ADVANCED EDUCATION PROGRAMS

Chair, Advanced Education Committee:
Mary P. Walker, DDS, PhD, Associate Dean for Research and Graduate Programs

The School of Dentistry offers curricula leading to advanced education dental certificates in each of four clinical dental specialty areas (Endodontics, Orthodontics and Dentofacial Orthopedics, and Periodontics) and a certificate in Advanced Education in General Dentistry (AEGD). In addition, the School of Dentistry offers curricula leading to Master of Science graduate degrees in either Oral and Craniofacial Sciences or Dental Hygiene Education. The School participates in the Interdisciplinary PhD program through the Department of Oral and Craniofacial Sciences (OCS). The OCS department research focus areas are: Biomaterials/Bioengineering of Biological Tissues & Replacements, Mineralized Tissue Biology and Translational and Clinical Research.

Application Information & Deadlines

Application Information

All applicants to the advanced education certificate programs (Advanced Education in General Dentistry, Endodontics, Orthodontics and Dentofacial Orthopedics, and Periodontics) require the Postdoctoral Application Support Services (PASS) application available at www.adea.org. All sections of the PASS application should be completed fully. Official dental school transcripts should be submitted directly to PASS. A minimum dental school 3.0 GPA is required for applicants to all Advanced Education programs. National dental board scores should be reported in the PASS “institutional evaluation” form. Since the NBDE scores are reported on the “Institutional Evaluation,” official scores do not need to be sent to UMKC.

The GRE is required for all applicants applying to the Orthodontics program and is highly recommended for those applying to the Periodontics program. (For any Periodontics or Endodontics selected applicants interested in applying later for concurrent enrollment in the OCS MS program, the GRE will be required.) Applicants to the Endodontics program are required to take the Advanced Dental Admission Test (ADAT). The ADAT is preferred but not required for Advanced Education in General Dentistry, and for the Periodontics program, ADAT is not required, but optional. Across programs, scores should be self-reported on the PASS application. Official GRE scores should be submitted directly to UMKC (GRE code is 6872). Be aware that approximately three weeks are required by the service to process PASS applications and deliver them to the designated programs. The length of this processing period should be considered by the candidate in order to meet relevant application deadlines. An applicant copy of the PASS application should not be sent to UMKC.

Applicants applying to any of the advanced education programs must be a U.S. citizen or permanent resident. Applicants must also submit evidence of graduation from a school of dentistry accredited by the American Dental Association or the Canadian Dental Association.

Residents accepted into the Endodontics, Orthodontics, and Periodontics programs must successfully complete a U.S. regional or equivalent Canadian clinical licensure exam prior to or no later than the end of the first year of residency.

All applicants are required to submit the Institutional Evaluation AND Professional Evaluation Form (PEF) as part of their completed PASS application. A minimum of three professional evaluators (dental faculty) are required to submit evaluations for the PEF. Additional letters of recommendation should not be sent to UMKC.

Additional information, as identified below, must be submitted directly to the UMKC School of Dentistry, Office of Student Programs, 650 East 25th Street, Kansas City, MO 64108.

• Official transcripts from degree granting undergraduate and graduate institution(s). Additionally, if a large number of pre-dental prerequisites were taken outside the degree granting institution, those transcripts should be submitted too. (Applicants do not need to submit dental school transcripts since they are provided to us through PASS).
• A copy of permanent resident card (if applicable).
• A copy of dental license (if applicable).
• A UMKC application and application fee are required of all applicants. Upon receipt of your PASS materials you will be emailed a link to the general UMKC application

Additional resumes, CVs, personal photos, or information not received as part of the PASS application will be destroyed upon receipt.

The advanced education certificate programs in Periodontics or Orthodontics & Dentofacial Orthopedics participate in the National Matching Services (MATCH) process. Candidates to these programs must also register for this service within the ADEA PASS applicant portal (www.adea.org). There are two phases of the MATCH process, each with its deadline date for receipt of Rank Order List forms from applicants. The Phase I deadline (typically toward the end of November each year) is for applicants to the Periodontics or Orthodontics & Dentofacial Orthopedics program.
General admissions questions concerning advanced education programs should be directed to the Office of Student Programs at (816) 235-6322. However, specific questions regarding any advanced education program should be directed to the pertinent program director. Advanced education program directors along with their telephone numbers are identified in a subsequent section.

