

# PERIODONTICS (ADVANCED CERTIFICATE)

NYSED: 01154 HEGIS: 1205.00 CIP: 51.0501

## Program Description

The Advanced Education Program in Periodontics provides a broad educational and clinical experience consisting of a 36-month curriculum leading to a certificate of training in Periodontics. The primary goals of the program are to:

1. Provide a foundation in the clinical, behavioral and biomedical sciences that will enable the graduate to diagnose, manage and/or prevent diseases, abnormalities, and structural conditions affecting the periodontal tissues.
2. Engender the role of the specialist as an integral and integrated member of the health professions team.
3. Encourage students to participate in dental education and to develop a philosophy of lifelong learning.
4. Prepare students to successfully qualify for the written and clinical components of the American Board of Periodontology (ABP).

## Program Strengths

1. Diverse clinical faculty, consisting of full and part-time members, many of whom hold joint appointments in the biomedical sciences or the Department of Implant Dentistry.
2. Diverse and large patient population, which provides a wide range of clinical experiences.
3. Opportunities for basic and/or clinical research within the College or through collaboration with the adjacent NYU Medical Center.
4. Intensive didactic and clinical programs that focus on advanced and innovative approaches to therapy.
5. Close collaboration with the Advanced Education Programs in Endodontics, Prosthodontics, and Orthodontics.

## Eligibility for Licensure

The program is fully accredited by the Commission on Dental Accreditation of the American Dental Association and fulfills all requirements for board eligibility as stated by the American Academy of Periodontology. Completion of the CODA-accredited Advanced Education Program in Periodontics satisfies the training requirements for eligibility for participation in the board certification process for the American Board of Periodontics. Eligibility for dental licensure is based on pre-professional, professional, and post-graduate training and varies by state/jurisdiction. Candidates should check the state/jurisdiction regulations for dental licensure for the state(s)/jurisdictions(s) in which they are seeking licensure in order to ensure that they comply with all requirements.

## Accreditation

The Advanced Education Program in Periodontics is accredited by the Commission on Dental Accreditation and has been granted the accreditation status of "approval without reporting requirements." The Commission is a specialized accrediting body recognized by the United States Department of Education.

The Commission on Dental Accreditation can be contacted at (312) 440-4653 or at:

Commission on Dental Accreditation  
211 East Chicago Avenue  
Chicago, IL 60611

To learn more please visit the Commission's website (<https://coda.ada.org/en/>).

## Educational Visits/Observership Opportunities

At this time, NYU Dentistry is not offering individual educational visits. Individuals interested in learning more about our PG Information Sessions should contact [dental.pgadmissions@nyu.edu](mailto:dental.pgadmissions@nyu.edu).

## Admissions

See Admissions & Application Process (<https://dental.nyu.edu/education/advanced-education-programs/periodontics/admissions.html>) for admission requirements and instructions specific to this program.

## Program Requirements

### Didactic Program

The didactic program embodies a formal curriculum in the biomedical, behavioral, and clinical sciences that has been developed specifically for the Advanced Education Program in Periodontics. The didactic program in the first year is largely devoted to the biomedical sciences, and students experience a curriculum that constitutes a rich foundation in the relevant biomedical sciences specifically designed to prepare them for patient care. In addition to the biomedical sciences, first-year students are also introduced to the fundamentals of clinical periodontics through a didactic curriculum that includes an extensive review of the classical literature, an in-depth review of anatomical pathophysiology, an introduction to advanced clinical periodontics, a series of interdisciplinary case reports, and an in-depth review of oral medicine. In the second and third years of the program, students participate in an in-depth didactic program in the clinical sciences, with emphasis on more advanced diagnostic, treatment planning, and surgical and non-surgical therapeutic techniques.

Overall, approximately 20 percent of the program consists of didactic content. In the first year, courses in the biomedical sciences focus on topics such as biology of bone, wound healing, research techniques, CBCT interpretation, introduction to statistics, host response, and clinical periodontics. In addition, students must complete a course in pedagogical techniques in preparation for teaching at the undergraduate level. Supplementing the biomedical sciences are courses in the clinical sciences which include classic literature review, periodontics clinic, and practical oral medicine. In addition, all students must successfully qualify in Basic Cardiac Life Support (BCLS) and Advanced Cardiac Life Support (ACLS).

