

# Postdoctoral Program – Graduate Specialty Program in Endodontology

**Graduate Program Director: Larry Koren, BDS, DMD**  
**Associate Professor of Endodontology**  
**Diplomate, American Board of Endodontics**

The Department of Endodontology, the first of its kind at a United States dental school, prepares qualified dentists for specialty practice, teaching, and research in endodontics through an advanced education program leading to a Postgraduate Certificate in Endodontology. The program is fully accredited and received three commendations at the last visit from the Commission on Dental Accreditation of the American Dental Association. The program also fulfills the educational requirements for specialty board certification by the American Board of Endodontics.

The full-time program\* encompasses clinical and didactic instruction presented over a 24-month period. Students matriculate at the beginning of September of each year and must remain in continuous residence for the entire program period. Program facilities include modern clinic operatories, a well-equipped seminar room, two surgical operating microscopes with digital video recording capability, graduate student study cubicle/office space, on-line computers, and access to operational research laboratories. Each student is assigned to their own radiographic imaging unit and locked cabinet.

Graduate endodontic students receive a major part of their didactic training during the first year and are instructed in diagnostic and therapeutic techniques in clinical endodontics as a part of their patient care activities. The didactic component of the program consists of multiple seminar courses that involve extensive reading and analysis of the primary scientific literature in endodontics, and a series of basic biomedical science courses jointly taken with graduate students from other clinical specialty programs. Clinical activities comprise approximately 50% of the program, with clinical proficiency attained in all phases of endodontic therapy. The program also places a heavy emphasis on Endodontic Board Certification. The pass rate of our graduates has been amongst the highest in the country. Training and experience is provided in all acceptable treatment modalities in clinical endodontics, including use of various types of endodontic instrumentation, non-surgical obturation techniques (lateral condensation, chloropercha, eucapercha, warm gutta-percha, thermoplastic techniques, and apexification), and endodontic surgery (apicoectomy, periapical curettage, guided tissue/bone regeneration, retrograde seals, and replantation procedures). A vast, highly diverse patient pool in the Philadelphia metropolitan area with a wide range of endodontic treatment needs is available to the program. Special clinical emphasis is placed on endodontic emergency care, endodontic re-treatment, and contemporary management of complex and/or refractory endodontic lesions. Collaborative educational activities take place with other endodontic specialty programs and faculty in the Philadelphia city area.

A publishable research project is a mandatory part of the program, and teaching experience for postgraduate endodontic students is offered by supervising predoctoral dental students in the endodontic technique laboratory, and in the clinical program at the School of Dentistry. A research thesis-based Master of Science in Oral Biology degree program is available through the Temple University Graduate School to qualified individuals, and may be taken concurrently with the postgraduate certificate program.

At present, six individuals are selected per year for full-time matriculation into the graduate specialty program in endodontology. The program does accept students straight out of dental school, however, preference in admission is given to academically-accomplished applicants with previous clinical practice experience, prior research accomplishment, and/or graduates of general residencies (GPR) or advanced general dentistry (AEGD) programs. Applicants should indicate if they are seeking acceptance into a *clinical track* for the Postgraduate Certificate in Endodontology only, or to a *research track*, where completion of the Master of Science in Oral Biology degree is required for awarding of the Postgraduate Certificate in Endodontology.

\* *Freedom to teach and freedom to learn are inseparable facets of academic freedom. The University has adopted a policy on Student and Faculty Academic Rights and Responsibilities (Policy #03.70.02) which can be accessed through the following link: [http://policies.temple.edu/getdoc.asp?policy\\_no=03.70.02](http://policies.temple.edu/getdoc.asp?policy_no=03.70.02)*

## **Philosophy of the Advanced Education Program in Endodontology** ([back to top](#))

An advanced program of study, designed to qualify specialists in Endodontics, should provide a background of understanding of the biological sciences, as well as of the behavioral and social sciences. The purposes of such a program are to prepare an individual to practice, to teach or to engage in research and to meet the requirements of a certifying board. The program will afford instruction in basic biological sciences such as biochemistry, pharmacology, immunology, pathology, microbiology, genetics and others. In addition, some insight will be afforded into motivation and behavioral patterns, the reactions of patients to dentists and the dentist's own reactions to patients.

The philosophy of such a program is intended to prepare them for independent decision-making. The students are asked to prepare reports, search the literature and discuss topics in seminars. There is less emphasis on formal lectures and more emphasis on group discussion.