Application Deadline
Application deadline dates for advanced dental certificate programs are as follows:

<table>
<thead>
<tr>
<th>Program</th>
<th>Deadline Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Education in General Dentistry</td>
<td>October 1</td>
</tr>
<tr>
<td>Endodontics</td>
<td>August 1</td>
</tr>
<tr>
<td>Orthodontics</td>
<td>August 15</td>
</tr>
<tr>
<td>Periodontics</td>
<td>August 1</td>
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</tbody>
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The deadline date for receipt of applications at the school is one year before the anticipated enrollment in program.

Financial Assistance
Please be advised that the information provided here is of a general nature only.

Newly admitted advanced dental education students (such as AEGD, Endodontics, Orthodontics, and Periodontics) will receive information regarding financial aid. Students who are interested in obtaining financial aid are advised to contact the Hospital Hill Financial Aid Office for more details and guidance.

Hospital Hill Financial Aid Office - Location Address: 1418 Health Sciences Building on UMKC Hospital Hill Campus.
Office Hours: 8:00am-5:00pm Monday-Thursday
(816) 235-6783
FinAidHospitalHill@umkc.edu

There are three types of financial aid for advanced education students:

1. Federal Stafford Unsubsidized Loans
2. Federal Graduate PLUS Loans
3. Private Student Loans

Separate financial aid applications are required for the summer term and for the fall/spring terms. Students apply for loans via the FAFSA website www.fafsa.gov. It advised that students consult the Hospital Hill Financial Aid Office for the priority application deadline and guidance in the application process.

Enrollment Fees
Typical credit hour enrollment for advanced education students is 5 credits in the Summer semester and 6 credit hours in the Fall and Spring semesters. This enrollment model applies for AEGD, Endodontics, Orthodontics and Dentofacial Orthopedics, and Periodontics certificate programs.

When taking 6 credit hours or fewer each semester, Missouri non-residents are not required to pay the out-of-state tuition rate. To estimate costs for attendance, please visit the cashier’s website: http://www.umkc.edu/finadmin/cashiers/dentistry-tuition-fee-rates.asp.

Academic Standards/Procedures: Advanced Education Students
The following academic standards and the procedures to be used in dealing with cases of academic difficulty apply to students in all advanced education/graduate programs of the School of Dentistry.

Standards of Scholarship
1. Advanced education students, regardless of classification, must maintain a 3.0 (B) GPA for all coursework taken at UMKC.
2. Advanced education students must maintain a 3.0 (B) GPA in their dental certificate specialty coursework.
3. Any materials pertaining to patient records, program records, and any materials produced in relation to an Advanced Education or Graduate Program are the property of the University. Such materials include photos, study models, case presentations, research proposal, research data, thesis, research-related presentations and must be saved and preserved at designated storage sites. While students can have copies of presentations, data, and written documents for their records, students should not remove or delete these files and associated information from school computers and server spaces. Compliance with this policy is mandatory for continued program participation and graduation and will be monitored.
Probation Policy
Whenever the overall GPA for UMKC courses taken for credit by an advanced education student of any classification falls below 3.0 (B), the student’s status for the next term becomes “On probation - See principal graduate advisor.” The principal graduate advisor will review the student’s progress and provide counsel, and the following conditions apply:

1. Any advanced education or graduate student on probation who is not restored to good academic standing by the end of two successive semesters will be declared ineligible to re-enroll.
2. While on probation, an advanced education or graduate student must achieve a 3.0 term GPA to enroll for the ensuing term.
3. An advanced education or graduate student on probation will not be restored to good standing until a cumulative graduate-credit GPA of at least 3.0 is achieved.

Dismissal
Following Academic Probation
1. An advanced education or graduate student who is on probation and fails to attain an overall GPA of at least 3.0 by the end of two successive semesters will be dismissed from the program.
2. An advanced education or graduate student who is on probation and fails to attain a 3.0 term GPA for the succeeding term will be dismissed.
3. An advanced education or graduate student who receives more than four credit hours of 2.0 (C) grades or a D or F grade in any course will be dismissed.

Due to Unsatisfactory Progress or Performance
When an advanced education program, irrespective of a student’s grade-point average, considers an advanced education student’s performance to be unsatisfactory, the Program Director may recommend to Associate Dean for Research & Graduate Programs that the student be declared ineligible for further study. The Associate Dean reviews the recommendation and discusses with the Advanced Education Committee prior to notifying the student of the decision.