The curriculum in the second year includes a course specifically designed to develop analytical skills in assessing the scientific literature. Additional courses in the second and third years focus on the clinical sciences and include current literature review, ortho-perio seminar, periodontal prosthesis, current concepts in implant dentistry and bone regeneration, clinical surgical seminar, and practice management.

All students participate in periodontal case conference and advanced prosthodontic treatment planning with their colleagues in the PG Prosthodontics program throughout the duration of the program.

In addition to formal courses, throughout all three years, lectures, seminars, and case conferences that integrate the biomedical and clinical sciences constitute a vital part of the program. Students actively participate in these sessions as part of their training and frequently serve as seminar leaders. Emphasis is placed on a biologic orientation and application of these principles to the clinical management of periodontal diseases. Informal academic gatherings are arranged with outstanding clinicians and scientists in periodontology and allied fields to provide a unique source of stimulation and knowledge.

## Clinical Program

The clinical component of the program constitutes approximately 65 percent of the curriculum and is a major strength of the program. Situated in an urban center and adjacent to one of the major medical centers in the Northeast, (NYU Langone Medical Center), the periodontics clinic has available one of the largest patient pools nationally, representing a full range of periodontal diseases and conditions. In addition to conventional surgical and non-surgical modalities of periodontal therapy, students gain broad experience in the following advanced surgical procedures:

- Implant dentistry, including preparation of the implant site, as well as implant placement itself. Students are trained in a number of site development strategies, including sinus lift, ridge augmentation, and guided bone regeneration. This is in conjunction with training in those phases of the procedure that are specifically involved in the actual surgical placement of the implant.
- Functional and aesthetic surgical procedures, including hard and soft tissue grafting procedures.
- Regenerative surgical procedures involving autogenous, allograft, and alloplastic bone substances, often in conjunction with the application of either two-stage non-resorbable, or single-stage, biodegradable, membrane barriers. In addition, advanced clinical training is provided in periodontal therapies in conjunction with therapies that address various endodontic, orthodontic, and prosthodontic conditions.

## Research Program

To obtain a general understanding of theory and methods of scientific research, all students are required to engage in some form of scholarly activity. Students are expected to be able to identify basic research design elements, specify research questions, evaluate types of study designs, and understand the role of statistics in scientific decision making. Structured, formal research activity is available through a master's degree offered by NYU Dentistry, either in biomaterial science, biology/oral biology, or clinical research. Alternatively, students may choose to prepare formal case reports and/or literature reviews for publication, present findings at national or regional professional meetings, or participate in basic or clinical research activities of the department or College.

## Teaching Program

Students obtain experience teaching dental students at the undergraduate level.

