

# ORTHODONTICS (ORTH)

## ORTH 5010 - Fundamentals of Orthodontics

1 Credit (Repeatable up to 2 credits)

Team-taught by the orthodontic faculty during the first summer and fall terms of the graduate program. Course is based upon a respected, comprehensive, graduate text in the specialty. Applied science and techniques of diagnosis, treatment-planning, active therapy, and retention are reviewed.

## ORTH 5020 - Orthodontic Business Management

0 or 1 Credits (Repeatable for credit)

This course is designed to educate and prepare orthodontic residents to enter the business world of orthodontics. The information provided will assist these doctors in selecting suitable employment options, office leadership and management techniques, office systems, marketing and general accounting principles related to the business of orthodontics. (Offered annually)

### Restrictions:

Enrollment limited to students in the Center for Advanced Dental Ed college.

## ORTH 5030 - Facial Growth

2 Credits

An overview of current thought in the field of craniofacial biology. The graduate student is exposed to the changes that take place in the face from embryo to adult. Hypothetical control mechanisms, clinical application of facial growth principles, and the experimental evidence are explored in a critical review of relevant literature. Offered every year.

## ORTH 5100 - Biomechanics

1 Credit

Concepts of orthodontic displacement and force.

## ORTH 5250 - Clinical Cephalometrics

2 Credits

Introduction to the use of cephalometric radiographs in clinical orthodontics. Overview of cephalometric analyses of historic importance. Lectures and demonstrations with a laboratory component that includes cephalometric tracing technique, visualization of treatment objectives for orthodontic and surgical orthodontic cases, analysis of growth pattern, and treatment results. Offered every year.

## ORTH 5350 - Surgical Orthodontics

1 Credit

Acquaints the graduate student with those surgical procedures that directly relate to orthodontic treatment plans. The lecture series encompasses a review of diagnostic procedures, surgical techniques for the treatment of maxillary and/or mandibular skeletal excess and deficiency as well as laterognathism, Class II malocclusion and adjunctive techniques of genioplasty for correction of microgenia and macrogenia. In addition to surgical consideration of jaw deformities, time is allocated for miscellaneous pathological conditions. Offered every year.

## ORTH 5370 - Orthodontic Problems Related to Cleft Palate Patient

1 Credit

A study of the various aspects of the congenital cleft-lip-and-palate condition with a consideration of the several professional areas concerned with the total habilitation of the cleft-tip-and-palate patient. Coursework includes diagnosis and treatment of patients at the Cardinal Glennon Hospital Cleft Palate Center. Offered every year.

## ORTH 5390 - Speech Disorders Related to the Oral Mechanism

1 Credit

Basic anatomy and physiology of the speech mechanism. Introduction to phonetics and speech sound production. Survey of communication disorders; significance of the disorder for the orthodontist, and orthodontic treatment plan. Offered every fall semester.

## ORTH 5400 - History of Orthodontics

0 Credits

Evaluating concepts in pre-specialization disciplinary organization, ethical considerations, and humanist aspects of the profession. (Offered in Fall)

### Restrictions:

Enrollment limited to students in the MS Dentistry, Orthodontics or PMC Orthodontics programs.

## ORTH 5490 - Diagnosis Procedures in Orthodontics

1 Credit

An introduction to diagnostic procedures including the taking of the prospective patients medical and dental history, conducting the clinical examination, and an evaluation of dental and oral function. The analysis of orthodontic study-casts. (Offered every year)

## ORTH 5500 - Diagnosis and Treatment Plan I

1 Credit

Evaluation and treatment planning of various types of malocclusion. Offered every year.

## ORTH 5530 - Clinical Diagnosis I

1 Credit

The clinical application of the various diagnostic procedures and philosophies of orthodontic diagnosis and a presentation of practical procedures to help in the management of unusual problems that can arise during the course of treatment. Offered every year.

## ORTH 5540 - Clinical Diagnosis II

1 Credit

Continuation of Clinical Diagnosis I. Offered every year.

## ORTH 5550 - Orthodontic Analysis & Treatment Modalities

1 Credit

An in-depth presentation of specific and complex problems that can and do arise in orthodontic practice. Recognition, precautions, and various treatment modalities for each problem are discussed. Advances in orthodontic technology will be presented utilizing diagrams, photographs, clinical aids, and actual demonstrations to further enhance knowledge in dealing with difficult situations. Offered every year.