Appeal
Any student who is dismissed from the program has the right to appeal that decision. Appeals shall be made in writing to the Associate Dean for Research and Graduate Programs within one week from the time the student received a notice of dismissal. The Associate Dean for Research and Graduate Programs in conjunction with the Chair of the Advanced Education Committee shall select a hearing panel of five members of the Advanced Education Committee to hear the student’s appeal. At least one member of the hearing panel will be a student. The program director of the program in which the appealing student is enrolled shall be ineligible to sit on the panel. The Hearing Panel will be chaired by the Associate Dean for Research and Graduate Programs. A meeting of the Hearing Panel will be scheduled within two weeks of the receipt of the student’s appeal. During the time the appeal process is being conducted the student shall be allowed to continue in the program. The Hearing Panel shall be provided with written statements from the student and the Program Director as well as all relevant records and documents. Both the Program Director and his or her designee and the appealing student must attend the hearing to provide additional information and answer questions from the Hearing Panel. Other individuals who have information relevant to the situation may be invited to present their information and answer questions for the committee. The student may have an advisor present to advise the student, but this advisor shall be limited to providing advice to the student.

After reviewing the information and conducting the hearing, the Hearing Panel shall make its recommendation regarding disposition of the case to the Dean. All five appointed members of the hearing panel shall have a vote. In case of a tie, the Associate Dean for Research and Graduate Programs shall cast the deciding vote. The Dean of the School of Dentistry will make the final decision and communicate that decision to the student and the Program Director.

Students in Cooperative Programs
Students enrolled in programs operated jointly by the School of Dentistry, School of Medicine, and other institutions, such as Children’s Mercy Hospital and Truman Medical Center, must remain in good standing with both organizations cooperating in the program. A student who is dismissed by either of the cooperating institutions is ineligible to continue in the program.

Graduate
Advanced Education Certificate Programs
- Dental Advanced Education Certificate Programs:
  - Advanced Education in General Dentistry
  - Endodontics
  - Orthodontics and Dentofacial Orthopedics
  - Periodontics

Biological Sciences Courses
BIO-SCI 5700 Biomaterials Teaching Credits: 2
Through this course, students will acquire teaching experience in graduate and undergraduate biomaterials.
BIO-SCI 5706 Growth and Development I Credit: 1
A course designed to teach the general principles of normal and abnormal physical, psychological and social growth and development of children and adolescents. The growth and development of the craniofacial structures is emphasized. The diagnosis of malocclusions is stressed. Consideration is given to possible approaches to their treatment.

BIO-SCI 5707 Growth and Development II Credits: 1-2
A comprehensive study of the genetical aspects of growth and development with special analysis of the molecular control of these processes by both intrinsic and epigenetic factors.

Prerequisites: BIO-SCI 5706.

BIO-SCI 5710 Genetics and Biochemistry of Cranial Facial Biology Credits: 2
Biochemistry of oral structures and the effect of oral diseases on these structures. This course may not be used to satisfy Cell Biology and Biophysics or Molecular Biology and Biochemistry discipline-specific requirements for the Interdisciplinary Ph.D. programs.

BIO-SCI 5739 Biomaterials for the Dental Specialist Credit: 1
Discussion of basic biomaterials principles and terminology including explanation of physical, mechanical and surface chemical properties, metallurgy, polymer chemistry, ceramics and composites. Clinical examples of how these principles apply to Prosthodontics, Endodontics and Orthodontics will be presented. Students cannot take both this course and BIO-SCI 5742 for credit.

BIO-SCI 5740 Oral Pathology I Credits: 2
A study of the clinical and histopathologic features of oral diseases, including inflammatory, degenerative, metabolic, and neoplastic diseases and developmental disturbances.

BIO-SCI 5742 Biomaterials for the Restorative and General Dentist Credits: 2
A thorough discussion of basic biomaterials principles and how they apply to the practice of general and restorative dentistry. Students cannot take both this course and BIO-SCI 5739 for credit.

BIO-SCI 5743 Advanced Seminar in Dental Biomaterials Credits: 1-2
The use and behavior of dental biomaterials in Pediatric Dentistry, Prosthodontics, Orthodontics, and Restorative Dentistry will be discussed in depth. Current basic and clinical literature related to these areas will be discussed and research information to improve dental practice will be presented.

Prerequisite: BIO-SCI 5739 (or BIO-SCI 5742).

BIO-SCI 5747 Research Instrumentation Used in Dental Biomaterials Credits: 2-4
A discussion and laboratory use of instrumentation employed in dental biomaterials research. Practical hands-on experience will include calibration and use of specific research equipment including the Instron, metallurgical mounting and polishing equipment, measuring microscope, metallograph, and contact angle goniometer.