Keeping abreast of current literature, as well as knowledge of landmark articles from the past literature is necessary for a deep-seated understanding of the field of endodontology. The literature is critically evaluated for research design, findings and conclusions. The scientific method is thus explored and evaluated.

Research is an integral part of the learning process. Students are expected to participate in research activities within the department. Fully equipped, departmental laboratory facilities are available to support basic research in such areas as: biochemistry, microbiology, molecular biology and cell biology. Additional research facilities, as well as expertise, is available through collaborative arrangements with departments within Temple University School of Medicine. Clinical research will also be supported and encouraged. A protocol for a proposed investigation must be prepared and presented to a panel of basic scientists. Following such critical evaluation and acceptance of the protocol, the student is encouraged to begin his research project.

Clinical aptitude is encouraged by clinical practice. Students are given basic instructions in techniques; concurrently, they practice endodontics in the clinic. Instruction is based on the philosophy that there should be freedom to explore various techniques. Instructors are always available for consultation. The students are encouraged to try out various techniques and no attempt is made to restrict them to any specific technique.

To expand the horizons of the students, visiting teachers and clinicians are invited to address the students, to participate in panel discussions with them. The students are also encouraged to attend local, state and national meetings and conferences to hear other points of view.

The developing concepts and philosophies of the students are subsequently allowed expression in the second year when the students are asked to lecture, lead group discussions and teach predoctoral dental students.

## **Relation of the Clinical Training to Other Clinical Disciplines** ([back to top](#))

All the advanced education students are taught the same core curriculum of basic sciences. They make seminar reports to each other and discuss various clinical problems in other disciplines. Due to their close proximity, periodontal students and endodontic students work together and consult each other frequently when combined problems exist.

Seminars with teachers of other disciplines are arranged, e.g. with oral pediatrics, operative dentistry and AEGD.

## **Goals and Objectives of the Advanced Specialty Education Program in Endodontics** ([back to top](#))

**Goal 1:** To train postdoctoral endodontic residents who possess the knowledge and skills required to diagnose, understand the basis of, and adequately treat, alone or in concert with other dental and medical practitioners, endodontic problems and their related diseases, and to maintain the health of the attachment apparatus.

- **Objective 1:** To provide the residents with in-depth knowledge of relevant biomedical sciences as they correlate to the theory and practice of Endodontics.
- **Objective 2:** To provide the residents with a sufficient number of diagnostic, nonsurgical, and surgical clinical experiences which will result in stated proficiencies and competencies in the practice of Endodontics.
- **Objective 3:** To prepare the residents to effectively treat medically compromised patients.
- **Objective 4:** To provide the residents with the opportunity to present and discuss their clinical cases with the endodontic faculty and fellow students, as well as with faculty and students in other dental disciplines.
- **Objective 5:** To ensure that the curriculum is constantly evolving with each iteration being an improved version of its predecessor.

**Goal 2:** To train postdoctoral endodontic residents who possess the knowledge and skills required to critically evaluate and apply current technological developments and research into their clinical practice.

- **Objective 6:** To train the resident in the basic principles of research methodology, biostatistics, and data analysis, in order to ensure that students complete a research project.
- **Objective 7:** To prepare the resident to critically evaluate the dental literature.
- **Objective 8:** To provide the resident with opportunities to work with and evaluate new instruments and techniques.

**Goal 3:** To prepare postdoctoral endodontic residents for certification by the American Board of Endodontics.

- **Objective 9:** To provide the resident with the knowledge and skills to successfully complete the board certification process.
- **Objective 10:** To provide the resident with the incentive and support to successfully complete the board certification process.

**Goal 4:** Create the desire and sense of obligation and responsibility to contribute to the perpetuation and growth of endodontics by mentoring and teaching; and by supporting organized endodontics and other professional organizations.

- **Objective 11:** To prepare all residents so that they may obtain practice, teaching and/or administrative positions associated with the discipline of endodontics.
- **Objective 12:** To provide the residents with the training necessary to teach endodontics to dentists and dental students at all levels.

**Goal 5:** To train postdoctoral endodontic residents to be ethical, sensitive, compassionate and professional endodontists who will have successful careers in clinical service and/or education.

- **Objective 13:** To provide residents with training necessary to serve and advance the specialty of Endodontics.
- **Objective 14:** To provide residents with knowledge regarding professional responsibilities.

## Acceptance to the Endodontology Program [\(back to top\)](#)

Preference is given to academically-accomplished applicants with one or more years of clinical practice experience or completion of a general practice residency (GPR) or an advanced education in general dentistry (AEGD) program. Preference is also given to applicants with prior research experience/training, scientific publications, and/or prior advanced degrees in basic science/biomedical fields. However, students straight out of dental school with very good grades are also encouraged to apply.

