

# ADVANCED DENTAL EDUCATION

## Advanced Dental Education

Accredited postdoctoral dental studies at The University of Texas at San Antonio consist of certificate programs and the Master of Science in Dental Science Program.

### Certificate Programs

Certificates are awarded to students successfully completing all requirements in either Advanced Education in General Dentistry, Dental Public Health, Endodontics, Oral and Maxillofacial Radiology, Oral and Maxillofacial Surgery, Orthodontics and Dentofacial Orthopedics, Pediatric Dentistry, Periodontics, or Prosthodontics. Full-time enrollment is eight semester credit hours per semester.

### Master of Science in Dental Science Program

The Master of Science in Dental Science (MSDS) program is supported by faculty of the School of Dentistry and the Graduate School of Biomedical Sciences. The MSDS degree is conferred by the Graduate School of Biomedical Sciences. This program is open only to students who have been accepted into, and continue in good standing in, a The University of Texas at San Antonio certificate program in either Advanced Education in General Dentistry, Oral and Maxillofacial Radiology, Endodontics, Orthodontics and Dentofacial Orthopedics, Pediatric Dentistry, Periodontics, or Prosthodontics.

## Academic Grievance, Probation and Dismissal Policies

### Probation and Dismissal Policy

An advanced education student may be placed on academic probation for reasons of substandard performance in didactic, clinical, behavioral or professional/ethical areas. A student whose overall grade point average falls below **B** (3.0) or who receives a final grade of D, F or U for any course during any one grading period will be considered for a recommendation of academic probation by the departmental Residency Oversight Committee of the appropriate program. A recommendation for probation will be made to the Advanced Education Committee's (AEC) Graduate Program Directors Subcommittee, which is comprised of the program directors of all the advanced education programs in the dental school and the Associate Dean for Students. Only the program directors will be voting members of this subcommittee; the Associate Dean for Students will serve in an *ex officio* capacity as a non-voting member. In addition, the departmental Residency Oversight Committee may recommend to the AEC's Graduate Program Directors Subcommittee that a student be placed on academic probation for clinical, behavioral or professional/ethical performance that does not meet the standards of the program.

An option to appear before the Advanced Education Committee's (AEC) Graduate Program Directors Subcommittee will be extended to the student before a vote is taken to recommend academic probation. The purpose of the appearance is to inform the subcommittee of extenuating circumstances which may have contributed to the student's performance.

The student may request that other appropriate verbal and/or written testimony regarding these circumstances be presented at this meeting. Only members of the subcommittee will be present when the vote for probation is taken.

The AEC's Graduate Program Directors Subcommittee will formally place the student on academic probation upon majority vote by its members.

The Chair of the Advanced Education Committee will give written notification to students placed on academic probation. This notification will serve as an official warning to the student that her or his didactic, clinical, behavioral and/or professional/ethical performance is below standard and continuation in the postgraduate program is in jeopardy.

The student will have an opportunity to address the substandard performance that resulted in academic probation status during a probationary period determined by the AEC's Graduate Program Directors Subcommittee. At subsequent monthly AEC meetings, the program director of the affected residency will report to the AEC on the status of the probated student's progress. Upon the student's successful correction of performance deficiencies, he or she will be removed from academic probation. A student may be placed on academic probation for professionalism as well as for academic reasons. If a student satisfies the remediation for a professional issue but still has a GPA of lower than 3.0, they will remain on probation. A recommendation to remove the student from academic probation will be made by the departmental Residency Oversight Committee to the AEC's Graduate Program Directors Subcommittee, which will remove academic probation status upon majority vote by its members.

If the substandard performance that led to academic probation is not corrected, the student will be subject to dismissal from the program.

A recommendation for dismissal will be made by the departmental Residency Oversight Committee to the AEC's Graduate Program Directors Subcommittee.

An option to appear before the AEC's Graduate Program Directors Subcommittee will be extended to the student before a vote is taken to recommend academic dismissal. The purpose of the appearance is to inform the Committee of extenuating circumstances which may have contributed to the student's performance. The student may request that other appropriate verbal and/or written testimony regarding these circumstances be presented at this meeting. Only members of the subcommittee will be present when the vote for dismissal is taken.

The AEC's Graduate Program Directors Subcommittee will consider the recommendation for dismissal and will formally dismiss the student from the program upon majority vote of the members. A student will be subject to dismissal actions without a probationary period if during a single grading period he or she receives a final grade of **D** or **F** for 4 (four) or more credit hours of required letter-graded course work or a grade of unsatisfactory (U) for 4 (four) or more credit hours of Sat/Unsat-graded course work or a grade of unsatisfactory (U) or failure (F) in a required rotation in a program.

During academic probation and dismissal actions, the student may address the AEC Graduate Program Directors Subcommittee in writing or may request permission to appear before the subcommittee to present her or his views. The Advanced Education Committee will transmit recommendations for dismissal through the Associate Dean for Students to the dean. Students may appeal academic dismissal to the dental dean.

### Appeals Process

1. A student may appeal an Advanced Education Committee Graduate Program Directors Subcommittee's decision that recommends academic dismissal. The student submits written notification of her/his desire to appeal to the dean's office. This written request must be received by the Dean's office within 5 days following the student's receipt of the written

notification of the AEC Graduate Program Directors Subcommittee's recommendation.

2. The dean will consult with appropriate individuals and render a decision to uphold or overturn the AEC Graduate Program Directors Subcommittee's decision. The student will receive written notification of the dean's final decision.

## Academic Grievance Policies

### Due Process Grade Assignment Disagreement

A student wishing to appeal the assignment of a grade must submit her/his grievance to the course director within seven days of the grade assignment. The appeal mechanism for challenging a grade is limited to: (1) possible clerical errors in calculating or recording a grade, or (2) allegation of mistakes or unfairness in application of the published academic standards in the assignment of a grade. It is the responsibility of the student to substantiate her/his assertion that an incorrect grade has been assigned.

If the student's concerns are not resolved after a meeting with the course director, the student may submit a written appeal to the program director. The written appeal must be made within seven days of the student's meeting with the course director and must contain information to substantiate the assertion that an incorrect grade has been assigned.

If the student's concerns are not resolved after a meeting with the program director, the student may submit a written appeal to the appropriate department chair. The written appeal must be made within seven days of the student's meeting with the program director and must contain information to substantiate the assertion that an incorrect grade has been assigned.

If the disagreement is not resolved at the departmental level, the student may submit a written appeal to the Dean of the School of Dentistry within seven days of the departmental decision. If the dean agrees to review the matter, he/she will review only that the appeal process was conducted appropriately. This School of Dentistry policy supersedes any other grievance policies, and decisions made in this process are final.

### Student Concerns

Various mechanisms are available at all levels for student input regarding their concerns. Individuals and groups who respond to these concerns include course directors, advisors, the Associate Dean for Academic, Faculty and Student Affairs, and the Associate Dean for Students. Procedures for grievances can be found in the General Section of the catalog.

### Student Mistreatment

Mistreatment of students will not be tolerated. Mistreatment, intentional or unintentional, occurs when behavior shows disrespect for the dignity of others and interferes with the learning process. Student mistreatment may take many forms all of which impact student performance. For more information see the Student Mistreatment Policy in the catalog.

## School of Dentistry Social Media Guidelines

The purpose of this policy is to promote the safety and privacy of students, faculty, staff, patients and visitors. Students, faculty members and staff must comply with the Health Insurance Portability and Accountability Act (HIPAA) and the Family Educational Rights and Privacy Act (FERPA) when using social media.

No student, staff or faculty may post, release or otherwise disclose photos, identifiable case descriptions, images or records related to the educational, clinical or research activities of the school via social networking sites, non-educational blogs, message boards, Internet websites, personal e-mail or anything other than standard professional means of query and/or dissemination.

No student, staff or faculty may post statements about the School of Dentistry community (employees, staff, students and visitors) that are defamatory, obscene, threatening or harassing.

Failure to comply with this policy may be a violation of legal, professional and/or ethical obligations. Violation will result in disciplinary action by the School of Dentistry up to and including reduction in professional grades, loss of clinical or pre-clinical privileges, additional HIPAA training, probation, termination of employment and/or dismissal from the School of Dentistry.

The School of Dentistry assumes no duty to monitor Internet activity but reserves the right to take appropriate action in accordance with this policy.

### Netiquette

The School of Dentistry has developed Netiquette Guidelines which align with the social media policy.