## Required Courses

Course	Title	Credits
<b>CORE COURSES</b>		
DGSCI-DN 9312	Multidisciplinary Seminars A: (This course is taken twice for a total of 0.75 credits)	0.75
DGSCI-DN 9512	Multidisciplinary Seminars B: (This course is taken twice for a total of 0.75 credits)	0.75
BASCI-DN 5055	Advanced Education Core Sciences	4.5
BASCI-DN 8045	Fundamentals of Anesthesia	3
BASCI-DN 5056	Applied Sciences	1.75
BASCI-DN 8043	Clinical Application of Advances in Wound Healing	1.5
BASCI-DN 7027	Host Response to Infection & Trauma	1.5
<b>YEAR ONE</b>		
DGSCI-DN 9371	Current Concepts in Implant Dentistry & Bone Regeneration IA	1.5
DGSCI-DN 9372	Current Concepts in Implant Dentistry & Bone Regeneration IB	1
PRECL-DN 8086	Comprehensive Treatment Planning I A	0.5
PRECL-DN 8586	Comprehensive Treatment Planning I B	0.75
DGSCI-DN 9324	Principles of Periodontics I A	1.75
DGSCI-DN 9387	Principles of Periodontics I B	1.75
DGSCI-DN 9326	Conferences in Periodontics I A	2
DGSCI-DN 9526	Conferences in Periodontics I B	2
PRECL-DN 9333	Preclinical Workshop in Periodontics I A	1.25
PRECL-DN 8088	Advanced Education in Periodontics Clinic I A	13
PRECL-DN 8588	Advanced Education in Periodontics Clinic I B	13
<b>YEAR TWO</b>		
DGSCI-DN 9394	Advanced Training in Anesthesia for Periodontics	1
DGSCI-DN 9333	Comprehensive Treatment Planning II A	0.5
DGSCI-DN 9533	Comprehensive Treatment Planning II B	0.75
DGSCI-DN 9327	Principles of Periodontics II A	1
DGSCI-DN 9388	Principles of Periodontics II B	1
DGSCI-DN 9329	Conferences in Periodontics II A	2.75
DGSCI-DN 9529	Conferences in Periodontics II B	2.75
PRECL-DN 8089	Advanced Education in Periodontics Clinic II A	13
PRECL-DN 8589	Advanced Education in Periodontics Clinic II B	13
<b>YEAR THREE</b>		
DGSCI-DN 8043	Comprehensive Treatment Planning III A	0.5
DGSCI-DN 8543	Comprehensive Treatment Planning III B	0.75
DGSCI-DN 9330	Principles of Periodontics III A	1
DGSCI-DN 9390	Principles of Periodontics III B	1
DGSCI-DN 9332	Conferences in Periodontics III A	2.75
DGSCI-DN 9532	Conferences in Periodontics III B	2.75
PRECL-DN 8090	Advanced Education in Periodontics Clinic III A	13
PRECL-DN 8590	Advanced Education in Periodontics Clinic III B	13
<b>Total Credits</b>		<b>122.75</b>

## Sample Plan of Study

Course	Title	Credits
<b>1st Semester/Term</b>		
DGSCI-DN 9312	Multidisciplinary Seminars A:	0.5
BASCI-DN 5055	Advanced Education Core Sciences	4.5
BASCI-DN 8045	Fundamentals of Anesthesia	3

BASCI-DN 5056	Applied Sciences	1.75
BASCI-DN 8043	Clinical Application of Advances in Wound Healing	1.5
BASCI-DN 7027	Host Response to Infection & Trauma	1.5
DGSCI-DN 9371	Current Concepts in Implant Dentistry & Bone Regeneration IA	1.5
DGSCI-DN 9324	Principles of Periodontics I A	1.75
DGSCI-DN 9326	Conferences in Periodontics I A	2
PRECL-DN 9333	Preclinical Workshop in Periodontics I A	1.25
PRECL-DN 8086	Comprehensive Treatment Planning I A	0.5
PRECL-DN 8088	Advanced Education in Periodontics Clinic I A	13
	Credits	32.75
<b>2nd Semester/Term</b>		
DGSCI-DN 9512	Multidisciplinary Seminars B:	0.5
DGSCI-DN 9372	Current Concepts in Implant Dentistry & Bone Regeneration IB	1
DGSCI-DN 9387	Principles of Periodontics I B	1.75
DGSCI-DN 9526	Conferences in Periodontics I B	2
PRECL-DN 8588	Advanced Education in Periodontics Clinic I B	13
PRECL-DN 8586	Comprehensive Treatment Planning I B	0.75
	Credits	19
<b>3rd Semester/Term</b>		
DGSCI-DN 9394	Advanced Training in Anesthesia for Periodontics	1
DGSCI-DN 9327	Principles of Periodontics II A	1
DGSCI-DN 9329	Conferences in Periodontics II A	2.75
PRECL-DN 8089	Advanced Education in Periodontics Clinic II A	13
DGSCI-DN 9333	Comprehensive Treatment Planning II A	0.5
	Credits	18.25
<b>4th Semester/Term</b>		
DGSCI-DN 9388	Principles of Periodontics II B	1
DGSCI-DN 9529	Conferences in Periodontics II B	2.75
PRECL-DN 8589	Advanced Education in Periodontics Clinic II B	13
DGSCI-DN 9533	Comprehensive Treatment Planning II B	0.75
	Credits	17.5
<b>5th Semester/Term</b>		
DGSCI-DN 9312	Multidisciplinary Seminars A:	0.25
DGSCI-DN 9330	Principles of Periodontics III A	1
DGSCI-DN 9332	Conferences in Periodontics III A	2.75
PRECL-DN 8090	Advanced Education in Periodontics Clinic III A	13
DGSCI-DN 8043	Comprehensive Treatment Planning III A	0.5
	Credits	17.5
<b>6th Semester/Term</b>		
DGSCI-DN 9512	Multidisciplinary Seminars B:	0.25
DGSCI-DN 9390	Principles of Periodontics III B	1
DGSCI-DN 9532	Conferences in Periodontics III B	2.75
PRECL-DN 8590	Advanced Education in Periodontics Clinic III B	13
DGSCI-DN 8543	Comprehensive Treatment Planning III B	0.75
	Credits	17.75
	Total Credits	122.75