BIO-SCI 5750 Special Problems in Dental Biomaterials Credits: 2-4
The student will select or be assigned a special research problem including appropriate literature reviews of a special topic in dental biomaterials. Emphasis will be placed on the correlation between basic and clinical research. The design and conduct of clinical research will be discussed.

BIO-SCI 5751 Elements of the Scientific Method Credits: 1-2
Through individualized instruction with thesis committee chair, student will conduct a literature review in preparation for developing a research question leading to the thesis research proposal. Students will select and rotate through a minimum of four laboratories in the Department of Oral Biology conducting a short research project in each. At the end of the semester, a report is required reviewing the research project and the instrumentation in each laboratory. Students are also required to attend the weekly Department of Oral Biology Seminar Series and the monthly Professional Development Seminar Series. Research presentations cover a variety of biological, engineering and psychological disciplines relevant to oral science education and the oral health care profession. Presentations will be by faculty, students, and invited guest lecturers.

BIO-SCI 5752 Research Methods in Oral and Craniofacial Sciences Credits: 1-5
Student will write the thesis research proposal in consultation with committee chair and members plus obtain appropriate IRB and/or IACUC approvals. For the MS degree qualifying exam, the student will write the research proposal, present the research proposal at a committee meeting, and answer related questions. Following the successful completion of the qualifying exam, the research proposal is the basis of the MS thesis project. As the student identifies a research focus for the dissertation project, they will begin reviewing the literature.

BIO-SCI 5759 Special Problems in Pharmacology Credits: 2
Pharmacologic and therapeutic problems of special interest in the practice of dentistry.

BIO-SCI 5760 Physiology of Oral Mineralized Tissues Credits: 2
A study of the physiology of the oral hard tissues with emphasis on the mechanisms of the growth, remodeling, and healing of maxillomandibular bones and on the mechanism of dentinogenesis. This course may not be used to satisfy Cell Biology and Biophysics or Molecular Biology and Biochemistry discipline-specific requirements for the Interdisciplinary Ph.D. program.

BIO-SCI 5780 Teaching Of Dentistry Credits: 1-2
A consideration of the problems of teaching in dental schools. Each department of the School of Dentistry will report on its teaching methods. The student will observe lectures and laboratory teaching in each department.

BIO-SCI 5790 Directed Research In Oral and Craniofacial Sciences Credits: 1-6
Student utilizes beginning research skills to design, conduct and report an individual research project under the direction of the faculty.
BIO-SCI 5799 Research And Thesis Credits: 1-9
The satisfactory completion of an original research project. Results of the research and critical review of the pertinent literature are incorporated into a thesis. Credit is awarded after the student's thesis is successfully defended and accepted by the School of Graduate Studies.

BIO-SCI 5801 Readings in Immunology Credits: 1-3
A detailed study of special topics in immunology. Specific topics to be arranged with the instructor. This course may be repeated by doctoral students for a maximum of 3 credit hours.
Prerequisites: BIOLOGY 435.

BIO-SCI 5802 Immunopathology Credits: 2
A detailed study of selected topics in immunopathology with emphasis on physicochemical barriers such as cutaneous and mucosal immune systems.
Prerequisites: BIOLOGY 435.

BIO-SCI 5805 Molecular Biology of Oral Microflora Credits: 2-3
Lecture and discussion. The course will provide an overview of the ecology of oral microbial flora and its role in oral health and disease. Students will examine the taxonomy and ecology of normal and pathogenic oral microbial flora, acquisition of the oral microbiota and the formation of dental plaque as a biofilm. The course will also explore other aspects of microbial biology, such as; bacterial virulence factors and pathogenesis; host defense mechanisms; systemic complications of periodontal disease; antibiotics and antibiotic resistance. The second part of the course will review the effect of recent advances in molecular biology and protein biochemistry on oral diagnosis and treatment.

BIO-SCI 5830 Structural Characterization of Dental Biomaterials Credits: 3
A detailed study of the techniques commonly used to determine the composition and structure of dental biomaterials. Surface and near-surface characterization techniques will be emphasized. The student will be expected to complete laboratory projects on the scanning and transmission electron microscopies available in the School of Dentistry.