- Think twice before posting- Privacy does not exist in the world of social media. Before each posting, students are encouraged to consider how the item may reflect both on the author of the post and the School of Dentistry. Something that would not be said in person should not be posted in social media. Imagine your posting on the front page of the local newspaper.
- Strive for accuracy- Students should be certain that anything they post on a social media site is factual. The posting should be reviewed for grammatical and spelling errors, especially when posting on behalf of the School of Dentistry.
- Be respectful- Posted responses and comments should be respectful and considerate.
- Photography- Students should be aware that photographs posted on social media sites can easily be accessed by visitors to those sites. Posting unauthorized photos on a website or social media network site can result in disciplinary action.
- Rules- It is important to review the terms of service, privacy settings and other policies of the social media network before use.

### The University of Texas at San Antonio Social Media Guidance

1. Familiarize yourself with existing The University of Texas at San Antonio's employment policies and disclaimers. All communication professionals should follow all rules and policies.
2. Do not engage in any communication or activity that is prohibited under federal, state or local laws. These laws include, but are not limited to, the Health Insurance Portability and Accountability Act (HIPAA), copyright, libel and false advertising laws.
3. Do not discuss or disclose any confidential or proprietary information of The University of Texas at San Antonio, or any non-public information on social media.
4. Acknowledge and correct mistakes promptly. Be professional, use good judgment and be accurate and honest in your communications; errors, omissions or unprofessional language or behavior reflect poorly on The University of Texas at San Antonio and may result in liability. Link directly to online references and original source materials, when possible.

5. The University of Texas at San Antonio Marketing, Communications & Media team reserves the right to edit, modify, remove or delete any content or other information or materials on official The University of Texas at San Antonio social media profiles, groups or pages. The University of Texas at San Antonio also reserves the right to delete or suspend official The University of Texas at San Antonio accounts if violations are committed.
6. Social media platforms are owned by third parties, which have their own policies and rules for operating accounts on the site and, often, specific rules for brands and businesses. It is important that account managers understand the rules or guidelines they agree to abide by in operating any account. Below are links to the brand pages of social media channels, to understand best practices and proper uses of their channel and brand assets.
  - a. Facebook Brand Resource Center
  - b. Twitter Brand Guidelines
  - c. Instagram Brand Resources
  - d. YouTube Brand Guidelines
  - e. Google+ Style Guide
  - f. LinkedIn Brand Guidelines
  - g. Snapchat Brand Guidelines
7. The University of Texas at San Antonio reserves the right to revise this guidance at any time.

## Courses

### **ENDO 5010. Clinical Endodontics 1. 2.5 Credit Hours.**

An extensive clinical experience in the broad spectrum of endodontic practice is offered on the graduate level. Each student has the opportunity to maintain a comprehensive endodontic practice under the supervision of the director and staff of the postdoctoral program in endodontics.

### **ENDO 5011. Clinical Endodontics 1. 3 Credit Hours.**

An extensive clinical experience in the broad spectrum of endodontic practice is offered on the graduate level. Each student has the opportunity to maintain a comprehensive endodontic practice under the supervision of the director and staff of the postdoctoral program in endodontics.

### **ENDO 5015. Dental Photography. 0.5 Credit Hours.**

This course is designed to expose the student to the principles of effective dental photography. Students are given the opportunity to make clinical photographs that are critiqued in class.

### **ENDO 5017. Clinical Seminar 1. 2 Credit Hours.**

These seminars provide the opportunity to discuss matters pertaining to clinical endodontics by exposing the student to a wide variety of clinical cases. The seminars provide information to give students the opportunity to become sophisticated diagnosticians and skillful clinicians. Students are provided the opportunity to achieve these goals through student case presentations, faculty case presentations, topical lectures by faculty and consultant visits.

### **ENDO 5018. Clinical Seminar 1. 2 Credit Hours.**

These seminars provide the opportunity to discuss matters pertaining to clinical endodontics by exposing the student to a wide variety of clinical cases. The seminars provide information to give students the opportunity to become sophisticated diagnosticians and skillful clinicians. Students are provided the opportunity to achieve these goals through student case presentations, faculty case presentations, topical lectures by faculty, and consultant visits.

### **ENDO 5020. Introduction to Advanced Endodontics. 2.5 Credit Hours.**

This course is a laboratory and lecture review of endodontic concepts and techniques starting at the basic level and progressing to the advanced. Various techniques of access preparation, chemomechanical canal preparation and obturation will be taught. Students will have an opportunity to prepare and obturate the root canal system using a variety of techniques and materials. Procedures are performed under simulated clinical conditions in a mannequin. Following completion of obturation, students dissect and photograph tooth roots under a dissecting microscope to evaluate the effectiveness of the various canal preparation and obturation techniques.

### **ENDO 5052. Endodontic Surgical Anatomy. 1.5 Credit Hour.**

This course consists of a series of four four-hour seminar sessions devoted to an in-depth discussion of endodontic surgical anatomy, surgical indications and techniques, and wound healing. This is followed by twenty hours of laboratory during which students practice actual surgical procedures on anterior, premolar and molar teeth in teeth mounted on manikins using contemporary endodontic microsurgery techniques. Emphasis is given to the correct use of the surgical microscope for these procedures and adequate management of soft and hard tissues.

### **ENDO 5060. Current Concepts In Endo. 1 Credit Hour.**

Modern thoughts and concepts in endodontics will cover diagnosis, the dental pulp and periapex, pulpalgia and referred pain; vital pulp therapy; treatment of the acute apical abscess, cellulitides, restorative considerations for the endodontically treated tooth, endodontic surgery, and the cracked tooth. Other topics include avulsions, endodontic-periodontic interrelationships, current concepts in endodontics and an overview of endodontic research.

### **ENDO 5071. Supervised Teaching. 1 Credit Hour.**

The goal of this course is to teach the student how to be an effective teacher. This course involves the student in teaching a sophomore lecture and laboratory course where dental students receive their initial exposure to endodontics. The student is given the opportunity to be actively involved in laboratory supervision of a small group of sophomore students as they perform specific endodontic procedures on extracted teeth. The student functions as an instructor side by side with endodontic faculty members who observe and critique the student's performance.

### **ENDO 5073. Literature Review 1. 5 Credit Hours.**

This course is designed to familiarize the student with pertinent articles, both topical and current, related to endodontics. The articles, selected from the dental, medical and basic science literature, are assigned to the student to critically abstract and evaluate for research design, findings and conclusions.

### **ENDO 5075. Literature Review 1. 4 Credit Hours.**

This course is designed to familiarize the student with pertinent articles, both topical and current, related to endodontics. The articles, selected from the dental, medical and basic science literature, are assigned to the student to critically abstract and evaluate for research design, findings and conclusions.

### **ENDO 5080. Case Presentations 1. 4.5 Credit Hours.**

This course is designed to provide faculty evaluation of endodontic cases treated by students. Critical evaluation will be made of the diagnosis, treatment plan and treatment methodology. Differential diagnosis will be considered along with alternate treatment plans and treatment methods. Reasons for any complications will be determined, and methods for preventing them will be discussed. The need for post-treatment follow-up examinations will be determined. The positive feedback provided by these courses is intended to increase student confidence and competence.

**ENDO 5082. Case Presentations 1. 4 Credit Hours.**

This course is designed to provide faculty evaluation of endodontic cases treated by students. Critical evaluation will be made of the diagnosis, treatment plan and treatment methodology. Differential diagnosis will be considered along with alternate treatment plans and treatment methods. Reasons for any complications will be determined, and methods for preventing them will be discussed. The need for post-treatment follow-up examinations will be determined. The positive feedback provided by these courses is intended to increase student confidence and competence.

**ENDO 5095. Research. 6 Credit Hours.**

The course requires the student to formulate a protocol for the purpose of conducting an original investigation. Once the protocol is critically evaluated and accepted, students, under the guidance of a mentor, conduct a research project suitable for publication. The completed research paper is presented to the Endodontics Department research Committee, staff and guests for evaluation and critique.

**ENDO 5096. Research. 6 Credit Hours.**

The course requires the student to formulate a protocol for the purpose of conducting an original investigation. Following a critical evaluation and acceptance of the protocol, the student conducts a research project, suitable for publication, under the guidance of a mentor. The completed research paper is presented to the Endodontics Department Research Committee, staff and guests for evaluation and critique.

**ENDO 5097. Research. 2 Credit Hours.**

The course requires the student to formulate a protocol for the purpose of conducting an original investigation. Following a critical evaluation and acceptance of the protocol, the student conducts a research project, suitable for publication, under the guidance of a mentor. The completed research paper is presented to the Endodontics Department Research Committee, staff and guests for evaluation and critique.

