more independent at this point.

Prerequisite: Enrolled in the School of Dentistry.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DESS%207334>)

DESS 7414 Senior Clinical Practicum in Surgical Sciences 1 (1 credits)

The first of two advanced-level practicums that provide experiences in periodontics, endodontics, oral surgery and oral pathology. Successful progress in each discipline is required to be judged as making satisfactory progress in this practicum experience. S/U grade assessment.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DESS%207414>)

DESS 7418 Senior Honors Clinical Practicum in Oral Surgery (1 credits)

An in-depth practicum for students who have applied for or have been accepted into advanced OMS programs. Students are exposed in a more specific and in depth manner to oral and maxillofacial surgical residency programs. Students are assigned additional complex dento-alveolar procedures as they arise and are expected to present case histories, treatment plans, outcomes and assessments of the procedures provided in an outcome based discussion. Enrollment in this course requires special permission of the course director, academic dean, the student's group leader and the clinical director.

Prerequisite: Enrollment in the School of Dentistry.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DESS%207418>)

DESS 7419 Senior Honors Clinical Practicum in Periodontics (1 credits)

A continuation of DESS 7319 with more in-depth cases for the student to work on. S/U grade assessment.

Prerequisite: Cons. of the course dir. and the academic dean.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DESS%207419>)

DESS 7424 Senior Clinical Practicum in Surgical Sciences 2 (1-4 credits)

The second of two advanced-level practicums that provide experiences in periodontics, endodontics, oral surgery and oral pathology. Successful progress in each discipline is required to be judged as making satisfactory progress in this practicum experience. S/U grade assessment.

Level of Study: Dental

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=DESS%207424>)

Graduate Dental Courses

Dental Biomaterials

BIMA 6101 Mechanical Behavior of Dental Biomaterials (3 credits)

Basic principles of mechanics, elastic deformation, plastic deformation and fracture. Comparison of mechanical behavior of metallic, ceramic and polymer dental biomaterial systems. Discussion of tension, compression, shear, bending, torsion, hardness and impact tests for dental biomaterials. Includes laboratory exercises.

Level of Study: Graduate

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=BIMA%206101>)

BIMA 6102 Polymeric Dental Biomaterials (2 credits)

Compositions and properties of polymers utilized in prosthetic, restorative, orthodontic, preventive, and implant dentistry. The materials include poly (methyl methacrylate), BIS-GMA, polyurethane and polyvinyl products in the form of resins, composites and microfills polymerized by heat, chemicals and ultraviolet or visible lights. Includes laboratory exercises.

Level of Study: Graduate

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=BIMA%206102>)

BIMA 6151 Dental Cements (2 credits)

Compositions, setting reactions and properties of zinc phosphate, zinc oxide-eugenol, polycarboxylate, glass ionomer and resin dental cements. Effects of clinical variables and the ADA specifications related to these materials will be included. May include laboratory exercises.

Level of Study: Graduate

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=BIMA%206151>)

BIMA 6152 Dental Impression Materials (2 credits)

Classification, composition and properties of the various impression materials used in restorative and prosthetic dentistry. The material systems to be discussed include impression compound, hydrocolloids, polysulfides, polyethers and silicones. May include laboratory exercises.

Level of Study: Graduate

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=BIMA%206152>)

BIMA 6153 Dental Casting Procedures (3 credits)

History and development of dental casting procedures. Basic principles and techniques for centrifugal, vacuum and pressure casting. Solidification of metals and classification of porosities. Detailed considerations for casting of noble and base metal dental alloys. Includes laboratory exercises.

Level of Study: Graduate

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=BIMA%206153>)

BIMA 6201 Dental Metallurgy 1 (3 credits)

Theory and application of metallurgical principles to the study of dental alloy systems. Dental amalgams, noble and base metal casting alloys, and wrought alloys. Area and extent of study determined by individual needs of student. Includes laboratory exercises.

Level of Study: Graduate

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=BIMA%206201>)

BIMA 6202 Dental Metallurgy 2 (3 credits)

See BIMA 6201.

Level of Study: Graduate

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=BIMA%206202>)

BIMA 6251 Dental Ceramics (3 credits)

Basic principles of ceramic structures and properties. History, properties and technology of dental porcelains, gypsum products and dental casting investments. Includes laboratory exercises.

Level of Study: Graduate

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=BIMA%206251>)

BIMA 6501 Advanced Experimental Techniques for Dental Biomaterials Research 1 (1 credits)

Biomaterials Research 1 laboratory courses. Topics may vary, but will generally include scanning electron microscopy, mechanical testing procedures, and X-ray diffraction.

Prerequisite: Admission to graduate program in dental biomaterials.