## ORTH 5560 - Clinical Case Conferences

0-1 Credits (Repeatable for credit)

IN a seminar format, each class-meeting features the presentation by one of the students of the work-up and diagnosis of an active orthodontic patient. The other students and faculty propose and critically evaluate possible treat-plans and modalities. The presenting student then reviews the actual treatment-plan being followed and the progress in therapy to date. (Offered every year.)

## ORTH 5580 - Clinical Specialty Seminars

1 Credit (Repeatable for credit)

Individual clinical faculty members present their personal philosophies of diagnosis, treatment -planning, active therapy, and retention. These sessions serve also to introduce the students to a diversity of techniques and appliances and therapy for unusual and exceptional categories of patients and cases perhaps not routinely seen in the mainstream of orthodontic care. (Offered every year.)

**ORTH 5590 - Orthodontic Aspects of Sleep Breathing Disorders**

1 Credit

Sleep problems, including sleep breathing disorders, and sleep bruxism are common. Good sleep is necessary for optimal health. Sleep deprivation can cause decreased work or school performance, memory and cognitive impairment, stress relationships, poor quality of life, occupational injury and automobile injury. In the long term, the clinical consequences of untreated sleep disorders are high blood pressure, heart attack, heart failure, stroke, obesity, psychiatric problems, attention deficit disorder, and mental impairment. Orthodontists can play a major role in both the recognition and treatment of sleep disorders. Many of the clinical findings may be recognizable by orthodontists. This course provides students with an understanding of the pathophysiology of sleep disorders and the current diagnostic and treatment options. For CADE Graduate Orthodontic Students Only.

**Restrictions:**

Enrollment limited to students in the MS Dentistry, Orthodontics or PMC Orthodontics programs.

**ORTH 5600 - Introduction to Clinical Orthodontics I**

1 Credit

A didactic and laboratory introduction to basic clinical principles and techniques. Initially, instruction covers the policies and procedures of the orthodontic clinic and later, the development of a patient diagnostic data base including study casts, photographs, cephalograms, and clinical evaluation of the patient. Offered every year.

**ORTH 5610 - Introduction to Clinical Orthodontics II**

1 Credit

A continuation of ORTH 560. A concentrated, didactic course that addresses in some depth the procedures of diagnosis, treatment-planning, and application of clinical therapy toward the solutions of orthodontic problems in patients of various ages and dental development.

**ORTH 5620 - Principles of Orthodontic Techniques I**

2 Credits

Course includes typodont setup in normal occlusion before banding; philosophy of treatment; and a coordination of lectures and seminars with laboratory demonstration on archwire fabrication and reasons for each bend. Offered every year.

**ORTH 5630 - Principles of Orthodontic Techniques II**

2 Credits

Course includes treatment of Class II, Division 1 non-extraction case and treatment of Class I bimaxillary-protrusion case, requiring removal of permanent teeth. Offered every year.

**ORTH 5650 - Orthodontic Treatment with Clear Aligners**

1 Credit (Repeatable for credit)

Series of lectures covering the didactic and practical knowledge of clear aligner treatment with the Invisalign System using 3D diagnostic tools and techniques. Limited to Graduate Orthodontic Students only. Offered in fall.

**Restrictions:**

Enrollment is limited to students with a program in Orthodontics.

**ORTH 5660 - Contemporary Orthodontics I**

1 Credit

This course will provide an up-to-date overview of orthodontics with discussions detailing information on diagnosis, treatment planning concepts, related problems or controversies, and current treatment procedures; including comprehensive looks at 3-D imaging, temporary skeletal anchorage devices, and accelerated orthodontic tooth movement. The following topics will be covered in this course: the development of orthodontic problems, the problem-oriented orthodontic diagnosis and treatment planning, the biologic basis of orthodontic therapy, mechanical principles in orthodontics, and contemporary orthodontic appliances. Offered to CADE Graduate Orthodontic Residents only.

**Restrictions:**

Enrollment limited to students in the Center for Advanced Dental Ed college.

**ORTH 5670 - Contemporary Orthodontics II**

1 Credit

This course provides evidence-based coverage of orthodontic diagnosis, treatment planning strategies, and treatment protocols, including esthetics, function, and biomechanics. The following topics will be covered: Moderate non-skeletal problems in children, complex non-skeletal problems in children, treatment of skeletal problems in children and pre-adolescents, comprehensive orthodontic treatment strategies, and combined surgical and orthodontic treatment.

**Prerequisite(s):** ORTH 5660**Restrictions:**

Enrollment limited to students in the Center for Advanced Dental Ed college.

**ORTH 5700 - Clinical Procedures**

1 Credit

Introduction of the first-year students to the policies, personnel, and protocol of the orthodontic clinical and the ancillary facilities that complement the clinic.