Since English is the language of instruction at Temple University School of Dentistry, adequate proficiency in both verbal and written comprehension and expression of English is a prerequisite for admission to the Postgraduate Certificate in Endodontology program. Applicants whose native language is not English are required to attain Test of English as a Foreign Language (TOEFL) scores equivalent to 600 or higher prior to consideration for admission.

The admissions process ensures a fair, unbiased and non-discriminatory admissions policy.


**A Master of Science (M.S.) in Oral Biology** degree is an option to be completed concurrent with the Postgraduate Certificate in Endodontology program. This joint program aims to develop "clinician scholars" in endodontology who obtain the combination of a strong modern foundation in basic sciences and research methodology from the M.S. degree with clinical specialty training from the postgraduate certificate program. The M.S. in Oral Biology in part requires a minimum of 30 semester hours of graduate-level coursework, completion of a written thesis based upon original investigation and research, and successful passage of a final oral examination defending the thesis. Admission to the M.S. in Oral Biology must be sought concurrent with the start of the clinical specialty certificate program.

## Applying to the Program [\(back to top\)](#)

Temple University encourages applicants both domestic and foreign. Applying to the Endodontic Program involves the following:

1. Application to the Endodontic Program is initiated through the American Dental Education Association **Postdoctoral Application Support Service (PASS)**. Please check with PASS that all your information is received by them as **they will only forward completed records** to the university for processing.

The website address to PASS is [http://www.adea.org/dental\\_education\\_pathways/pass/Pages/default.aspx](http://www.adea.org/dental_education_pathways/pass/Pages/default.aspx).

The website address to PASS for directions on how to apply is: <https://portal.passweb.org/> 

2. The applicant must send official transcripts from their study at undergraduate college directly to Temple University School of Dentistry (Department of Endodontics). **Please do not send the undergraduate college transcripts to PASS as they will not accept them.**
3. A **separate application fee of \$40** is required when applying to the endodontics program. Please make checks payable to: **Temple University School of Dentistry.**

**The address for the check and transcripts is:**


Dr. Larry Koren  
Department of Endodontics  
Temple University  
Kornberg School of Dentistry  
3223 North Broad Street  
Philadelphia, PA 19140


If you have questions about the application process please contact the Endodontology Department Office Secretary, Ms Pamela Bennett:

Phone: 215-707-2810

Fax: 215-707-1482

E-Mail: Pam Bennett, [pbennett@dental.temple.edu](mailto:pbennett@dental.temple.edu)

For more information about Philadelphia including culture, shopping, apartments, newspapers and events go to [Philadelphia and The Countryside™](#) 

If you plan to visit the dental school, accommodations can be made at Temple University's [Conwell Inn](#)  located on the Main Campus.

## Facilities [\(back to top\)](#)

Constructed in 1989, the The Maurice H. Kornberg School of Dentistry is housed in one of the newest facilities of any dental school in the country. Large areas of this facility were dedicated specifically for the Postdoctoral Endodontics Program, and remain exclusively used by our Postdoctoral Endodontics Students. This includes 13 operatories (each with its own x-ray unit and the potential for microscope use), 2 student lounges/offices, a seminar room, a reception room, a waiting room, sterilization/dispensing areas, and storage rooms. It is clear from this that a substantial commitment was made by the dental school, to the establishment of an advanced Education Program in Endodontics. This commitment has continued and grown. Financial support by the school has permitted the department to assemble a professional staff of 5 full time, and 7 part time faculty members who participate in our Advanced Educational Program - either as lecturers, Seminar Leaders, or Clinical Instructors. In addition, the financial support committed by the school to our Advanced Education Program has allowed us to bring noted experts in all phases of endodontics, pulp biology, and periapical biology to our school to teach our students.

Another example of the school's commitment to this department and our Advanced Education Program, was the construction of 2,200sq. ft. of laboratory space for the research activities of our program. Finally, the continued support of the school has allowed us to fully equip and maintain the clinical facilities that are dedicated to our advanced education program.