**ENDO 5098. Research. 2 Credit Hours.**

The course requires the student to formulate a protocol for the purpose of conducting an original investigation. Following a critical evaluation and acceptance of the protocol, the student conducts a research project, suitable for publication, under the guidance of a mentor. The completed research paper is presented to the Endodontics Department Research Committee, staff and guests for evaluation and critique.

**ENDO 6000. Introduction to Advanced Endodontics for Interns. 1 Credit Hour.****ENDO 6010. Clinical Endodontics 2. 6 Credit Hours.**

An extensive clinical experience in the broad spectrum of endodontic practice is offered on the graduate level. Each student has the opportunity to maintain a comprehensive endodontic practice under the supervision of the director and staff of the postdoctoral program in endodontics.

**ENDO 6012. Clinical Endodontics 2. 5 Credit Hours.**

An extensive clinical experience in the broad spectrum of endodontic practice is offered on the graduate level. Each student has the opportunity to maintain a comprehensive endodontic practice under the supervision of the director and staff of the postdoctoral program in endodontics.

**ENDO 6013. Clinical Endodontics 3. 0.5 Credit Hours.**

An extensive clinical experience in the broad spectrum of endodontic practice is offered on the graduate level. Each student has the opportunity to maintain a comprehensive endodontic practice under the supervision of the director and staff of the postdoctoral program in endodontics.

**ENDO 6031. Hospital Endodontics Rotation. 1 Credit Hour.**

Conducted at the Audie L. Murphy Memorial Veterans Affairs Hospital ("VA"), this rotation consists of the diagnosis, treatment planning and clinical treatment of endodontically involved teeth and supporting structures. This rotation provides the second-year postdoctoral endodontics student the opportunity to diagnose and treat endodontic problems on all types of inpatients and outpatients in the hospital setting.

**ENDO 6032. Hospital Endodontics Rotation. 1 Credit Hour.**

Conducted at the Audie L. Murphy Memorial Veterans Affairs Hospital ("VA"), this rotation consists of the diagnosis, treatment planning, and clinical treatment of endodontically involved teeth and supporting structures. This rotation provides the second-year postdoctoral endodontics student the opportunity to diagnose and treat endodontic problems on all types of inpatients and outpatients in the hospital setting.

**ENDO 6060. Pulp Biology and Pain Pharmacology. 1.5 Credit Hour.**

The purpose of this course is to provide solid foundational knowledge in the biology of dental pulp and periradicular tissues necessary for appropriate clinical decision making in endodontic and restorative diagnosis and treatment and to ensure that residents are prepared for future change in therapy or understanding new risk factors in disease.

**ENDO 6071. Supervised Teaching. 1 Credit Hour.**

The goal of this course is to teach students how to be an effective teacher. This course allows students to teach a sophomore lecture and laboratory course where dental students receive their initial exposure to endodontics. The student is given the opportunity to be actively involved in laboratory supervision of a small group of sophomore students as they perform specific endodontic procedures on extracted teeth. The student functions as an instructor side by side with endodontic faculty members who observe and critique the student's performance.

**ENDO 6073. Literature Review 2. 5 Credit Hours.**

This course is designed to familiarize the student with pertinent articles, both topical and current, related to endodontics. The articles, selected from the dental, medical and basic science literature, are assigned to the student to critically abstract and evaluate for research design, findings and conclusions.

**ENDO 6075. Current Literature Review. 1.5 Credit Hour.**

These courses are designed to familiarize the student with pertinent endodontic literature published during the academic year. Students will be assigned specific articles for review and literature will be critically evaluated in a seminar format.

**ENDO 6077. Current Literature Review. 1 Credit Hour.**

The goal of this course is for the student to develop a biological understanding and scientific basis for the diagnosis and treatment of various endodontic subjects by a review of current literature articles. Each resident will be assigned specific articles for review. Residents will be required to prepare written abstracts of these articles and orally present them to the class.

**ENDO 6078. Literature Review. 4 Credit Hours.**

This course is intended to introduce the endodontic resident application manuscripts related to our specialty. The articles are selected according to their impact on clinical and biological considerations pertinent to the understanding of the endodontic practice. Subjects will be broad in scope and will cover the majority of topics and treatment alternatives of classic, relevant and contemporary literature. These manuscripts will be discussed and evaluated, placing emphasis on their strength to already existing endodontic comprehension.



**ENDO 6080. Focused Regendo Research. 4 Credit Hours.**

This course is intended to provide a focused review on the most relevant scientific evidence on regenerative endodontics. Emphasis will be given to the critical appraisal of existing scientific evidence on stem cell biology and tissue engineering related to regenerative endodontics. The articles are selected according to their impact on clinical and biological considerations pertinent to the understanding of the endodontic practice.

**ENDO 6083. Case Presentations 2. 1 Credit Hour.**

This course is designed to provide faculty evaluation of endodontic cases treated by students. Critical evaluation will be made of the diagnosis, treatment plan, and treatment methodology. Differential diagnosis will be considered along with alternate treatment plans, and treatment methods. Reasons for any complications will be determined, and methods for preventing them will be discussed. The need for post-treatment follow-up examinations will be determined. The positive feedback provided by these courses is intended to increase student confidence and competence.

**ENDO 6084. Case Presentations 2. 4 Credit Hours.**

This course is designed to provide faculty evaluation of endodontic cases treated by students. Critical evaluation will be made of the diagnosis, treatment plan, and treatment methodology. Differential diagnosis will be considered along with alternate treatment plans, and treatment methods. Reasons for any complications will be determined, and methods for preventing them will be discussed. The need for post-treatment follow-up examinations will be determined. The positive feedback provided by these courses is intended to increase student confidence and competence.

**ENDO 6085. Case Presentations 2. 4 Credit Hours.**

This course is designed to provide faculty evaluation of endodontic cases treated by students. Critical evaluation will be made of the diagnosis, treatment plan, and treatment methodology. Differential diagnosis will be considered along with alternate treatment plans, and treatment methods. Reasons for any complications will be determined, and methods for preventing them will be discussed. The need for post-treatment follow-up examinations will be determined. The positive feedback provided by these courses is intended to increase student confidence and competence.

**ENDO 6086. Case Presentations 3. 2 Credit Hours.**

This course is designed to provide faculty evaluation of endodontic cases treated by students. Critical evaluation will be made of the diagnosis, treatment plan, and treatment methodology. Differential diagnosis will be considered along with alternate treatment plans, and treatment methods. Reasons for any complications will be determined, and methods for preventing them will be discussed. The need for post-treatment follow-up examinations will be determined. The positive feedback provided by these courses is intended to increase student confidence and competence.

**ENDO 6087. Case Presentations 3. 1 Credit Hour.**

This course is designed to provide faculty evaluation of endodontic cases treated by students. Critical evaluation will be made of the diagnosis, treatment plan, and treatment methodology. Differential diagnosis will be considered along with alternate treatment plans, and treatment methods. Reasons for any complications will be determined, and methods for preventing them will be discussed. The need for post-treatment follow-up examinations will be determined. The positive feedback provided by these courses is intended to increase student confidence and competence.

**ENDO 6094. Research. 4 Credit Hours.**

The course requires the student to formulate a protocol for the purpose of conducting an original investigation. Once the protocol is critically evaluated and accepted, students, under the guidance of a mentor, conduct a research project suitable for publication. The completed research paper is presented to the Endodontics Department research Committee, staff and guests for evaluation and critique.

**ENDO 6095. Research. 4 Credit Hours.**

The course requires the student to formulate a protocol for the purpose of conducting an original investigation. Once the protocol is critically evaluated and accepted, students, under the guidance of a mentor, conduct a research project suitable for publication. The completed research paper is presented to the Endodontics Department research Committee, staff and guests for evaluation and critique.

**ENDO 6098. Thesis. 4 Credit Hours.**

Completion of an acceptable thesis is required for the Master of Science degree. Registration in this course for at least one semester is required of all degree candidates. Admission to candidacy for the Master of Science degree is required in order to enroll in this course.

**ENDO 7041. Junior Endodontics Lecture. 1 Credit Hour.**

This course enhances the cognitive skills attained by the student that has successfully completed ENDO 6041 and ENDO 6142 in the Sophomore year. Topics covered include: endodontic radiography, endodontic diagnosis, endodontic irrigants and medicaments, evaluation of endodontic outcomes and retreatment, management of endodontic emergencies including pain control, diagnosis and management of tooth root resorption, endodontic treatment risk assessment, management of the immature root apex and management of traumatic tooth injuries including tooth fracture, luxation and avulsion. The importance of the inter-relationships with other dental disciplines such as periodontics and restorative dentistry are also emphasized.

