

Endodontics, M.S.

Degree Offered

- Master of Science

Nature of the Program

The twenty-six month Master of Science in Endodontics program is designed to prepare the student for all aspects of the practice of endodontics. The clinical program is modeled on a private practice, state-of-the-art facility. The didactic program prepares the resident for a career in endodontics which includes practice, teaching, and/or research. The program is fully accredited by the Commission on Dental Accreditation (CODA). Our core belief is that a strong evidence-based scientific background prepares our residents for the challenges of the current practice environment and Diplomate status reflects the commitment to our chosen profession.

The master's thesis project is designed to obtain results suitable for publication in a reputable dental journal. The ability to read and understand past and current literature is critical to keeping abreast of the latest advances.

Graduates of the program will be well prepared to successfully pass the examination conducted by the American Board of Endodontics that leads to Board certification and status of Diplomate, American Board of Endodontics. It is a requirement for every second year resident to take the written component of the ABE and all endodontic residents are encouraged to complete the board certification process.

A stipend plus tuition waiver will be provided for graduate students in Endodontics during fall and spring semester of year two and summer semester of year three. Special fees are not covered by the tuition waiver. You must pay these each term/semester.

Inquiries concerning this program should be directed to the Office of Dental Admissions, Recruitment and Access (<https://dentistry.hsc.wvu.edu/departments/dental-admissions-recruitment-access/>). Applications will be processed by the School of Dentistry. Applicants approved for admission to the program will be notified soon after interviews are completed.

This program is accredited by the Commission on Dental Accreditation of the American Dental Association. For details about the faculty, publications, and alumni information, please visit the website at Department of Endodontics. (<https://dentistry.hsc.wvu.edu/students/master-of-science/endodontics/>)

Program Goals

1. Education - To impart residents with in-depth knowledge of the biologic and mechanical principles involved in endodontics and to encourage continued learning throughout the professional life of the graduate.
 - a. Objective 1.1 - To graduate endodontists who will seek and successfully complete Diplomate status of the American Board of Endodontics.
 - b. Objective 1.2 - To prepare graduates to enter careers centered on the specialty of endodontics whether in practice, teaching, research, or a combination of the three.
2. Patient Care - To graduate residents who will be proficient in endodontics through adequate clinical exposure and broad-based patient case selection.
3. Research - To prepare residents able to contribute to the advancement of the endodontic specialty and the dental profession through basic biomedical, behavioral, clinical and educational research.
4. Service - To produce graduates who provide quality endodontic care to the public and who establish productive, competent and socially responsible professional careers as health care educators and providers.

Program Curriculum

The program commences with an orientation on July 1 of the first year and runs continuously until the summer semester ends in mid August, twenty-six months later. The semesters are divided into Fall (mid-August to mid-December), Spring (January to early May) and Summer (mid-May to early August). Didactic course work at the WVU Department of Endodontics consists of lectures and seminar sessions that cover all aspects of endodontic therapy. Clinical experience includes the use and evaluation of new technology such as CBCT, microscopy, ultrasonic irrigation, and 3D modeling for surgery. In case presentation seminars, residents are continually stimulated to evaluate the care they provide so they can engage in a lifelong learning process for a career of continual improvement. Joint treatment with Pediatric Dentistry, and treatment of patients in the hospital operating room adds to the full experience of this residency. In addition, residents will have the opportunity to meet many guest lecturers from around the world who will stimulate them with new ideas.

FACULTY

CHAIR

- Samuel Dorn - D.D.S., C.A.G.S.
Fairleigh Dickinson University

GRADUATE PROGRAM DIRECTOR

- Samuel Dorn - D.D.S, C.A.G.s
Fairleigh Dickinson University

PREDOCTORAL DIRECTOR

- Mark Byron - D.D.S
West Virginia University

Admissions for 2026-2027

The program's requirements are as follows:

- Must have passed the National Board Dental Examination - Part 1 at the time of application and Part 2 upon entrance to the program or the Integrated Exam (INBDE).
- Must have earned a D.M.D. or D.D.S. degree or its equivalent.
- Must be proficient in the English language (<https://admissions.wvu.edu/how-to-apply/international-students/english-language-proficiency-requirements/>) and report the most recent TOEFL score (if foreign applicant from a non-English speaking country).
- Must display evidence of scholastic and clinical achievement that would indicate the applicant's ability to progress in a program of this nature. A minimum grade-point average of 3.0 is required.
- Must apply to the program through the Postdoctoral Application Support Service (PASS) (<https://adea.org/PASSapp/applicants/>) and have all application materials submitted by July 15.
- Must complete and submit a WVU Graduate Application if invited for an interview.
- Must participate in an interview.
- Must consent to and pass a criminal background investigation prior to final acceptance.
- Must submit documentation of all required immunizations. A complete list is available on the School of Dentistry website.
- Must become familiar with the West Virginia University School of Dentistry's Policy and Procedure for Bloodborne Pathogens and Infectious Diseases.
- Must meet federal and university standards regarding the Responsible Conduct of Research.
- Must be eligible for and obtain a West Virginia dental license or a dental resident/intern permit prior to the first day of program orientation.

Major Code: 8016

Degree Requirements

- Fulfill University requirements for graduate study.
- Complete 26 months (two academic years plus a summer session) of consecutive full-time advanced study and clinical training at the School of Dentistry.
- Complete an approved master's thesis based on original research completed during the course of study in an area related to endodontics.
- Pass a final oral examination.
- Complete all didactic and clinical work in the required curriculum successfully.
- Demonstrate satisfactory clinical competency in endodontics.
- Complete the written portion of the American Board of Endodontics examination.
- Complete a minimum of 84 credit hours, including 60 hours of endodontic courses, a minimum of 7 hours of selected basic sciences subjects, 5 hours teaching practicum, and 12 hours devoted to research/thesis.
- Achieve a 3.0 GPA or an overall competence in the student's field. A minimum grade of B must be earned in all work attempted in the master's program. A grade of C or below in two courses will require a faculty review of the student's progress. A third C or below will result in suspension from the program.

CURRICULUM REQUIREMENTS

Code	Title	Hours
Minimum GPA of 3.0 is required.		
Minimum grade of B is required in all courses. *		
Biomedical Sciences Courses		
DENT 601	Advanced Oral Microbiology	3
DENT 602	Special Studies in Oral Pathology	2
PALM 716	Craniofacial Growth and Maturation	1
PCOL 765	Advanced Biomedical Sciences: Applied Pharmacology	1

Endodontic Courses		
DENT 600	Advanced Oral Surgery	3
ENDO 681	Fundamentals of Endodontics	2
ENDO 682	Fundamentals of Endodontics Laboratory	2
Endodontic Classic Literature Review		7
ENDO 683	Endodontic Classic Literature Review	
Endodontic Current Literature Review		7
ENDO 684	Endodontic Current Literature Review	
Endodontic Case Review and Analysis		7
ENDO 685	Endodontic Case Review and Analysis	
ENDO 688	Clinical Endodontics (Repeated)	30
Clinical Management of Medically Compromised Patients		2
PERI 644	Clinical Management of Medically Compromised Patients	
Teaching Practicum		5
ENDO 690	Teaching Practicum	
Research/Thesis		
DENT 686	Applied Statistics in Dentistry	3
DENT 687	Research Methods	1
ENDO 697	Research	8
Master's Thesis		
Oral Examination		
Demonstrate clinical competency in endodontics		
Total Hours		84

SUGGESTED PLAN OF STUDY

First Semester	Hours
DENT 600	1
ENDO 681	2
ENDO 682	2
ENDO 683	1
ENDO 684	1
ENDO 685	1
ENDO 697	1
	9
Second Semester	Hours
DENT 600	2
DENT 686	3
ENDO 683	1
ENDO 684	1
ENDO 685	1
ENDO 688	5
ENDO 697	1
DENT 602	2
PCOL 765	1
	17
Third Semester	Hours
DENT 601	3
DENT 687	1
ENDO 683	1
ENDO 684	1
ENDO 685	1
ENDO 688	5