BIO-SCI 5899 Required Graduate Enrollment Credit: 1

Endodontics Courses
ENDO 5701 Endodontology 1 Credits: 1-6
This course is designed to introduce the first year endodontic postgraduate student to the field of advanced endodontics. It will provide introductory information and guidance which will serve as a basis for follow on course work in ENDO 5702 through ENDO 5706.

ENDO 5702 Endodontology 2 Credits: 1-6
This course is designed to continue the transition of the general dentist into a first year endodontic postgraduate student in the field of advanced endodontics. It will build upon material taught in previous courses of instruction as well as introduce completely new material to the resident.

ENDO 5703 Endodontology 3 Credits: 1-6
This course is designed to complete the transition of the general dentist into a first year endodontic postgraduate student in the field of advanced endodontics. It will build upon material taught in previous courses of instruction as well as introduce completely new material to the resident.
Prerequisites: ENDO 5701, ENDO 5702.

ENDO 5704 Endodontology 4 Credits: 1-6
This course is designed to transition the first year into a second year postgraduate student in the field of advanced endodontics. It will build upon material taught in previous courses of instruction as well as introduce completely new material to the resident.
Prerequisites: ENDO 5701, ENDO 5702, ENDO 5703.

ENDO 5705 Endodontology 5 Credits: 1-6
This course is designed to continue the transition of the general dentist into a more proficient second year postgraduate student in the field of advanced endodontics. It will build upon material taught in previous courses of instruction as well as introduce completely new material to the resident.
Prerequisites: ENDO 5701, ENDO 5702, ENDO 5703, ENDO 5704.

ENDO 5706 Endodontology 6 Credits: 1-6
This course is designed to complete the transition of the general dentist into a fully independently practicing endodontist. It will build upon material taught in previous courses of instruction as well as introduce completely new material to the resident.
Prerequisites: ENDO 5701, ENDO 5702, ENDO 5703, ENDO 5704, ENDO 5705.

ENDO 5721 Endodontology 7 Credits: 1-6
This course is designed to complete the transition of the general dentist into a fully independently practicing endodontist. It will build upon material taught in previous courses of instruction as well as introduce completely new material to the resident.
Prerequisites: ENDO 5706.
ENDO 5722 Endontology 8 Credits: 1-6  
This course is designed to complete the transition of the general dentist into a fully independently practicing endodontist. It will build upon material taught in previous courses of instruction as well as introduce completely new material to the resident.  
Prerequisites: ENDO 5721.

ENDO 5723 Endodontontology 9 Credits: 1-6  
This course is designed to complete the transition of the general dentist into a fully independently practicing endodontist. It will build upon material taught in previous courses of instruction as well as introduce completely new material to the resident.  
Prerequisites: ENDO 5722.

General Practice Courses  
G-PRAC 5710 Principles Of Pedodontics For General Practice Credits: 2  
A lecture course presenting the basic concepts of diagnosis and treatment of the child in a general dental practice.

G-PRAC 5716 Special Problems In General Practice Dentistry I Credits: 1-6  
Courses designed to provide the student with opportunities to work with consultants and specialists on the faculty of the dental school on cases which require the attention of a specialist.

G-PRAC 5717 Special Problems In General Practice Dentistry II Credits: 1-6  
Prerequisites: G-PRAC 5716.

G-PRAC 5718 Special Problems In General Practice Dentistry III Credits: 1-6  
Prerequisites: G-PRAC 5717.

G-PRAC 5721 General Practice Clinic I Credits: 1-10
G-PRAC 5722 General Practice Clinic II Credits: 1-10
G-PRAC 5723 General Practice Clinic III Credits: 1-10

G-PRAC 5728 Dental Implantology Credit: 1  
The course is designed to include the following topics: history of implantology, implant materials and designs, fibroosseous and osseo-integration theories, bioinert and bioactive retention, indication and case selection, technique methodology, anatomical considerations and reasons for failure, prosthetic considerations using several systems and necessary radiographic aids, surgical stent and laboratory with simulated insertion of an implant.

G-PRAC 5740 Interdisciplinary Seminar I Credit: 1  
The integration of common areas of concern in the clinical disciplines of Oral and Maxillofacial Surgery, Orthodontics, Pediatric Dentistry, Periodontics and Prosthodontics as they relate to patient cases. Cases are presented that present problems in at least two clinical disciplines in the areas of Diagnosis, Treatment Programming or Therapy. The current literature is reviewed and the case discussed.

G-PRAC 5741 Interdisciplinary Seminar II Credits: 1-6  
Prerequisites: G-PRAC 5740.