**ENDO 7043. Endodontics Clinic. 1 Credit Hour.**

Students perform endodontic diagnosis and treatment procedures necessary to provide endodontic treatment as part of overall comprehensive clinical patient care.

## Courses

**ORTH 5010. Introduction to Orthodontics. 0.5 Credit Hours.**

The expected to gain understanding of basic clinic operations, laboratory procedures and collection of orthodontic database including study models, photographs, and orthodontic clinical exams.

**ORTH 5011. Orthodontic Techniques. 1 Credit Hour.**

This course is designed to present to the students all modern orthodontic techniques, approached and appliance. The prerequisite for the course is solid biomechanics and understanding of importance of setting specific treatment goals for each patient. Discussions are led by the instructor on the cases treatment by the residents where the theoretical knowledge is applied.

**ORTH 5012. Orthodontic Lab Technique. 0.5 Credit Hours.**

The students are exposed to didactic teaching and practical hands on instruction about the design and fabrication of various orthodontic appliances including removable appliances, retainers and special custom designed appliances for complex orthodontic patients.

**ORTH 5013. Orthodontic Treatment Planning. 0.5 Credit Hours.**

The principles of the initial and advanced treatment planning are presented in this case based course. The student will learn how to effectively use databases including cephalometrics and 3-D imaging into making treatment decisions and presenting the treatment options to the patient.

**ORTH 5014. Literature Seminars. 0.5 Credit Hours.**

The students are taught to critically analyze and present current orthodontic literature, make effective presentations and learn how to categorize a research study within the hierarchy of research publications.

**ORTH 5015. Orthodontic Biomechanics. 1 Credit Hour.**

This course is designed to equip the student with knowledge of basic biomechanics and utilization of fundamental physical principles in orthodontics. It includes application of biomechanical principles in the design of the appliance and predictable tooth movement to achieve orthodontic movement goals.

**ORTH 5020. Clinical Orthodontics 1. 1 Credit Hour.**

During this clinical course, the student will be exposed to and learn all modern orthodontic techniques, approaches and appliances through treatment of about 65 orthodontic patients started by the student. In addition, about 20 transfer cases will be assigned to each student at the beginning of each year. The course will result in clinical competency of the student and preparation of at least six board quality cases for certification straight out of the residency program.

**ORTH 5021. Clinical Orthodontics 2. 4 Credit Hours.**

During this clinical course, the student will be exposed to and learn all modern orthodontic techniques, approaches and appliances through treatment orthodontic patients with several malocclusion and patients with craniofacial deformities started by the student, in addition understand the marketing side of orthodontics.

**ORTH 5026. Clinical Orthodontics 2. 4 Credit Hours.**

During this clinical course, the student will be exposed to and learn all modern orthodontic techniques, approaches and appliances through treatment orthodontic patients with several malocclusion and patients with craniofacial deformities started by the student, in addition understand the marketing side of orthodontics.

**ORTH 5028. ABO Literature Review. 1 Credit Hour.**

This series of seminars focuses on the literature required by the American Board of Orthodontics for the written board examination which the residents take during the spring semester of the second year. The seminars include in-depth coverage of the presented articles and topics and board-provided materials for preparing for the board written exam.

**ORTH 5030. Case Analysis Seminars 1. 1 Credit Hour.**

In this series of seminars, one resident is selected for each class to present a case of their choice with an in-depth analysis of the development of treatment planning, design of the appliance, and progress and outcome of the treatment. Other students in the audience are encouraged to ask questions and develop a discussion about the case and treatment approaches used.

**ORTH 5035. Current Literature Review 1. 1 Credit Hour.**

During this series of seminars attended by multiple of orthodontic faculty, the residents are presenting selected papers on current orthodontic topics. The seminars include in-depth discussion of the methodology, design of the study, interpretation of the results and conclusions based on the presented results. This course is designed to familiarize the student with all areas of current orthodontic literature and is a supplement to all didactic courses.

**ORTH 5037. Orthodontic Lecture Series 1. 1 Credit Hour.**

This series of orthodontic didactic lectures is a multifaceted course taught by several faculty during the course of the program. The topics covered in the course include periodontal consideration in orthodontics, orthodontic radiology, oral pathology, anatomy and histology and principles of growth and development.

**ORTH 5070. Practice Management. 0.5 Credit Hours.**

The practice Management course for orthodontics is an orthodontic specialty course designed to teach residents tools in managing a successful practice.

**ORTH 5090. Research 1. 0.5 Credit Hours.**

Following the course on Research Methodology, the student meets with the faculty and attends presentations on research topics from which he/she can select the topic of interest for the research project. Several components of that course throughout the duration of the program include understanding of research topics of interest to clinical orthodontics, design of clinical study and practical laboratory research on the selected project under the guide of student's research mentor.

**ORTH 6000. Introduction to Advanced Orthodontics for Interns. 1 Credit Hour.****ORTH 7073. Junior Orthodontic Lectures And Case Analysis. 1 Credit Hour.**

This advanced lecture/case presentation series emphasizes the principles of orthodontic diagnosis and treatment planning for limited orthodontic procedures and the principles of comprehensive orthodontic therapy, interdisciplinary dentistry, and orthognathic surgery.

## Courses

**PEDO 5020. Pediatric and Orthodontic Clinic 1. 2 Credit Hours.**

The postdoctoral program in pediatric dentistry is designed to provide each resident with clinical experience that will enable her or him to function as a proficient and competent provider of comprehensive dental services for children. Throughout the two-year program, residents will be expected to apply the information gained in the didactic part of the program to the delivery of dental care in the various clinical settings encompassed by the program. Although supervision by faculty is always provided, residents are expected to demonstrate increasing independence and initiative as they progress in clinical experience.

**PEDO 5021. Pediatric & Orthodontic Clinic 2. 5 Credit Hours.**

The postdoctoral program in pediatric dentistry is designed to provide each resident with clinical experience that will enable her or him to function as a proficient and competent provider of comprehensive dental services for children. Throughout the two-year program, residents will be expected to apply the information gained in the didactic part of the program to the delivery of dental care in the various clinical settings encompassed by the program. Although supervision by faculty is always provided, residents are expected to demonstrate increasing independence and initiative as they progress in clinical experience.

**PEDO 5022. Pediatric and Orthodontic Clinic 3. 6 Credit Hours.**

The postdoctoral program in pediatric dentistry is designed to provide each resident with clinical experience that will enable her or him to function as a proficient and competent provider of comprehensive dental services for children. Throughout the two-year program, residents will be expected to apply the information gained in the didactic part of the program to the delivery of dental care in the various clinical settings encompassed by the program. Although supervision by faculty is always provided, residents are expected to demonstrate increasing independence and initiative as they progress in clinical experience.

**PEDO 5026. Orthodontics I. 2 Credit Hours.**

This course comprises two seminar series in which orthodontic diagnosis and treatment principles for the primary and mixed dentitions are presented. Included also are laboratory technique exercises in which commonly used orthodontic appliances are constructed.

**PEDO 5027. Orthodontics 2. 2 Credit Hours.**

These seminars consist of a series of selected orthodontic topics that will be assigned to individual residents for presentation to their classmates and faculty. The course director will provide a seminal article on the assigned topic from which the resident will research additional references and present a seminar session based on the material.

**PEDO 5028. Orthodontics 3. 1.5 Credit Hour.**

These seminars consist of a series of selected orthodontic topics that will be assigned to individual residents for presentation to their classmates and faculty. The course director will provide a seminal article on the assigned topic from which the resident will research additional references and present a seminar session based on the material.

**PEDO 5042. Pediatric Dentistry I. 2 Credit Hours.**

This course comprises several seminar series and lectures on a variety of subjects pertinent to advanced pediatric dentistry. Included are conscious sedation, pulp therapy, traumatic dental injuries, cariology and prevention, periodontal problems, special patient care, infection control, restorative materials and techniques, radiographic principles and practice, and pediatric grand rounds.

**PEDO 5043. Pediatric Dentistry 2. 6 Credit Hours.**

This course is largely a continuation of lectures and seminars on the subject matter introduced in PEDO 5042 Pediatric Dentistry 1, but also adds case conferences and current literature seminars.

**PEDO 5044. Pediatric Dentistry 3. 6 Credit Hours.**

In part, this is a continuation of some lecture and seminar topics from PEDO 5043 Pediatric Dentistry 2. In addition, the following subject matter will be presented: behavior management, psychosocial growth and development, pediatric oral pathology, advanced nutrition, craniofacial growth and development, antibiotics, and analgesics and sedatives.

**PEDO 5051. Pediatric Physical Diagnosis. 1.5 Credit Hour.**

The pediatric dental resident will be given the opportunity to learn physical evaluation of a child's various systems to determine the patient's status prior to administration of general anesthesia.

