

# ENDODONTICS

## Program Overview

Endodontic residents participate in a comprehensive 27-month program designed to provide in-depth clinical training in endodontics, supported by a solid foundation of coursework in the biologic principles that uphold the specialty. In addition to a curriculum that nurtures the clinician-scientist, the program offers clinical experiences with an extensive patient demographic supported by the School of Dentistry and a community dental clinic that is part of an expansive health care network in the East San Francisco Bay Area. Each resident will also engage in an investigative project and complete an acceptable thesis to qualify for the Master of Science in Dentistry degree. The thesis is typically submitted for publication in scientific journals. Classes begin each July. Residents are scheduled for classroom and clinical instruction five full days (and some evenings) per week and full participation is required.

The graduate program in endodontology is fully accredited by the Commission on Dental Accreditation.

More information on the program, including admissions requirements, curriculum and schedule, graduation and certification requirements are available here (<http://dental.pacific.edu/academic-programs/residency-and-graduate-programs/advanced-education-program-in-endodontology/>).

## Units of Credit

One unit of credit is awarded for ten hours of lecture or seminar, twenty hours of laboratory or clinic, or thirty hours of independent study per term. In the predoctoral programs (DDS and IDS), students are assigned to comprehensive care clinics for approximately 650 hours during the second year and 1,000 hours during the third, in addition to specialty clinic rotations. Units of credit are assigned in the comprehensive care clinical disciplines in proportion to the amount of time an average student spends providing specific types of care for assigned patterns.

Courses are taught on a permanent or interim (continuing) basis. Course numbers followed by the letter 'I' indicate interim courses which are taught over two or more quarters. Units assigned to interim courses build upon each preceding quarter's unit value and culminate in a final and permanent unit value. The final unit value is transcribed with the permanent course while interim courses and corresponding unit values can be found on report cards.

Full-time enrollment in the predoctoral programs at the School of Dentistry (DDS and IDS) is defined as 16 or more units per term. Full-time enrollment in the graduate residency programs in orthodontics and endodontics and in the dental fellowship and internship programs is defined as 20 or more units per term.

## Competency Statements

### Graduates of Advanced Education Program in Endodontology will:

- Achieve a full range of endodontic care experiences, including but not limited to diagnosis and treatment planning for patients of all ages.
- Be equipped with the necessary manual and cognitive skills for the changing marketplace in private practice now and in the foreseeable future.
- Incorporate during their practice an in-depth knowledge of the biologic and technical aspects of maintaining, replacing, and enhancing the natural dentition, including mechanisms for enhanced

tissue healing and tissue regeneration on areas relevant to endodontics.

- Emphasize the interrelationship among the biomedical and clinical sciences and their application to clinical practice.
- Be prepared to practice evidence-based endodontics in both simple and complex cases.
- Exercise the five principles of ethics in their practice.
- Have detailed knowledge in:
  - Anatomy (gross and micro) of soft and hard tissues of the head and neck relevant for endodontic diagnostics, successful anesthesia and surgical procedures.
  - Pathophysiology of the pulpal/periradicular disease
  - Infectious and immunologic processes in oral health and disease
  - Embryology
  - Wound healing
  - Oral medicine and oral pathology
  - Pharmacotherapeutics
  - Research methodology and statistics
  - Neurosciences
  - Biomaterials
- Have in-depth proficiency in:
  - Diagnosis, treatment planning and prognosis
  - Non-surgical and surgical endodontic treatment and retreatment
  - A variety of endodontic techniques
  - Outcome evaluation
  - Radiography and other diagnostic imaging technologies
  - Management of endodontic treatment of medically compromised patients
  - Emergency treatment for endodontic conditions for consultations and treatment if needed.
  - Management of patients with orofacial pain and anxiety
  - Preparation of space for intraradicular restorations in endodontically treated teeth
  - Communication with patients and health care professionals to effectively and formally verbalize knowledge of endodontics, clinical therapies, treatment plans and related diseases to others
  - Use of magnification technologies such as operating microscopes and cameras for documentation.
- Have in-depth proficiency in:
  - Vital pulp management
  - Endodontic management of developing permanent teeth
  - Revascularization/regenerative endodontics
  - Intracoronary bleaching procedures
  - Endodontic management of traumatic dental injuries
- Have in-depth competency in:
  - Diagnosis and treatment of periodontal disease and defects in conjunction with the treatment of the specified tooth undergoing endodontic therapy; treatment provided in consultation with the individuals who will assume the responsibility for the completion or supervision of any additional periodontal maintenance or treatment
  - Placement of intraradicular restorations and cores in endodontically treated teeth; and when the patient is referred, this treatment is accomplished in consultation with the restorative dentist