G-PRAC 5742 Interdisciplinary Seminar III Credit: 1  
Prerequisites: G-PRAC 5741.

G-PRAC 5743 Interdisciplinary Seminar IV Credit: 1  
Prerequisites: G-PRAC 5742.

G-PRAC 5899 Required Graduate Enrollment Credit: 1

Oral Biology Courses  
OR-BIO 5699 Dissertation Research Credits: 1-12  
Ph.D. dissertation research.

OR-BIO 5702 Biomechanics of Mineralized Tissue Credits: 3  
The physical principles underlying mineralized tissue biomechanics will be presented at multiple hierarchies. Details of bone, tooth and joint (with a special emphasis on the TMJ) anatomy and function will be outlined as related to mechanical loading.

OR-BIO 5899 Required Graduate Enrollment Credit: 1

Oral Surgery Courses  
OR-SURG 5700 Principles Of Oral Surgery I Credit: 1  
A conference on diagnosis, treatment planning, surgical technique.

OR-SURG 5701 Principles Of Oral Surgery II Credit: 1  
Prerequisites: OR-SURG 5700.
OR-SURG 5702 Principles of Oral Surgery III Credit: 1
Prerequisites: OR-SURG 5701.

OR-SURG 5703 Principles of Oral Surgery IV Credit: 1
Prerequisites: OR-SURG 5702.

OR-SURG 5704 Clinical Oral Surgery I Credit: 1
The clinical application of the principles of diagnosis, treatment planning, and surgical techniques.

OR-SURG 5705 Clinical Oral Surgery II Credit: 1
Prerequisites: OR-SURG 5704.

OR-SURG 5706 Clinical Oral Surgery III Credit: 1
Prerequisites: OR-SURG 5705.

OR-SURG 5707 Physical Diagnosis For The Oral & Maxillofacial Surgeon I Credit: 1
Basic physical diagnosis and review of systems as it relates to the practice of Oral and Maxillofacial Surgery.

OR-SURG 5708 Physical Diagnosis For The Oral & Maxillofacial Surgeon II Credit: 1
Advanced physical diagnosis and review of systems as it relates to the practice of Oral and Maxillofacial Surgery.

OR-SURG 5709 Physical Diagnosis For The Oral & Maxillofacial Surgeon III Credit: 1
Oral and Maxillofacial Surgery and the medically compromised patient.

OR-SURG 5710 Physical Diagnosis for the Oral & Maxillofacial Surgeon IV Credit: 1
Prerequisites: OR-SURG 5709.

OR-SURG 5711 Physical Diagnosis for the Oral & Maxillofacial Surgeon V Credit: 1
Prerequisites: OR-SURG 5710.

OR-SURG 5712 Physical Diagnosis for the Oral & Maxillofacial Surgeon VI Credit: 1
Prerequisites: OR-SURG 5711.

OR-SURG 5713 Advanced Physical Diagnosis For Oral & Maxillofacial Surgeon I Credit: 1
Advanced physical diagnosis and review of systems as it relates to the practice of Oral and Maxillofacial Surgery.

OR-SURG 5714 Advanced Physical Diagnosis for Oral & Maxillofacial Surgeon II Credit: 1
Prerequisites: OR-SURG 5713.

OR-SURG 5716 Special Problems In Oral And Maxillofacial Surgery I Credit: 1

OR-SURG 5717 Special Problems In Oral And Maxillofacial Surgery II Credit: 1

OR-SURG 5719 Special Problems - Oral & Maxillofacial Surgery IV Credit: 1
Special Problems - Oral Maxillofacial Surgery IV

OR-SURG 5720 Oral Surgery Hospital Residency I Credit: 1
Two calendar years of hospital residency in an affiliated teaching hospital. The residency provides additional training in major oral surgery and didactic education in oral surgery and science areas, including anesthesiology, diagnosis, pathology, and radiology.

OR-SURG 5721 Oral Surgery Hospital Residency II Credit: 1
Prerequisites: OR-SURG 5720.

OR-SURG 5722 Oral Surgery Hospital Residency III Credit: 1
Prerequisites: OR-SURG 5721.

OR-SURG 5723 Oral Surgery Hospital Residency IV Credit: 1
Prerequisites: OR-SURG 5722.

OR-SURG 5724 Oral Surgery Hospital Residency V Credit: 1
Prerequisites: OR-SURG 5723.

OR-SURG 5725 Oral Surgery Hospital Residency VI Credit: 1
Prerequisites: OR-SURG 5724.