**PEDO 6000. Introduction to Advanced Pediatric Dentistry for Interns. 1 Credit Hour.**

This is a one year program during which the student intern participates in similar curricular activities as the first year pediatric dentistry residents. The student will attend didactic courses with the first year residents and participate in presentations of journal articles in seminars. The student will participate in weekly case presentations and interdisciplinary dentistry seminars, as well as lectures by guest speakers in our institution. Clinical activities will involve hands-on contact with patients and working on pediatric patients under the supervision of pediatric dentistry residents and faculty. The intern will be assigned their own patients, and will attend clinic sessions with the pediatric dentistry residents. Interns will rotate through our offsite clinics, providing comprehensive dental care to pediatric patients.

**PEDO 6023. Pediatric And Orthodontic Clinic 4. 7 Credit Hours.**

The postdoctoral program in pediatric dentistry is designed to provide each resident with clinical experience that will enable him or her to function as a proficient and competent provider of comprehensive dental services for children. Throughout the two-year program, residents will be expected to apply the information gained in the didactic part of the program to the delivery of dental care in the various clinical settings encompassed by the program. Although supervision by faculty is always provided, residents are expected to demonstrate increasing independence and initiative as they progress in clinical experience.

**PEDO 6024. Pediatric and Orthodontic Clinic 5. 4.5 Credit Hours.**

The postdoctoral program in pediatric dentistry is designed to provide each resident with clinical experience that will enable him or her to function as a proficient and competent provider of comprehensive dental services for children. Throughout the two-year program, residents will be expected to apply the information gained in the didactic part of the program to the delivery of dental care in the various clinical settings encompassed by the program. Although supervision by faculty is always provided, residents are expected to demonstrate increasing independence and initiative as they progress in clinical experience.

**PEDO 6025. Pediatric and Orthodontic Clinic 5. 7 Credit Hours.**

The postdoctoral program in pediatric dentistry is designed to provide each resident with clinical experience that will enable him or her to function as a proficient and competent provider of comprehensive dental services for children. Throughout the two-year program, residents will be expected to apply the information gained in the didactic part of the program to the delivery of dental care in the various clinical settings encompassed by the program. Although supervision by faculty is always provided, residents are expected to demonstrate increasing independence and initiative as they progress in clinical experience.

**PEDO 6029. Orthodontics 4. 2 Credit Hours.**

These seminars consist of a series of selected orthodontic topics that will be assigned to individual residents for presentation to their classmates and faculty. The course director will provide a seminal article on the assigned topic from which the resident will research additional references and present a seminar session based on the material.

**PEDO 6030. Orthodontics 5. 2 Credit Hours.**

These seminars consist of a series of selected orthodontic topics that will be assigned to individual residents for presentation to their classmates and faculty. The course director will provide a seminal article on the assigned topic from which the resident will research additional references and present a seminar session based on the material.

**PEDO 6045. Pediatric Dentistry 4. 6 Credit Hours.**

A continuation of the case conferences, current literature seminars, and pediatric grand rounds, this course also introduces practice management and topics in clinical genetics.

**PEDO 6083. Investigative Project. 1 Credit Hour.**

Each resident is required to carry out an investigative project that may be laboratory-, clinic-, or library-based, depending on the interests of the student. Projects must be submitted in the form of a manuscript or publishable quality.

**PEDO 6084. Investigative Project. 1 Credit Hour.**

Each resident is required to carry out an investigative project that may be laboratory-, clinic-, or library-based, depending on the interests of the student. Projects must be submitted in the form of a manuscript or publishable quality.

**PEDO 6146. Pediatric Dentistry 5. 5 Credit Hours.**

This course continues the case conferences, current literature seminars, and pediatric grand rounds of PEDO 6045 Pediatric Dentistry 4, adding craniofacial anomalies seminars.

**PEDO 7091. Pediatric Dentistry Clinic. 2 Credit Hours.**

Clinical experience with child patients gives students the opportunity to gain clinical judgement and proficiency while practicing comprehensive dentistry for children. Areas of competency include prevention, examination, diagnosis and treatment planning, local anesthesia, operative dentistry, pulpal therapy, oral injuries, oral surgery, preventive and interceptive orthodontics, behavior management, maintenance care, and periodontics.

## Courses

### **PERI 5010. Clinical Periodontics 1. 2 Credit Hours.**

Students have the opportunity to gain clinical experience as they treat patients in the postdoctoral clinic. Cases gradually increase in complexity and severity and include treatment of the medically compromised patient, implant cases, and interdisciplinary cases.

### **PERI 5012. Clinical Periodontics 1. 1 Credit Hour.**

Students have the opportunity to gain clinical experience as they treat patients in the postdoctoral clinic. Cases gradually increase in complexity and severity and include treatment of the medically compromised patient, implant cases, and interdisciplinary cases.

### **PERI 5025. Case Presentation Seminar. 0.5 Credit Hours.**

The course consists of presentation of clinical cases. Students have the opportunity to prepare to defend their approaches to therapy and gain experience in oral presentation of cases.

### **PERI 5031. Periodontics Lecture Series. 2 Credit Hours.**

This course is designed to instruct the student in all aspects of periodontology. It is meant to be an adjunct to the PERI 6073 Literature Seminar. Topics dealing with basic science, pathobiology, and clinical and surgical aspects of periodontal disease will be discussed.

### **PERI 5035. Peri Lecture Series. 1.5 Credit Hour.**

This course is designed to instruct the student in all aspects of periodontology. It is meant to be an adjunct to the PERI 6073 Literature Seminar. Topics dealing with basic science, pathobiology, and clinical and surgical aspects of periodontal disease will be discussed. Cross-listed/ Concurrent: PERI 6030/6031.

### **PERI 5037. Bone & Connective Tissue Biology. 0.5 Credit Hours.**

This course seeks to apply current principles of bone and periodontal ligament cell biology to our understanding of the development, maintenance, and repair of periodontal tissues and to the clinical management of pathology at the tooth supporting structures. Emphasis is placed on the basic cell and structural biology which provides the underlying rationale for current and experimental approaches to periodontal disease and therapies.

### **PERI 5052. Surgical Anatomy. 1 Credit Hour.**

This course emphasizes the learning of the head and neck anatomy that is related directly to surgical procedures performed by periodontists and endodontists and the practice of prosthodontic dentistry. Anatomic structures related to implant placement receive special emphasis. Surgical complications related to anatomy are described. A prosection on human cadavers is presented with a strong emphasis on surgical anatomy.

### **PERI 5073. Literature Seminars. 1 Credit Hour.**

This course is designed to familiarize the student with the historical and contemporary literature related to periodontics. The first-year course is concerned mainly with basic science literature while second- and third-year courses concentrate on the clinical literature. Students have the opportunity to evaluate the data in the literature, critique experimental design, abstract articles, critically evaluate research findings, and learn to use library resources.

### **PERI 5074. Current Lit Seminar. 1-5 Credit Hours.**

Current periodontal literature published during the academic year is discussed in a seminar format.

### **PERI 5075. Mock Boards. 0.5 Credit Hours.**

This course is a simulation of the exams given by the American Board of Periodontology. Students present their cases orally, with slides, to faculty examiners and take an oral examination.

### **PERI 5097. Research. 1-9 Credit Hours.**

This course consists of independent, original research under the direction of a faculty member.

### **PERI 6000. Introduction to Advanced Periodontics for Interns. 1 Credit Hour.**

### **PERI 6001. Periodontic Practice Management. 0.5 Credit Hours.**

The objective of this course is to prepare the student for the business aspects of clinical practice. The student will be exposed to the banking finances, practical aspects of office management, matters relating to dental insurance, and the different types of practice.

### **PERI 6009. Clinical Periodontics 2. 2 Credit Hours.**

Students have the opportunity to gain clinical experience as they treat patients in the postdoctoral clinic. Cases gradually increase in complexity and severity and include treatment of the medically compromised patient, implant cases and interdisciplinary cases.

### **PERI 6011. Clinical Periodontics 2. 3 Credit Hours.**

Students have the opportunity to gain clinical experience as they treat patients in the postdoctoral clinic. Cases gradually increase in complexity and severity and include treatment of the medically compromised patient, implant cases, and interdisciplinary cases.

### **PERI 6012. Clinical Periodontics 3. 4.5 Credit Hours.**

Students have the opportunity to gain clinical experience as they treat patients in the postdoctoral clinic. Cases gradually increase in complexity and severity and include treatment of the medically compromised patient, implant cases, and interdisciplinary cases.

