DENTAL - GRADUATE CORE CURRICULUM (DADE)

DADE 9100 Clinical Microbiology
The purpose of Microbiology is to provide modern information in five broad categories: 1. Molecular biology of prokaryotic cells as it relates to oral health. 2. Basic principles of immunology as they relate to infection and immunity. 3. Infectious diseases caused by microbial agents. 4. Relationship of microbes to oral health and how microbes cause caries and periodontal disease. 5. Basic aspects of viral infections and how they related to oral health (herpes, hepatitis B and HIV)
Fall
0.5 Credit Hours

DADE 9110 Ethics
The program includes the core basic science courses, designed to encompass the the various disciplines basic to advanced studies in the science and practice of dentistry. They are designed to expose students to modern concepts in the areas covered with the objective of updating and expanding upon their predoctoral knowledge of oral biology. The courses are designed to meet the requirements of the different specialty organizations. All programs are presented on an academic term basis.
Fall
0.25 Credit Hours

DADE 9120 Genetics, Embryology
The treatment of patients with cleft lip/palate and other types of craniofacial anomalies in the United States has improved dramatically, many children still receive care that is substantially inferior to what can or should be provided. Inadequate care results from diagnostic errors, failure to recognize and treat the full spectrum of health problems associated with these anomalies, unnecessary and poorly timed treatment, and inappropriate or poorly performed procedures. This course will inform of these persistent problems. Embryology lecture is an overview of the field from its 19th Century with Hegel and "Ontogeny recapitulates Phylogeny" to the 21st century research on "Evo-Devo" and the HOX development genes and their relations to the contemporary understanding of embryological development including stem cells.
Fall
0.25 Credit Hours

DADE 9140 Maxillofacial Radiology
This course is intended to supplement the basic science course by radiographically showing dissimilar pathoses that appear similar on x-rays.
Fall
0.25 Credit Hours

DADE 9150 Nitrous Oxide Analgesia
This course is designed to provide didactic and clinical instruction in nitrous oxide/oxygen analgesia in accordance with American Dental Association Guidelines. Upon completion of this course, the participant will be eligible for an Anesthesia Restricted Permit II from the Pennsylvania State Board of Dentistry. Participants will have the opportunity to administer (to each other and patients) and undergo nitrous oxide sedation under close supervision. The course is geared to general dentists and dental specialists.
1 Credit Hour

DADE 9160 Practice Management
Practice Management Lectures and clinical experiences provide students with foundation knowledge regarding the policies and procedure governing practice.
0.25 Credit Hours

DADE 9170 Pathology
Pathology is a course that will apply what students have already learned to the study of disease. It is an essential link between the basic and clinical sciences concerned with the mechanisms of disease (e.g., inflammation, neoplasia, and immunopathology) and the disease processes that students will encounter during their careers in dentistry. While the emphasis will be on oral pathology, one must also be familiar with systemic diseases that may impact on the health of the patients.
0.25 Credit Hours

DADE 9180 Pulp/Dentin Biology
Purpose of this lecture series is to review the principal anatomy comprising the stomatognathic system. The lectures build on the knowledge of head and neck anatomy acquired in dental school and integrate clinical relevance to this important subject. Slide presentations are employed to teach the anatomical structures of the major head and neck morphologic systems.
0.75 Credit Hours

DADE 9190 Head and Neck Anatomy
The purpose of this lecture series is to review the principal anatomy comprising the stomatognathic system. The lectures build on the knowledge of head and neck anatomy acquired in dental school and integrate clinical relevance to this important subject. Slide presentations are employed to teach the anatomical structures of the major head and neck morphologic systems.
0.75 Credit Hours

DADE 9200 Advance Library
0.25 Credit Hours

DADE 9210 Cultural Competency
Participants in this workshop will assess their beliefs and awareness around cross cultural communication and diversity and inclusiveness. Through lecture, group participation, skill practice, role-play, case studies, and coaching they learn to advance their skill levels and take communication to the next level. Participants will also be recorded at the opening and conclusion of the to assess skill development.
0.25 Credit Hours

DADE 9220 Pharmacology
Pharmacology is both a basic science and a clinical science. It builds on the foundation of anatomy, biochemistry, physiology, and pathology and bridges the gap into clinical dentistry. This course in basic pharmacology will give the students a better understanding of drugs, interpreting complicated drug/medical histories, and understanding drug reactions.
0.5 Credit Hours

DADE 9230 Osteoimmunology
This is a web based course with face to face review sessions prior to in class testing over course material. The material for the course will be presented to students via the online interface. This course covers topics from the text book "osteoimmunology" and from supplemental material provided on Canvas. The course directors will be available by phone, appointment or email for a one hour period each week to address questions. In addition, 90 minute review sessions will be held prior to each exam.
2 Credit Hours
DADE 9240 Oral Medicine
There are numerous conditions that affect the oral and maxillofacial region, including oral mucosal diseases, temporomandibular joint disorders, orofacial pain syndromes and salivary gland dysfunction. Patients presenting with these disorders can be challenging to diagnose and manage. Several techniques are available for evaluation of these conditions and will guide the clinician toward proper diagnosis. Management protocols vary based upon the specific affecting the oral and maxillofacial region. This course will highlight the etiology, clinical presentation, diagnostic techniques, and management protocols of several conditions, including oral mucosal diseases, temporomandibular joint disorders, orofacial pain syndromes, and salivary gland disorders. 0.25 Credit Hours

DADE 9250 Nutrition & Oral Health
0.25 Credit Hours

DADE 9260 Wound Healing
The course includes information given by experts in the basic and/or clinical sciences. The first seven lectures cover the basic biologic aspects of wound healing. These are followed by a series of five lectures discussing wound healing in a more clinical context covering the topics of fracture repair, osseointegration, orthodontics, endodontics and periodontics. 2 Credit Hours

DADE 9270 Grand Rounds
This course will be in the form of a monthly Penn conference for all the residents of graduate specialty programs in PDM. Each conference will include residents' presentations of patients' treatment with complex dental needs that require multi-disciplinary approach and then open discussion with all involved specialties as panel. This conference is designed to provide residents with an understanding of the sequential management of multidisciplinary cases from a diagnostic and treatment basis. 0.5 Credit Hours

DADE 9280 Biostatistics
This course will provide a summary of the main statistical concepts needed to make decisions based on data. Some of the material that will be covered includes: data displays, summary statistics, probability distributions and expectation, statistical inference procedures for univariate and bivariate data, linear regression models, and analysis of variance. You will learn how to test a hypothesis, which includes phrasing a hypothesis, making a rationale choice of experimental design, choosing the statistics best suited to test the hypothesis, and assessing the results with standard errors, confidence intervals, and p-values. 1 Credit Hour

DADE 9290 Pulp/Dentin Biology
0.25 Credit Hours

DADE 9300 Maxillofacial Trauma
0.25 Credit Hours

DADE 9310 Core Curriculum I
5.5 Credit Hours

DADE 9320 Core Curriculum II
5.5 Credit Hours

DADE 9900 Dscd Research Seminar
1 Credit Hour

DADE 9910 Guest Lecture Series
1 Credit Hour

DADE 9960 Biostatistics
1 Credit Hour

DADE 9970 Systematic Review
1 Credit Hour