OR-SURG 5727 Major Oral Surgery I Credit: 1
A comprehensive study of major oral surgery. Lectures are correlated with surgical exercises which are performed in the anatomy laboratory.

OR-SURG 5728 Major Oral Surgery II Credit: 1
Prerequisites: OR-SURG 5727.
OR-SURG 5729 General Anesthesiology And Pharmacology I Credit: 1
The pharmacological principles of the various anesthetic agents and allied medications.

Prerequisites: OR-SURG 5729.

OR-SURG 5730 General Anesthesiology and Pharmacology II Credit: 1

Prerequisites: OR-SURG 5729.

OR-SURG 5731 Clinical General Anesthesiology And Pharmacology I Credit: 1
The clinical application of various anesthetic and pharmacological agents.

Prerequisites: OR-SURG 5731.

OR-SURG 5732 Clinical General Anesthesiology and Pharmacology II Credit: 1

Prerequisites: OR-SURG 5731.

OR-SURG 5733 Clinical General Anesthesiology and Pharmacology III Credit: 1

Prerequisites: OR-SURG 5732.

OR-SURG 5734 Clinical/Major General Anesthesiology And Pharmacology I Credit: 1
The clinical/major surgical application of various anesthetic and pharmacological agents.

Prerequisites: OR-SURG 5734.

OR-SURG 5735 Clinical/Major General Anesthesiology and Pharmacology II Credit: 1

Prerequisites: OR-SURG 5734.

OR-SURG 5736 Clinical/Major General Anesthesiology and Pharmacology III Credit: 1

Prerequisites: OR-SURG 5735.

OR-SURG 5737 Pediatric General Anesthesiology And Pharmacology I Credit: 1
The pharmacological principles of various anesthetic agents and allied medications in the pediatric patient.

Prerequisites: OR-SURG 5737.

OR-SURG 5738 Oral & Maxillofacial Surgery Independent Study Credits: 1-6
An advanced study and/or elective course in Oral and Maxillofacial Surgery related field(s) which enhances the compulsory curriculum.

Prerequisites: OR-SURG 5738.

Orthodontics Courses

ORTHOD 5704 Orthodontics And Dentofacial Orthopedics I Credits: 1-6
Orthodontic theory, treatment techniques and treatment of patients; includes current and historical concepts.

Prerequisites: ORTHOD 5704.

ORTHOD 5705 Orthodontic and Dentofacial Orthopedics II Credits: 1-6

Prerequisites: ORTHOD 5705.

ORTHOD 5706 Orthodontics and Dentofacial Orthopedics III Credits: 1-6

Prerequisites: ORTHOD 5706.

ORTHOD 5707 Orthodontics and Dentofacial Orthopedics Iv Credits: 1-6

Prerequisites: ORTHOD 5707.

ORTHOD 5708 Orthodontic and Dentofacial Orthopedics V Credits: 1-6

Prerequisites: ORTHOD 5708.

ORTHOD 5709 Orthodontic and Dentofacial Orthopedics Vi Credits: 1-6

Prerequisites: ORTHOD 5709.

ORTHOD 5710 Orthodontic and Dentofacial Orthopedics Vii Credits: 1-6

Prerequisites: ORTHOD 5710.

ORTHOD 5711 Orthodontics and Dentofacial Orthopedics Viii Credits: 1-6

Prerequisites: ORTHOD 5711.

ORTHOD 5726 Cephalometric I Credits: 2
An introductory lecture and laboratory course in the principles of radiographic cephalometry and integrated cephalometric analysis.
ORTHOD 5727 Cephalometric II Credits: 2
An advanced lecture and laboratory course with emphasis on the use of a computer in cephalometric analysis.

**Periodontics Courses**

PERIO 5700 Periodontic Residency I Credits: 1-2
Didactics, Seminars in Basic Periodontics with Clinical Practice.

PERIO 5701 Periodontal Residency I Credits: 1-6
Clinical Periodontics with Related Didactics and Seminar. This first year course introduces the incoming advanced education student to the principles and techniques in the field of advanced periodontics.

PERIO 5702 Periodontal Residency II Credits: 1-6
Clinical Periodontics with Related Didactic and Seminar. This first year course continues the instruction of the advanced education student to the principles and techniques in the field of advanced periodontics.

**Prerequisites:** PERIO 5701.

PERIO 5703 Periodontal Residency III Credits: 1-6
Clinical periodontics, with related didactics and seminar. This first year course continues the instruction of the advanced education student to the principles and techniques in the field of advanced periodontics, and builds upon the material taught in previous courses as well as introduces new information.