- Implant dentistry
- Extrusion procedures
- Have in-depth knowledge of the:
  - History of endodontics
  - Teaching methodology
  - Jurisprudence and risk management
  - Practice management
  - Medical emergencies
- Acquire in-depth knowledge of classic and contemporary literature to help graduates critically evaluate the dental literature and provide theoretical bases for diagnostics, techniques and procedures, management, successes, and failures/complications in the clinical practice of non-surgical and surgical endodontic therapy.
- Make or respond to all appropriate consultation requests and demonstrate professionalism, rapport and cooperation with professional colleagues.
- Maintain a patient list in the approved electronic health record for follow-up of patients to enable graduates to assess the outcome of their treatment.
- Demonstrate competency in using clinical management software like axiUm to maintain a comprehensive records of history, diagnosis and treatment of each patient.
- Teach endodontics to predoctoral and/or postdoctoral students in a clinical setting.
- Possess sufficient knowledge and clinical experiences to become proficient in diagnostic data collection, pulpal and periradicular diagnosis treatment planning and treatment sequencing for complicated patients.
- Accomplish a research project and present a thesis monograph in written form, submitted for publication in a peer-reviewed endodontic journal and present a summary of the findings in oral form and defense of the thesis in a colloquium
- Develop and update treatment approach documents for each of the board case categories that must be evidence based.
- Submit 10 board level cases that follows current ABE criteria; both an electronic and a print-out version
- Be eligible to sit for the certifying Boards of the American Board of Endodontics

EN 406	Research Lab Techniques	2
EN 411	Case Seminar I	12
EN 412	Classic Literature I	12
EN 413	Current Literature I	4
EN 414	Research Seminar I	1
EN 422	Clinical Transition: Evidence-based Endodontics	4
EN 424	Pain/Neuro Seminar I	1
EN 457	Endodontic Clinic: Assisting	1
EN 458	Clinical Endodontics I	23.5
EN 459	Clinical Endodontics: Surgery I	3
EN 503	Endodontic Biology and Pathology II	2
EN 504	Advanced Endodontics Seminar Series II	4
EN 511	Case Seminar II	12
EN 512	Classic Literature II	12
EN 513	Current Literature II	4
EN 514	Research Seminar II	1
EN 524	Pain/Neuro Seminar II	1
EN 558	Clinical Endodontics II	30.5
EN 559	Clinical Endodontics: Surgery II	4
EN 567	Endodontics at La Clinica II	16
EN 571	Predocutorial Instruction	4
EN 611	Case Seminar III	3
EN 613	Current Literature III	1
EN 658	Clinical Endodontics III	9
EN 659	Clinical Endodontics: Surgery III	1
EN 671	Residency Instruction	2
EN 684	ABE Seminar	1

## Master of Science in Dentistry - Endodontics

AN 410	Advanced Head and Neck Anatomy I	1
BMS 401	Research Philosophy and Design I	1
BMS 440	Thesis Protocol	1
BMS 450	Research Project I	3
BMS 550	Research Project II	3
BMS 651	Manuscript Preparation	3
DS 402	Statistical Methods I	1
DS 430	Advanced Oral Pathology I	1
DS 502	Statistical Methods II	1
DS 530	Advanced Oral Pathology II	1
EN 401	Endodontic Technology I	1
EN 402	Endodontic Therapy Seminar I	2
EN 403	Endodontic Biology and Pathology I	2
EN 404	Advanced Endodontics Seminar Series I	4
EN 405	Advanced Endodontic Technique	8