Level of Study: Graduate

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=BIMA%206501>)

BIMA 6502 Advanced Experimental Techniques for Dental Biomaterials Research 2 (1 credits)

Biomaterials Research 2 laboratory courses. Topics may vary, but will generally include scanning electron microscopy, mechanical testing procedures, and X-ray diffraction.

Prerequisite: Admission to graduate program in dental biomaterials.

Level of Study: Graduate

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=BIMA%206502>)

BIMA 6570 Biomaterials Science and Engineering (3 credits)

Basic and advanced principles of dental biomaterials science. Fundamental scientific principles, and physical, mechanical, chemical and biological properties of restorative and preventive dental biomaterials. Relationships between properties and clinical performance of these materials and methods used for testing them.

Level of Study: Graduate

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=BIMA%206570>)

BIMA 6601 Dental Biomaterials Literature Review 1 (1-3 credits)

Discussion of current and classic literature in dental biomaterials. Topics and journals discussed are rotated to provide an overview and range of different materials, properties, and applications. Emphasizes class discussion and presentations.

Prerequisite: Grad. stndg. in BIMA graduate program or cons. of dept.

Level of Study: Graduate

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=BIMA%206601>)

BIMA 6602 Dental Biomaterials Literature Review 2 (1-3 credits)

See BIMA 6601.

Prerequisite: Grad. stndg. in BIMA graduate program or cons. of dept.

Level of Study: Graduate

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=BIMA%206602>)

BIMA 6603 Dental Biomaterials Literature Review 3 (1-3 credits)

See BIMA 6601.

Prerequisite: Grad. stndg. in BIMA graduate program or cons. of dept.

Level of Study: Graduate

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=BIMA%206603>)

BIMA 6604 Dental Biomaterials Literature Review 4 (1-3 credits)

See BIMA 6601.

Prerequisite: Grad. stndg. in BIMA graduate program or cons. of dept.

Level of Study: Graduate

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=BIMA%206604>)

BIMA 6931 Topics in Dental Biomaterials (1-3 credits)

Practical laboratory exercises designed to provide the student with specific skill sets and analytic approaches used in modern materials research.

Level of Study: Graduate

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=BIMA%206931>)

BIMA 6970 Biomaterials Seminar (1 credits)

Current topics and concepts in materials science.

Level of Study: Graduate

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=BIMA%206970>)

BIMA 6980 Teaching Experience in Dental Biomaterials (1-2 credits)

Teaching and preclinical laboratory assignments in dental biomaterials for undergraduate dental students.

Level of Study: Graduate

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=BIMA%206980>)

BIMA 6995 Independent Study in Dental Biomaterials (1-3 credits)

Faculty-supervised, independent study/research of a specific area or topic in Dental Biomaterials.

Prerequisite: Cons. of instr. Consent required.

Level of Study: Graduate

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=BIMA%206995>)

BIMA 6999 Master's Thesis (1-6 credits)

Credit hours assigned to thesis preparation and scholarship. S/U grade assessment.

Level of Study: Graduate

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=BIMA%206999>)

BIMA 9970 Graduate Standing Continuation: Less than Half-Time (0 credits)

Fee. S/U grade assessment. Designated as less than half-time status only, cannot be used in conjunction with other courses, and does not qualify students for financial aid or loan deferment.

Prerequisite: Consent required.

Level of Study: Graduate

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=BIMA%209970>)

BIMA 9994 Master's Thesis Continuation: Less than Half-Time (0 credits)

Fee. S/U grade assessment. Allows a student to be considered the equivalent of less than half-time status. Requires that the student is working less than 12 hours per week on their master's thesis. All six thesis credits required for the degree should be completed before registering for non-credit Master's Thesis Continuation.

Prerequisite: Consent required.

Level of Study: Graduate

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=BIMA%209994>)

BIMA 9995 Master's Thesis Continuation: Half-Time (0 credits)

Fee. S/U grade assessment. Allows a student to be considered the equivalent of half-time status. Requires that the student is working more than 12 to less than 20 hours per week on their master's thesis. All six thesis credits required for the degree should be completed before registering for non-credit Master's Thesis Continuation.

Prerequisite: Consent required.

Level of Study: Graduate

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=BIMA%209995>)

BIMA 9996 Master's Thesis Continuation: Full-Time (0 credits)

Fee. S/U grade assessment. Allows a student to be considered the equivalent of full-time status. Requires that the student is working 20 hours or more per week on their master's thesis. All six thesis credits required for the degree should be completed before registering for non-credit Master's Thesis Continuation.

Prerequisite: Consent required.

Level of Study: Graduate

Schedule of Classes (<https://bulletin.marquette.edu/class-search/?details&code=BIMA%209996>)