### **PERI 6016. Clinical Periodontics 3. 2 Credit Hours.**

Students have the opportunity to gain clinical experience as they treat patients in the postdoctoral clinic. Cases gradually increase in complexity and severity and include treatment of the medically compromised patient, implant cases, and interdisciplinary cases.

### **PERI 6020. Emergency Care Seminar. 0.5 Credit Hours.**

This is a pragmatic course to familiarize the student with the medical emergencies that the clinician may incur while practicing dentistry. Major texts on the medically compromised patient are used as a guideline. The course is given in seminar format.

### **PERI 6025. Case Presentation Seminar. 0.5 Credit Hours.**

The course consists of presentation of clinical cases. Students have the opportunity to prepare to defend their approaches to therapy and gain experience in oral presentation of cases.

### **PERI 6030. Periodontic Lecture Series. 2 Credit Hours.**

This course is designed to instruct the student in all aspects of periodontology. It is meant to be an adjunct to the PERI 6073 Literature Seminar. Topics dealing with basic science, pathobiology, and clinical and surgical aspects of periodontal disease will be discussed.

### **PERI 6031. Periodontic Lecture Series. 2 Credit Hours.**

This course is designed to instruct the student in all aspects of periodontology. It is meant to be an adjunct to the PERI 6073 Literature Seminar. Topics dealing with basic science, pathobiology, and clinical and surgical aspects of periodontal disease will be discussed.

### **PERI 6033. Peri Lecture Series. 1 Credit Hour.**

This course is designed to instruct the student in all aspects of periodontology. It is meant to be an adjunct to the PERI 6073 Literature Seminar. Topics dealing with basic science, pathobiology, and clinical and surgical aspects of periodontal disease will be discussed. Concurrent: PERI 5031 and PERI 6031.



**PERI 6036. Peri Lecture Series. 1 Credit Hour.**

This course is designed to instruct the student in all aspects of periodontology. It is meant to be an adjunct to the PERI 6073 Literature Seminar. Topics dealing with basic science, pathobiology, and clinical and surgical aspects of periodontal disease will be discussed. Concurrent: PERI 5031 and PERI 6031.

**PERI 6050. Periodontal Medicine. 1 Credit Hour.**

This course is designed to establish the principles essential for problem-oriented evaluation of the dental patient. The intent is to discuss the diagnosis of selected common orally related primary and secondary mucocutaneous conditions and oral cancer and their management.

**PERI 6070. Supervised Teaching. 0.5 Credit Hours.**

Graduate students are assigned to the various clinics and classes for the opportunity to acquire experience in teaching pre-doctoral students and faculty members in a variety of situations. Supervision and evaluation of teaching performance are provided by the graduate faculty.

**PERI 6071. Supervised Teaching. 0.5 Credit Hours.**

Graduate students are assigned to the various clinics and classes for the opportunity to acquire experience in teaching pre-doctoral students and faculty members in a variety of situations. Supervision and evaluation of teaching performance are provided by the graduate faculty.

**PERI 6072. Supervised Teaching. 0.5 Credit Hours.**

Graduate students are assigned to the various clinics, laboratories, and classes for the opportunity to acquire experience in teaching undergraduate students in a variety of situations. Supervision and evaluation of teaching performance are provided by the graduate faculty.

**PERI 6073. Literature Seminars. 1 Credit Hour.**

This course is designed to familiarize the student with the historical and contemporary literature related to periodontics. The first-year course is concerned mainly with basic science literature while second- and third-year courses concentrate on the clinical literature. Students have the opportunity to evaluate the data in the literature, critique experimental design, abstract articles, critically evaluate research findings, and learn to use library resources.

**PERI 6074. Current Lit Seminar. 0.5-5 Credit Hours.**

Current periodontal literature published during the academic year is discussed in a seminar format.

**PERI 6075. Mock Boards. 0.5 Credit Hours.**

This course is a simulation of the exams given by the American Board of Periodontology. Students present their cases orally, with slides, to faculty examiners and take an oral examination.

**PERI 6097. Research. 1-9 Credit Hours.**

This course consists of independent, original research under the direction of a faculty advisor.

**PERI 6098. Thesis. 1-9 Credit Hours.**

Completion of an acceptable thesis is required for the Master of Science degree. Registration in this course for at least one semester is required of all degree candidates. Prerequisites: admission to candidacy for the Master of Science degree.

**PERI 7059. Implantology. 1 Credit Hour.**

Through lecture sessions, this introductory course offers students an opportunity to obtain both background and knowledge regarding accepted dental implant systems.

**PERI 7081. Periodontics. 1.5 Credit Hour.**

This course is an expansion of the foundation presented in the sophomore year. Surgical treatment planning, rationale, techniques, and wound healing are emphasized. A three-hour surgical laboratory exercise is included. Periodontal interrelationships with prosthodontics, endodontics, and orthodontics are examined in case presentation formats with student participation.

**PERI 8015. Periodontics. 0.5 Credit Hours.**

This lecture course is a comprehensive review of current periodontal topics. Topics include those that should be employed in the diagnosis, treatment planning, and management of periodontal diseases in a general dentistry practice setting. Both non-surgical and surgical treatment approaches will be discussed.

**PERI 9097. Research. 4 Credit Hours.**

The student develops a research protocol and background literature search for a clinical, laboratory, or animal model research project.

## Courses

**PROS 5015. Concepts Of Occlusion. 1 Credit Hour.**

Various concepts of occlusion with special emphasis on the clinical application of gnathology are the focus of this course. The laboratory phase includes the development of a functional occlusion through the cusp-fosa additive wax method and an occlusal equilibration technique.

**PROS 5021. Advanced Prosthodontics I. 1 Credit Hour.**

This fall course for first-year advanced prosthodontics students is designed to provide the postdoctoral student with the didactic basis for advanced clinical prosthodontics care.

**PROS 5022. Advanced Prosthodontics I. 1 Credit Hour.**

This spring course for first-year advanced prosthodontics students is designed to provide the postdoctoral student with the didactic basis for advanced clinical prosthodontics care.

**PROS 5032. Clinical Prosthodontics I. 4 Credit Hours.**

This fall course for first-year advanced prosthodontics students is designed to provide extensive clinical experience in the broad spectrum of prosthodontics as a first course in a progressively more complex clinical prosthodontics curriculum. Each student will have the opportunity to maintain a comprehensive prosthodontics practice involving fixed, removable, and implant treatment procedures.

**PROS 5033. Clinical Prosthodontics I. 3 Credit Hours.**

This spring course for first-year advanced prosthodontics students is designed to provide extensive clinical experience in the broad spectrum of prosthodontics as a second course in a progressively complex clinical prosthodontics curriculum. Each student will have the opportunity to maintain a comprehensive prosthodontics practice involving fixed, removable, and implant treatment procedures.

**PROS 5044. OMS/Prosthodontics Seminar 1. 0.5 Credit Hours.**

This fall course for first-year prosthodontics students is a seminar devoted to the discussion and coordination of treatment of patients under joint management by Oral & Maxillofacial Surgery and Graduate Prosthodontics.

**PROS 5045. OMS/Prosthodontics Seminar 1. 0.5 Credit Hours.**

The spring course for first-year prosthodontics students is a seminar devoted to the discussion and coordination of treatment of patients under joint management by Oral & Maxillofacial Surgery and Graduate Prosthodontics.

**PROS 5049. Overview of Maxillofacial Pros. 0.5 Credit Hours.**

This course introduces the graduate student to the discipline of maxillofacial prosthetics. Emphasis is placed on treating patients requiring prosthetic devices for the head and neck area due to surgery or trauma.

**PROS 5050. Dental Implantology. 1 Credit Hour.**

This course offers graduate level students an introduction to the basics of the osseointegrated implant surgical and prosthetic technique. Lectures on advanced concepts of osseointegration therapy related to several implant systems are included.

**PROS 5053. Advanced Implant Prosthodontics. 1.5 Credit Hour.**

The objective of this course is to offer each student an opportunity to obtain background information, knowledge, and skills associated with dental implant treatment modalities.

**PROS 5054. Advanced Dental Materials. 3.5 Credit Hours.**

Students have an opportunity to become acquainted with sophisticated research equipment through hands-on exposures. Measurements of mechanical, physical, and chemical properties of commonly used dental materials give the student the opportunity to envision and formulate research projects in dental materials.

**PROS 5067. Supervised Teaching 1. 1.5 Credit Hour.**

This course provides first-year prosthodontic residents the opportunity to teach complete denture laboratory skills to predoctoral students under the supervision of experienced prosthodontic educators.