## **Courses**[\(back to top\)](#)

### **First Year Coursework**

#### **Fall Semester**

GEndo 8111. Pain Diagnosis and Control (2 s.h.)  
GEndo 8112. Pulp Biology (2 s.h.) \*\*  
GEndo 8113. Periapical Biology (2 s.h.) \*\*  
GEndo 8114. Biological Basis of Disease (2 s.h.)  
GEndo 8115. Current Clinical Concepts (2 s.h.)  
GEndo 8120. Clinical Seminars in Endodontology (2 s.h.)  
GEndo 8130. Current Literature Review (1 s.h.)  
GEndo 9185. Emergency Endodontic Clinic (3.0 s.h.)  
GEndo 9285. Endodontic Clinic (12 s.h.)  
Oral Biology 418. Research Methods and Study Design (1 s.h.)\*\*\*  
Oral Biology 421. Oral Microbiology & Immunology (1 s.h.)\*\*\*  
Oral Biology 425. Biostatistics (1 s.h.)\*\*\*  
Oral Biology 471. Oral and Maxillofacial Radiology (1 s.h.)\*\*\*

#### **Spring Semester**

GEndo 8112. Pulp Biology (2 s.h.)\*\*  
GEndo 8113. Periapical Biology (2 s.h.) \*\*  
GEndo 8115. Current Clinical Concepts (2 s.h.)  
GEndo 8120. Clinical Seminars in Endodontology (2 s.h.)  
GEndo 8116. Microbiology/Immunology (2 s.h.)  
GEndo 8117. Systemic Diseases (1.5 s.h.)  
GEndo 8118. Endodontic Surgery (2.5 s.h.)  
GEndo 8119. Teaching for Sophomore Preclinical Lab (2 s.h.)  
GEndo 9185. Emergency Endodontic Clinic (3.0 s.h.)  
GEndo 8123. Endodontic Methods and Materials (1.0 s.h.)  
GEndo 9285. Endodontic Clinic (12 s.h.)  
Oral Biology 401. Molecular Oral and Craniofacial Biology (1 s.h.)\*\*\*  
Oral Biology 407. Advanced Dental Pharmacology and Therapeutics (1 s.h.)\*\*\*  
Oral Biology 411. Seminars in Oral and Craniofacial Biology (1 s.h.)\*\*\*  
Oral Biology 420. Advanced Oral Pathology (1 s.h.)\*\*\*  
Pediatric Patient Management\*\*\*\*

#### **Summer Session I**

GEndo 9185. Emergency Endodontic Clinic (3.0 s.h.)  
GEndo 9285. Endodontic Clinic (12 s.h.)  
Oral Biology 416. Clinical Anatomy of the Head and Neck (1 s.h.)\*\*\*  
Pediatric Patient Management\*\*\*\*

## Summer Session II

GEndo 9185. Emergency Endodontic Clinic (3.0 s.h.)  
GEndo 9285. Endodontic Clinic (12 s.h.)  
Pediatric Patient Management\*\*\*\*

## Second Year Coursework

### Fall Semester

GEndo 8112. Pulp Biology (2 s.h.)\*\*  
GEndo 8113. Periapical Biology (2 s.h.)\*\*  
GEndo 8120. Clinical Seminars in Endodontology (2 s.h.)  
GEndo 8130. Current Literature Review (1 s.h.)  
GEndo 9185. Emergency Endodontic Clinic (3.0 s.h.)  
GEndo 8122. Dental Traumatology (1.0 s.h.)  
GEndo 9285. Endodontic Clinic (12 s.h.)

### Spring Semester

GEndo 8112. Pulp Biology (2 s.h.)\*\*  
GEndo 8113. Periapical Biology (2 s.h.)\*\*  
GEndo 8120. Clinical Seminars in Endodontology (2 s.h.)  
GEndo 8130. Current Literature Review (1 s.h.)

GEndo 8140. Classical Literature Review (1 s.h.)  
GEndo 9185. Emergency Endodontic Clinic (3.0 s.h.)  
GEndo 9285. Endodontic Clinic (12 s.h.)

### Summer Session I

GEndo 9185. Emergency Endodontic Clinic (3.0 s.h.)  
GEndo 9285. Endodontic Clinic (12 s.h.)

### Summer Session II

GEndo 9185. Emergency Endodontic Clinic (3.0 s.h.)  
GEndo 9285. Endodontic Clinic (12 s.h.)

*\* Any student who feels a need for an accommodation based on the impact of a disability should contact Disability Resources and Services (room 100 in Ritter Annex) at 215-204-1280. This office will assist in coordinating reasonable accommodations for students with documented disabilities.*

\*\* Course offered alternate years

\*\*\* CORE - Mandatory courses for all first year postgraduate students

\*\*\*\* Courses offered in conjunction with visiting lecturers

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