## Learning Outcomes

Upon successful completion of the program, graduates will:

### Comprehensive Care

1. Demonstrate an understanding of Basic Science and Craniofacial Biology, Cariology and Comprehensive Care, Biomaterials and Biomimetics, Epidemiology and Health Promotion, Oral and Maxillofacial Pathology, Radiology and Medicine, Oral Maxillofacial Surgery, and Orthodontics.
2. Understand and carry out the diagnostic and therapeutic skills within the scope of Periodontics.

3. Identify patients at risk for periodontal diseases and employ suitable preventive and/or interceptive treatments.
4. Diagnose and treat patients with periodontal diseases and related conditions according to scientific principles and knowledge of current concepts of etiology, pathogenesis, and patient management.
5. Explain concepts of sensitivity, specificity, positive, and negative predictive value for diagnostic testing.
6. Interpret conventional and three-dimensional images as they relate to periodontal and dental implant therapy.
7. Assess and measure the course/trajectory of periodontal disease in individual patients and document disease activity as measured by loss or gain.
8. Articulate and understand the rationale for therapy and anticipated outcomes, and critically evaluate results.
9. Treat and manage non-plaque related periodontal diseases and disorders of the periodontium.

Additionally, graduates will demonstrate competency in the following:

- physical evaluation
- laboratory evaluation
- non-surgical management of periodontal disease
- scaling and root planning
- occlusal treatment
- implant Placement
- periodontal surgical procedures
- ridge augmentation
- soft tissue graft
- sinus elevation
- crown lengthening
- aesthetic crown lengthening
- root amputation
- sedation
- temporization

### A&P

Graduates will demonstrate in-depth understanding of:

1. Developmental, gross, surgical, microscopic, and ultrastructural anatomy and physiology of tissues of the oral cavity and related structures, with special emphasis on the periodontium.
2. The structures of the head and neck, particularly of the oral and perioral areas.
3. The neural and vascular structures pertaining to the viscera of the oral and perioral structures.
4. The general structure and function of the central nervous systems and the central connections of cranial nerves.
5. Apply anatomical information within the context of both the clinical practice of dentistry and the interpretation of clinical procedures.

### Medicine and Surgery

1. Diagnose and treat prosthetic requirements of implants from different manufacturers, the surgical placement of implants, and evaluation and management of dental implants once placed.
2. Perform surgical management of periodontal diseases and conditions, including resective surgery, gingivoplasty, gingivectomy, periodontal flap procedures, osteoplasty, ostectomy, and tooth/root resection.

3. Demonstrate competency in periodontal plastic and esthetic surgery techniques.

Additionally, graduates will:

1. Perform regenerative and reparative surgeries.
2. Perform tooth extractions in the course of periodontal and implant therapy.
3. Be trained in canine and other teeth exposure, corticotomies, and placement of temporary anchorage devices.
4. Evaluate peri-implant tissues and manage implant complications.
5. Evaluate and develop implant sites, including hard and soft tissue preservation and reconstruction, ridge augmentation, and sinus floor elevation.
6. Practice appropriate sterile and aseptic techniques for implant placement.
7. Manage endodontic-periodontal lesions.