**PROS 5068. Supervised Teaching 1. 2 Credit Hours.**

This spring course provides first-year prosthodontic residents the opportunity to teach complete denture laboratory skills to predoctoral students under the supervision of experienced prosthodontic educators.

**PROS 5072. Literature Review Seminar 1. 1 Credit Hour.**

This fall course for first-year prosthodontics students is the first of six courses given in a three-year continuum of classical literature review seminars. The broad field of prosthodontics literature is systematically reviewed with the objective of providing the postdoctoral student with a background of prosthodontic knowledge and history.

**PROS 5073. Literature Review Seminar 1. 1 Credit Hour.**

This spring course for first-year prosthodontic students is the second of six courses given in a three-year continuum of classical literature review seminars. The broad field of prosthodontics literature is systematically reviewed with the objective of providing the postdoctoral student with a background of prosthodontic knowledge and history.

**PROS 5095. Research. 1 Credit Hour.**

This summer course for advanced prosthodontics students is the first of three in the first year designed to offer opportunity to review the literature and to design and complete a laboratory or clinical research project under the direction of a faculty advisor. Research should result in a paper by certificate students suitable for publication in a peer-rated journal. Students in the masters programs will be expected to collect and analyze data for a thesis that must be defended as the culmination of research efforts.

**PROS 5096. Research. 1 Credit Hour.**

This summer course for advanced prosthodontics students is the second of three in the first year designed to offer an opportunity to review the literature and to design and complete a laboratory or clinical research project under the direction of a faculty advisor. Research should result in a paper by certificate students suitable for publication in a peer-rated journal. Students in the master's degree programs will be expected to collect and analyze data for a thesis that must be defended as the culmination of research efforts.

**PROS 5097. Research 1. 1-9 Credit Hours.**

This course offers the student an opportunity to review the literature and to design and complete a laboratory or clinical research project under the direction of a faculty advisor. Research should result in a paper by certificate students suitable for publication in a peer-rated journal. Students in the master's programs will be expected to collect and analyze data for a thesis which must be defended as the culmination of research efforts.

**PROS 6000. Introduction to Advanced Prosthodontics for Interns. 1 Credit Hour.****PROS 6022. Advanced Prosthodontics 2. 1 Credit Hour.**

This fall continuation course for second-year advanced prosthodontic students is designed to provide the postdoctoral student with the didactic basis for advanced clinical prosthodontic care.

**PROS 6023. Advanced Prosthodontics 2. 1 Credit Hour.**

This spring continuation course for second-year advanced prosthodontics students is designed to provide the postdoctoral student with the didactic basis for advanced clinical prosthodontic care.

**PROS 6031. Clinical Prosthodontics 2. 4.5 Credit Hours.**

This fall course for second-year advanced prosthodontic students is designed to provide extensive clinical experience in the broad spectrum of prosthodontics as a third clinical course in a progressively complex clinical prosthodontic curriculum. Each student will have opportunity to maintain a comprehensive prosthodontic practice involving fixed, removable, and implant treatment procedures (including surgical placement of implants).

**PROS 6032. Clinical Prosthodontics 2. 4.5 Credit Hours.**

This spring course for advanced prosthodontic students is designed to provide extensive clinical experience in the broad spectrum of prosthodontics as a course in a progressively more complex clinical prosthodontic curriculum. Each student will have the opportunity to maintain a comprehensive prosthodontic practice involving fixed, removable, and implant treatment procedures (including surgical placement of implants).

**PROS 6033. Clinical Prosthodontics 3. 8 Credit Hours.**

This fall course for advanced prosthodontic students is designed to provide extensive clinical experience in the broad spectrum of prosthodontics in a progressively more complex clinical prosthodontics curriculum. Each student will have the opportunity to maintain a comprehensive prosthodontic practice involving fixed, removable, implant and maxillofacial prosthodontic patients.

**PROS 6034. Clinical Prosthodontics 3. 6.5 Credit Hours.**

This spring course for advanced prosthodontics students is designed to provide extensive clinical experience in the broad spectrum of prosthodontics in a progressively more complex clinical prosthodontics curriculum. Each student will have the opportunity to maintain a comprehensive prosthodontics practice of fixed, removable, implant, and maxillofacial prosthodontics patients.

**PROS 6036. Maxillofacial Prosthodontics. 1 Credit Hour.**

This clinical course provides the opportunity to experience treating patients on the Maxillofacial Prosthetics Service. Patients with congenital and acquired defects are treated under the supervision of the maxillofacial prosthodontics faculty.

**PROS 6037. Clinical Prosthodontics. 1.5-4 Credit Hours.**

This clinical course for Perio-Pros residents in their 3rd and 5th years is designed to provide complex clinical treatment experiences that integrate skills from both specialties. Each student will have the opportunity to maintain a comprehensive integrated Perio-Pros practice.

**PROS 6043. Geriatric Dentistry. 0.5 Credit Hours.**

The objective of this course is to provide the clinical and didactic background necessary to address the limitations geriatric patients pose for prosthodontic specialty level diagnosis, planning and treatment.

**PROS 6046. OMS/Prosthodontics Seminar 2. 0.5 Credit Hours.**

This fall semester course for second-year advanced prosthodontic students is the third in a continuum of seminar courses devoted to the discussion and coordination of treatments of patients under joint management of the Oral and Maxillofacial Surgery and Prosthodontics programs.

**PROS 6047. OMS/Prosthodontics Seminar 2. 0.5 Credit Hours.**

This spring semester course for second-year advanced prosthodontics students is the fourth in a continuum of seminar courses devoted to the discussion and coordination of treatments of patients under joint management of the Oral and Maxillofacial Surgery and Prosthodontics programs.

**PROS 6048. Oral & Maxillofacial Surgery and Prosthodontics Seminar 3. 0.5 Credit Hours.**

This fall semester course for third year advanced prosthodontics students is a continuation of seminar courses devoted to the discussion and coordination of treatments of patients under joint management of the Oral & Maxillofacial Surgery and Prosthodontics programs.

**PROS 6049. Oral & Maxillofacial Surgery and Prosthodontics Seminar 3. 0.5 Credit Hours.**

This spring semester course for third year advanced prosthodontics students is a continuation of seminar courses devoted to the discussion and coordination of treatments of patients under joint management of the Oral & Maxillofacial Surgery and Prosthodontics programs.

**PROS 6069. Supervised Teaching 2. 2 Credit Hours.**

This fall course is the first of two second-year advanced prosthodontics courses that provide students with the opportunity to teach fixed prosthodontic laboratory skills to predoctoral students under the supervision of experienced prosthodontic educators.

**PROS 6070. Supervised Teaching 2. 2 Credit Hours.**

This spring course is the second of two second-year advanced prosthodontics courses that provide students with the opportunity to teach fixed prosthodontic laboratory skills to predoctoral students under the supervision of experienced prosthodontic educators.

**PROS 6071. Supervised Teaching 3. 2 Credit Hours.**

This course is the first of two third-year advanced prosthodontics courses that provide students with the opportunity to teach prosthodontic clinical skills to predoctoral students under the supervision of experienced prosthodontic educators.

**PROS 6072. Supervised Teaching 3. 2 Credit Hours.**

This course is the second of two third-year advanced prosthodontics courses that provide students with the opportunity to teach prosthodontic skills to predoctoral students under the supervision of experienced prosthodontic educators.

**PROS 6073. Literature Review Seminar 2. 1 Credit Hour.**

This fall course for second-year advanced prosthodontics students is the third of six courses given in a three-year continuum of classical literature review seminars.

**PROS 6074. Literature Review Seminar 2. 1 Credit Hour.**

This spring course for second-year advanced prosthodontics students is the fourth of six courses given in a three-year continuum of classical literature review seminars.

**PROS 6075. Literature Review Seminar 3. 1 Credit Hour.**

This fall course for third year advanced prosthodontics students is the fifth of six courses given in a three-year continuum of classical literature review seminars.

**PROS 6076. Literature Review Seminar 3. 1 Credit Hour.**

This fall course for third year advanced prosthodontics students is the sixth of six courses given in a three-year continuum of classical literature review seminars.

**PROS 6092. Research 2. 2 Credit Hours.**

This summer course for advanced prosthodontics students is the first of three research courses in the second year. It is designed to offer an opportunity to review the literature and to design and complete a laboratory or clinical research project under the direction of a faculty advisor. Research should result in a paper suitable for publication in a peer-rated journal. Students in the master's programs will be expected to collect and analyze data for a thesis which must be defended as the culmination of research efforts.

