

# BASIC SCIENCES (BASCI-DN)

## **BASCI-DN 5055 Advanced Education Core Sciences (1-7 Credits)**

This course is composed of a collection of topics/modules providing basic/ fundamental knowledge and skills for students in the Advanced Specialty Education Programs. Some topics are unique to the NYUCD training and patient care environment; others generalize to skills and knowledge that enhance the effectiveness of the advanced level practitioner. Each Advanced Specialty Education Program Director selects the modules that apply to their specialty practice and standards. The following modules will be presented: Anatomy Workshop, Clinical Research Design, Introduction to Biostatistics, IRB Seminar, Emergencies in Dental Practice (Dental/Medical/BLS), Diversity in Practice/Cultural Competence, Ethics Workshop, Introduction to EHR and Digital Imaging, Contemporary Caries, Introduction to Basic Radiology and CBCT, Practice Management, Introduction to Pedagogy.

**Grading:** Dental Pass/Fail

**Repeatable for additional credit:** No

## **BASCI-DN 5056 Applied Sciences (1.75 Credits)**

The postgraduate course in Applied Sciences addresses Applied Medicine, Pathology and Pharmacology, and will focus on selected critical topics in medicine, oral medicine, pathology and integrated areas of pharmacology presented in a case-based format with introductory background material. All content in this course, assumes mastery of content in the predoctoral curriculum and is presented at a post-graduate level.

**Grading:** Dental Pass/Fail

**Repeatable for additional credit:** No

## **BASCI-DN 7027 Host Response to Infection & Trauma (1.5 Credits)**

The primary goal of this course is to provide the post-graduate students with sufficient background in the innate and adaptive immune response to infection and trauma so that he/she will be able to understand and predict the response of patients to infectious and traumatic (surgical) challenges. A secondary goal is to understand how innate and adaptive immunity changes in specific systemic conditions so that he/she will be able to understand immune responses under challenging conditions. Applications of future advances in these fields as they pertain to his/her clinical specialty are also addressed.

**Grading:** Dental Pass/Fail

**Repeatable for additional credit:** No

## **BASCI-DN 8043 Clinical Application of Advances in Wound Healing (1.5 Credits)**

The goal of this course is to provide the post-graduate students with classic and current concepts in soft and hard tissue wound healing in the oral cavity environment involving standard dental procedures. The course will provide detailed understanding of the basic science and practical aspects of soft tissue and hard tissue healing as it relates to procedures done in the oral cavity including implants. This includes the cellular and molecular basis of wound healing as well as clinical concepts and practical timelines.

**Grading:** Dental Pass/Fail

**Repeatable for additional credit:** No

## **BASCI-DN 8045 Fundamentals of Anesthesia (0.25-5 Credits)**

This intensive didactic introduction to the principles and practice of sedation and anesthesia is designed to prepare first year postgraduate students in Periodontics and Pediatric Dentistry for their clinical anesthesia training rotations. This course is a prerequisite for participation in all clinical ambulatory sedation/anesthesia assignments at the New York University College of Dentistry and affiliate hospitals, as well as assigned rotations on the Anesthesiology Service at New York University affiliated hospitals. Students are required to pass this course to be eligible to participate in clinical anesthesia training. Enrollment in this course is limited to first-year postgraduate students in Periodontics and Pediatric Dentistry although other programs may audit select sessions at the direction of their program directors.

**Grading:** Dental Pass/Fail

**Repeatable for additional credit:** No

## **BASCI-DN 8046 Growth & Development I (1 Credit)**

Participants will be introduced to various aspects of overall human growth & development and their impact on health. In addition, the growth & development of the dentition will be reviewed as well as the growth mechanisms & concepts associated with the development of the human craniofacial skeleton. Participants will also be introduced to aspects of therapeutic mechanotherapy on the human craniofacial skeleton and their impact on speech, facial growth, and airway function.

**Grading:** Dental Pass/Fail

**Repeatable for additional credit:** No

## **BASCI-DN 8047 Growth & Development II (0.75 Credits)**

In this course Growth and Development Part 2, the knowledge gained about growth & development principles presented throughout Part 1 will be expanded upon through presentations of clinically based treatment concerns encountered in clinical practice. Participants will be introduced to various aspects of therapeutic mechanotherapy on the human craniofacial skeleton and their impact on speech, facial growth, and airway function.

**Grading:** Dental Pass/Fail

**Repeatable for additional credit:** No

## **BASCI-DN 8048 Integrative Seminars in Oral Biology I - Oral Systemic Connections (3 Credits)**

This course will introduce students to current topics in oral biology research, primarily focusing on the connection between oral diseases and systemic diseases and medical conditions. The aim of the course is to help students develop an integrated understanding of the current state of oral biological science by combining lectures, presentations, discussions, and critical reviews of scientific literature assigned by faculty members in their areas of expertise. Topics include periodontal disease, phage therapy, oral facial pain, tobacco, alcohol, e-cigarettes and cancer, some molecular and clinical characteristics of oral cancers, correlations between oral pathogens and chronic systemic inflammatory diseases, Sjogren's Disease.

**Grading:** Dental Graded

**Repeatable for additional credit:** No

**BASCI-DN 8049 Integrative Seminars in Oral II - Bone Biology & Craniofacial Development (3 Credits)**

This course introduces fundamental concepts of skeletal and craniofacial biology, particularly embryonic and adult skeletal and cartilage development. Topics covered are: understanding of craniofacial bone growth, tooth development, cartilage biology, endocrine regulation of the skeletal integrity, and skeletal biomechanical properties. The goals of the course are threefold: 1) to provide “fundamental knowledge” of skeletal and craniofacial growth and development, 2) to apply the principles of biologic processes to their clinical manifestations, and 3) to develop critical reading of scientific reports in the research field of hard tissues.

**Grading:** Dental Graded

**Repeatable for additional credit:** No

**BASCI-DN 8050 Directed Individual Research in Oral Biology (1-4 Credits)**

Supervised research

**Grading:** Dental Pass/Fail

**Repeatable for additional credit:** No

**BASCI-DN 8051 Directed Individual Research in Oral Biology II (1-4 Credits)**

Supervised research

**Grading:** Dental Graded

**Repeatable for additional credit:** No

**BASCI-DN 8057 Reading in Oral Biology (1 Credit)**

Student reads and presents on an assigned topic

**Grading:** Dental Graded

**Repeatable for additional credit:** No

**BASCI-DN 8058 Reading in Oral Biology II (1 Credit)**

Student reads and presents on an assigned topic

**Grading:** Dental Graded

**Repeatable for additional credit:** No