## Infection and Disease

Graduates will:

1. Understand and apply the principles of implant biomaterials and bioengineering, indications, and contraindications for various implant designs and characteristics.
2. Utilize infection control protocols.

Additionally, graduates will discuss in depth:

1. The formation of biofilm in the development of local and systemic disease.
2. Microbes in the mature biofilm that are pathogenic to the tooth, endodontic, and periodontic tissue.
3. Immunological concepts, with emphasis on the differentiation between innate and adaptive immunity and basic immune response as applicable to commonly encountered oral diseases.
4. Etiology, histopathology, and natural history of periodontal diseases.

Graduates will demonstrate an in-depth understanding of:

1. The dental patient's innate and adaptive immune response to infective and surgical challenges from a cell and molecular biology perspective.
2. Inflammatory mechanisms and wound healing.
3. The principles of implant biomaterials and bioengineering.
4. Molecular biology concepts as they relate to oral and periodontal diseases.
5. The microbiologic aspects of periodontal diseases, caries, and other oral diseases.
6. The biology of the host response to infection, primarily focusing on connective tissue.
7. Oral pathology.
8. Epidemiology of the periodontal diseases.

## Pharmacology and Anesthesia

Graduates will demonstrate an understanding of:

1. The indications and contraindications of systemic and local-site delivery antimicrobial or host-modulating pharmacotherapeutics.

2. Mechanisms, interactions, and effects of drugs used in the prevention, diagnosis, and treatment of periodontal and other oral diseases.
3. Mechanisms, interactions and effects of therapeutic agents used in the management of systemic diseases that may influence the progression of periodontal diseases.
4. Prescribe appropriate pharmacological agents that augment initial therapy, provide pharmacological support during surgical therapy, or address certain systemic conditions.
5. Demonstrate in-depth knowledge of minimal, moderate, and deep sedation and pain control.

Additionally, graduates will be able to describe:

- The process of risk assessment for patients scheduled for dental procedures under sedation/anesthesia
- Necessary monitoring and interpret EKG findings relevant to administration of anesthesia/sedation
- The indications/contraindications, interactions, mechanisms of action of commonly used anesthetic agents
- Training and regulatory requirements for ambulatory sedation/anesthesia procedures

## Behavioral Health

Graduates will:

1. Appropriately modify communication skills to align with individual patients' behavior
2. Demonstrate an understanding of:
  - The psycho-physiological process that produces patients' experience of pain, fear, anxiety, and phobia, and manage these cognitive/emotional experiences during treatment
  - The indications for behavioral and pharmacological methods

## Practice Management

Graduates will:

1. Utilize ethical guidelines in practice management that adhere to the highest standards of jurisprudence and risk management.
2. Communicate effectively with dental and other health care professionals, interpret their advice, and integrate this information into the treatment of the patient.
3. Communicate effectively to patients the nature of their periodontal health status, risk factors, and treatment needs, and document accordingly.
4. Effectively utilize all allied dental personnel.

## Research

Graduates will:

1. Critically analyze current evidence in research and apply it to clinical practice.
2. Critically analyze research and statistics to formulate discussion, hypotheses, and results.
3. Utilize Biostatistics, research design and methods to complete a research project including a critical review of the literature, development of a hypothesis, design of the project combined with the

appropriate statistical analysis and interpretation of data, concluding with the outcome/findings of the project.

4. Evaluate types of epidemiological study designs.
5. Demonstrate an understanding of the incidence and prevalence of periodontics in the United States and around the world.

## **Special Needs**

Graduates will:

1. Provide periodontal treatment to older adult patients, and medically compromised patients.
2. Understand the incidence and prevalence of the periodontal indices in the population, and differences in periodontal disease risk by demographic subgroup
3. Treat a variety of patients with different periodontal diseases and conditions as currently defined by The American Academy of Periodontology

## **Policies**

### **NYU Policies**

University-wide policies can be found on the New York University Policy pages (<https://bulletins.nyu.edu/nyu/policies/>).

### **College of Dentistry Policies**

A full list of related academic policies can be found on the College of Dentistry Academic Policies page (<https://bulletins.nyu.edu/graduate/dentistry/academic-policies/>).