**PROS 6093. Research 2. 2 Credit Hours.**

This summer course for advanced prosthodontics students is the first of three research courses in the 2nd year. It is designed to offer an opportunity to review the literature and to design and complete a laboratory or clinical research project under the direction of a faculty advisor. Research should result in a paper suitable for publication in a peer-rated journal. Students in the masters programs will be expected to collect and analyze data for a thesis which must be defended as the culmination of research efforts.

**PROS 6096. Research 3. 2 Credit Hours.**

This fall course for advanced prosthodontic students is the second of three research courses in the 3rd year. It is designed to offer an opportunity to review the literature and to design and complete a laboratory or clinical research project under the direction of a faculty advisor. Research should result in a paper by certificate students suitable for publication in a peer-rated journal. Students in the masters programs will be expected to collect and analyze data for a thesis which must be defended as the culmination of research efforts.

**PROS 6097. Research 3. 2 Credit Hours.**

This course for third-year students in advanced prosthodontics is offered in the fall only for M.S. Prosthodontic degree students and in both the fall and spring for certificate students who matriculated in 2011. It is designed to offer an opportunity to review the literature and design and complete a laboratory or clinical research project under the direction of a faculty advisor. Certificate program research should result in a paper suitable for publication in a peer-rated journal or a scholarly presentation at an approved specialty venue.

**PROS 6098. Thesis. 1-9 Credit Hours.**

Completion of an acceptable thesis is required for the Master of Science in Prosthodontics degree. Registration in this course for at least one semester is required of all degree candidates. Admission to candidacy for the Master of Science degree is required in order to enroll in this course.

**PROS 6121. Advanced Prosthodontics 3. 1 Credit Hour.**

This fall continuum course provides an open forum for a wide variety of faculty and guest consultants on topics of special interest to the specialty of prosthodontics.

**PROS 6122. Advanced Prosthodontics 3. 1 Credit Hour.**

This spring continuum course provides an open forum for a wide variety of faculty and guest consultants on topics of special interest to the specialty of prosthodontics.

**PROS 7018. Fixed Prosthodontics. 1 Credit Hour.**

This course is designed to be adjunct to and to complement the preclinical course so that the student correlates previous instruction in the clinical care of patients in need of crowns and/or fixed partial dentures.

**PROS 7019. Fixed Prosthodontics Clinic. 4.5 Credit Hours.**

This clinical course consists of diagnosis and treatment planning, instruction in making complete and partial veneer crown preparations and modifications, management of supportive tissues, provision of adequate pain control for restorative procedures, fabrication and insertion of provisional as well as cast restorations, and instruction to patients in the care and maintenance of restorations.

**PROS 7091. Removable Partial Denture Prosthodontics Lecture. 0.5 Credit Hours.**

This didactic course is designed to acquaint the student with a variety of approaches that may be used in treating the partially edentulous mouth. Lectures cover critical steps in treatment of the partially edentulous patient, stabilization of periodontically weakened teeth, intracoronal and other attachments used in partial denture construction, swinglock partial dentures, removable partial overdentures, and cancer therapy as it relates to prosthodontic treatment.

**PROS 7092. Removable Partial Dentures Clinic. 1.5 Credit Hour.**

A clinical experience designed to place continued emphasis on diagnosis, treatment planning, design principles, mouth preparation, and dental laboratory coordination. The student is given the opportunity to correlate biological and mechanical information in clinical care of patients requiring removable partial dentures. The student is required to complete treatment for one partial denture patient during the junior year.

**PROS 7095. Complete Dentures Lecture. 0.5 Credit Hours.**

This course offers a series of lectures designed to present more sophisticated concepts in the prosthodontic treatment of edentulous and partially edentulous patients not included in previous courses. Lecture topics include preparation of the tissues for dentures, complete denture esthetics, occlusal systems for complete dentures, single complete dentures, immediate dentures, overdentures, maintenance care for the complete denture patient, and relining of dentures.

**PROS 7099. Complete Dentures Clinic. 2.5 Credit Hours.**

This clinical course consists of diagnosis and treatment planning, management of supportive tissues, fabrication and placement of complete dentures, and instruction to patients in the care and maintenance of complete dentures. The clinical experiences encourage students to correlate biological and biomechanical information into the prosthodontic treatment of edentulous and partially edentulous patients.

**PROS 8001. Dental Implantology. 0.5 Credit Hours.**

This course is designed to be an ever-evolving lecture series designed to provide senior dental students with more information regarding advanced topics in implant dentistry. The premise of this course is to provide evidenced-based materials regarding the latest information and current topic of interest in the field of implant dentistry. Lecture topics may include but are not limited to advanced treatment planning, immediate provisionalization (Non-loaded) of dental implants, the controversy of connecting an implant to a natural tooth, implant esthetics, advanced prosthodontic techniques, and implant and the maxillofacial patient.

**PROS 9021. Adv Prosthodontics 2. 5 Credit Hours.**

This continuation course for second-year advanced prosthodontic students is designed to provide the postdoctoral student with the didactic basis for advanced clinical prosthodontic care.

**PROS 9022. Advanced Prosthodontics 2. 5 Credit Hours.**

This continuation course for second-year advanced prosthodontic students is designed to provide the postdoctoral student with the didactic basis for advanced clinical prosthodontic care.

**PROS 9023. Advanced Prosthodontics 2. 5 Credit Hours.**

This continuation course for second-year advanced prosthodontics students is designed to provide the postdoctoral student with the didactic basis for advanced clinical prosthodontic care.

**PROS 9024. Adv Prosthodontics 3. 5 Credit Hours.**

This course is designed to provide the postdoctoral student with the opportunity to gain the prerequisite background and clinical experience in prosthodontic procedures. Fixed, removable, and overdenture concepts and treatment procedures will be emphasized.

**PROS 9029. Clinical Prosthodontics 2. 4.5 Credit Hours.**

This fall course for second-year advanced prosthodontic students is designed to provide extensive clinical experience in the broad spectrum of prosthodontics as a fifth clinical course in a progressively complex clinical prosthodontic curriculum. Each student will have opportunity to maintain a comprehensive prosthodontic practice involving fixed, removable, and implant treatment procedures.

**PROS 9030. Clinical Prosthodontics 2. 2 Credit Hours.**

This summer course for second-year advanced prosthodontics students is designed to provide extensive clinical experience in the broad spectrum of prosthodontics as a fourth clinical course in a progressively complex clinical prosthodontic curriculum. Each student will have the opportunity to maintain a comprehensive prosthodontic practice involving fixed, removable, and implant treatment procedures.

**PROS 9031. Clinical Prosthodontics 1. 6 Credit Hours.**

This course provides instruction in the laboratory procedures and clinical aspects of complete dentures, removable partial dentures, fixed, and implant prosthodontics. Residents are required to understand laboratory techniques and dental materials and to perform all phases of laboratory support related to clinical prosthodontics.

**PROS 9032. Clinical Pros 1. 2 Credit Hours.**

This spring course for advanced prosthodontic students is designed to provide extensive clinical experience in the broad spectrum of prosthodontics as a sixth clinical course in a progressively complex clinical prosthodontic curriculum. Each student will have the opportunity to maintain a comprehensive prosthodontic practice involving fixed, removable, and implant treatment procedures.

**PROS 9040. Hosp Maxillofacial Rotation. 1.5 Credit Hour.**

Rotation in the Maxillofacial Prosthetics Department gives residents clinical exposure to geriatric and maxillofacial patients. 3rd year residents provide treatment for a patient requiring an obturator prosthesis. Residents with special interest in maxillofacial prosthetics may have the opportunity to treat additional maxillofacial patients that require other various prostheses.

**PROS 9073. Literature Seminar 1. 3 Credit Hours.**

This course for second-year advanced prosthodontics students is one of a series of courses given in a three-year continuum of classical literature review seminars.

**PROS 9074. Literature Seminar 2. 3 Credit Hours.**

This course for second-year advanced prosthodontics students is one of a series of courses given in a three-year continuum of classical literature review seminars.



**PROS 9075. Literature Seminar 2. 3 Credit Hours.**

This course for second-year advanced prosthodontics students is one of a series of courses given in a three-year continuum of classical literature review seminars.

**PROS 9076. Literature Seminar 3. 3 Credit Hours.**

The broad field of prosthodontics literature is systematically reviewed with the objective of providing the postdoctoral student with a background of prosthodontics knowledge and history.

**PROS 9077. Literature Seminar 3. 3 Credit Hours.**

The broad field of prosthodontics literature is systematically reviewed with the objective of providing the postdoctoral student with a background of prosthodontics knowledge and history.

**PROS 9097. Research. 1-9 Credit Hours.**

The student develops a research protocol and background literature search for a clinical, laboratory, or animal model research project.