PERIO 5704 Periodontal Residency IV Credits: 1-6
Clinical periodontics with related didactics and seminar. This second year course is designed to transition the first year student into a second year advanced education student and builds upon the material taught in previous courses as well as introducing new information.

**Prerequisites:** PERIO 5701, PERIO 5702, PERIO 5703.

PERIO 5705 Periodontal Residency V Credits: 1-6
Clinical Periodontics with Related Didactics and Seminar. This second year course continues the instruction of the advanced education student to the principles and techniques in the field of advanced periodontics, and builds upon the material taught in previous courses as well as introducing new information.

**Prerequisites:** PERIO 5704.

PERIO 5706 Periodontal Residency VI Credits: 1-6
Clinical Periodontics with Related Didactics and Seminar. This second year course is designed to build upon the in-depth knowledge base of the advanced education student, as well as introducing new information, transitioning the student into a more proficient student in advanced periodontics.

**Prerequisites:** PERIO 5705.

PERIO 5707 Periodontal Residency VII Credits: 1-6
Clinical Periodontics with Related Didactics and Seminar. This third year course serves to transition the student into a clinician who by repeated action exhibits in depth levels of knowledge and skill. It builds upon material previously taught.

**Prerequisites:** PERIO 5706.

PERIO 5708 Periodontal Residency VIII Credits: 1-6
Clinical Periodontics with Related Didactics and Seminar. This third year course builds upon information previously taught and completes the transition of the student into a proficient specialist in Periodontology.

**Prerequisites:** PERIO 5707.

PERIO 5709 Periodontal Residency IX Credits: 1-6
Clinical Periodontics with Related Didactics and Seminar. This third year course is designed to build upon the in-depth information and knowledge base previously taught and completes the transition of the student into a proficient specialist in periodontology.

**Prerequisites:** PERIO 5708.

PERIO 5719 Implantology Credits: 2
This 2 credit hour seminar is designed for a student in the Advanced Education Program in Periodontology to develop in-depth knowledge of the concepts and theories of implant dentistry as they relate to periodontist. It will provide basic and advanced information and guidance which will serve to complement course work in PERIO 5702 through PERIO 5709, and the clinical implant dentistry experience offered in the program, at a minimum to a level of competency.

PERIO 5720 General Anesthesia Credit: 1
A rotation to the Department of Anesthesiology of K.C. Veterans Administration Medical Center. Students become familiar with operating room procedures, medical emergencies, venipuncture, airway maintenance and pharmaco-physiology of sedative, analgesic and anesthetic agents as well as drug interactions.
PERIO 5730 Biology Of The Periodontium Credits: 1-2
Biology of the Periodontium covers the embryology, histology, ultrastructure and biochemistry of stratified squamous epithelium, fibrous connective tissue, bone and cementum. These four tissues are studied in health and during inflammatory disease and healing of surgical wounds. Major emphasis is placed on immune system interactions with bone and fibrous connective tissue components during inflammatory periodontal disease.

PERIO 5799 Research And Thesis Credits: 1-6
PERIO 5899 Required Graduate Enrollment Credit: 1

Research Methodology-Dentistry Courses

RES-ME 5700 Introduction To Research Methodology Credits: 2-3
This lecture/discussion course will facilitate student’s understanding of terminology and key concepts of research methodology and design. Assigned exercises are designed to demonstrate application of research design principles, and to increase advanced education students’ competency in evaluating and planning scientific studies. This knowledge is indispensable for conducting meaningful research in advanced education certificate, masters of doctoral level programs.

RES-ME 5703 Thesis Writing Credit: 1
The methods of preparing, organizing, and presenting research findings using scientific writing format will be reviewed for completing a thesis. This course is required for the Master of Science degrees in Oral Biology and Dental Hygiene Education.

RES-ME 5704 Introduction To Biostatistics Credits: 2-3
A lecture/seminar course required for students pursuing a master’s degree. This course focuses on an in-depth coverage of statistical designs commonly found in dental research, statistical techniques associated with these designs, application to them via the use of a computer based statistical software analysis package, and the interpretation of statistical tests.

Prerequisites: RES-ME 5700.

RES-ME 5706 Dissertation Writing Credit: 1
Scientific writing format appropriate for preparing a dissertation will be reviewed. This course is required for the Interdisciplinary Ph.D. degree in Oral Biology.