ENDO 690	1
ENDO 697	1
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	14
Fourth Semester	Hours
ENDO 683	1
ENDO 684	1
ENDO 685	1
ENDO 688	5
ENDO 690	1
ENDO 697	1
PALM 716	1
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	11
Fifth Semester	Hours
ENDO 683	1
ENDO 684	1
ENDO 685	1
ENDO 688	5
ENDO 690	1
ENDO 697	1
PERI 644	1
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	11
Sixth Semester	Hours
ENDO 683	1
ENDO 684	1
ENDO 685	1
ENDO 688	5
ENDO 690	1
ENDO 697	1
PERI 644	1
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	11
Seventh Semester	Hours
ENDO 683	1
ENDO 684	1
ENDO 685	1
ENDO 688	5
ENDO 697	2
ENDO 690	1
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	11

Total credit hours: 84

Major Learning Outcomes

ENDODONTICS

- Provide the education and training necessary for graduate dentists to practice in their specialty.
- Provide the education and training necessary for a specialist to achieve Board Certification.

COURSES

ENDO 644. Clinical Management of Medically Compromised Patients. 1 Hour.

PR: Enrollment in the MS program in Endodontics. This course will provide an in-depth knowledge of various medically compromising conditions and their management during dental treatment. The course will also enable the participants to prevent, diagnose and respond to common medical emergencies appropriately.

ENDO 681. Fundamentals of Endodontics. 2 Hours.

The aim of this course is to provide first year Endodontic residents with foundational knowledge in endodontic diagnosis, treatment planning, treatment procedures, prognosis and contemporary research prior to starting patient care in the graduate endodontics clinic.

ENDO 682. Fundamentals of Endodontics Laboratory. 2 Hours.

This laboratory course is designed to mimic the technical skills required for patient care. Graduate students (residents) will practice the techniques discussed and demonstrated in ENDO 681. Residents will become familiar with the Graduate Endodontic Clinic, instrumentation, materials and the Surgical Operating Microscope. Instructors will be able to assess the resident as they observe the demonstration of technical skills required.

ENDO 683. Endodontic Classic Literature Review. 1 Hour.

Provides seminar discussions in the topics of: basic endodontic techniques, advanced endodontic techniques, endodontic literature review, case presentation, advanced endodontic theory and legal aspects of clinical practice.

ENDO 684. Endodontic Current Literature Review. 1 Hour.

Provides seminar discussions in the topics of: Current endodontic techniques, current endodontic literature review, and legal aspects of clinical practice.

ENDO 685. Endodontic Case Review and Analysis. 1 Hour.

PR: ENDO 682. Advanced education students in endodontics apply critical thinking skills while presenting comprehensive cases with endodontic conditions utilizing diagnosis and treatment planning options considered through a problem-based approach. Students are also expected to apply critical thinking skills to the review of endodontic books and current literature pertaining to the field of endodontics and pulp biology to justify treatment approaches.

ENDO 688. Clinical Endodontics. 1-5 Hours.

(May be repeated for credit.) PR: Graduate of an accredited dental school and admission to the advanced education program in endodontics or consent. Clinical endodontic practice in the areas of: ordinary endodontic cases, complex endodontic cases, hemisection, root amputation, replantation, transplantation, endodontic implantation, vital pulp therapy, apexification, and bleaching.

ENDO 690. Teaching Practicum. 1-3 Hours.

PR: Consent. Supervised practice in college teaching of dentistry. Note: this course is intended to insure that graduate assistants are adequately prepared and supervised when they are given colleges teaching responsibility. It also provides a mechanism for students not on assistantships to gain teaching experience.

ENDO 691. Advanced Topics. 1-6 Hours.

PR: Consent. Investigation of advanced topics not covered in regularly scheduled courses.

ENDO 697. Research. 1-9 Hours.

PR: Consent. Research activities leading to thesis (697), problem report (697), research paper or equivalent scholarly project (697), or a dissertation (797). (Grading may be S/U.).