**ORTH 5710 - Clinical Orthodontics I**

0 or 2 Credits

Supervised patient treatment in the Orthodontic Clinic.

**ORTH 5720 - Clinical Orthodontics II**

3 Credits

Supervised patient treatment in the Orthodontic Clinic.

**ORTH 5730 - Clinical Orthodontics III**

1 Credit

Supervised patient treatment in the Orthodontic Clinic.

**ORTH 5740 - Clinical Orthodontics IV**

3 Credits

Supervised patient treatment in the Orthodontic Clinic.

**ORTH 5750 - Clinical Orthodontics V**

3 Credits

Supervised patient treatment in the Orthodontic Clinic.

**ORTH 5760 - Clinical Orthodontics VI**

1 Credit

Supervised patient treatment in the Orthodontic Clinic.

**ORTH 5770 - Clinical Orthodontics VII**

3 Credits

Supervised patient treatment in the Orthodontic Clinic.

**ORTH 5780 - Clinical Orthodontics VIII**

0 or 1 Credits (Repeatable for credit)

Supervised patient treatment in the Orthodontic Clinic.

**Restrictions:**

Enrollment limited to students in the MS Dentistry, Orthodontics or PMC Orthodontics programs.

**ORTH 5800 - Child and Adolescent Psychology**

1 Credit

The personal-social development of the adolescent from the perspective of life-span psychology is presented and discussed in the context of orthodontics, which includes the psycho-social impact of malocclusion, patient-parent-doctor motivations, communication and interpersonal relationships, patient cooperation and behavior modifications, and the psychology of the orthodontist. Offered every year.

**ORTH 5840 - Early and Mixed Dentition**

0 or 1 Credits (Repeatable for credit)

A didactic course on the development of the occlusion, growth-related imbalances and interceptive treatment. Discussions include psychological handling of younger patients, pros and cons of early intervention, early decisions to preserve spaces and pertinent literature review. (Offered annually)

**ORTH 5850 - Adult Treatment**

0 or 2 Credits (Repeatable for credit)

A didactic course on the philosophy and special considerations of adult and interdisciplinary treatment. This course focuses on diagnosis, treatment planning, criteria for treatment, special mechanics with special attention to the interaction among the different specialties.

**ORTH 5890 - Review for the American Board of Orthodontics Examination**

1 Credit

The second year-students attend a series of seminars with various members of the faculty toward preparation for the phase-two, written examination administered periodically by the American Board of Orthodontics. Passing the examination is a required step toward Board certification. (Offered in Spring)

**ORTH 5910 - Literature Review**

0-1 Credits (Repeatable for credit)

A consideration of recent developments and current literature in the orthodontic field and in related fields.

**ORTH 5940 - Orthodontic Internship**

0 or 1 Credits (Repeatable for credit)

**ORTH 5950 - Special Study for Exams**

0 Credits (Repeatable for credit)

**ORTH 5970 - Research Topics**

1-3 Credits (Repeatable for credit)

**ORTH 5980 - Graduate Independent Study in Orthodontics**

3 Credits (Repeatable for credit)

**ORTH 5990 - Thesis Research**

0-6 Credits (Repeatable for credit)

**ORTH 6000 - Treatment Planning with Digital Technology**

1 Credit

Treatment planning with digital technology will include conventional diagnostic procedures and new 3D diagnostic tools that allow for the clinician to simulate all available treatment options. The course will be based on cases treatment planned at the CADE. By the completion of this course participants will be competent in performing simulation treatment planning to assist in identifying the ideal or best treatment option, present a visual aid during informed consent, collaboration tools for multidisciplinary treatment, and assist with proper therapeutic appliance selection. (Offered in Fall)

**Restrictions:**

Enrollment limited to students in the Center for Advanced Dental Ed college.

**ORTH 6010 - Digital Orthodontics I**

1 Credit

The course is the integration of digital technology into orthodontic therapy. This course will focus on technological tools utilized to improve efficiency and the quality outcomes for aligner, labial and lingual appliances. Participants are encouraged to apply such techniques to their assigned clinical cases. Participants will be able to collaborate and share amongst fellow residents the planning and executing of the digital treatment plan to help increase the exposure and available applications to all.

**Prerequisite(s):** ORTH 6000**Restrictions:**

Enrollment limited to students in the Center for Advanced Dental Ed college.

**ORTH 6020 - Digital Orthodontics II**

0 or 1 Credits

The course is intended to build upon the objectives of Digital Orthodontics I will greater emphases upon finishing treatment and retention. The foundation of content will be primarily derived from cases treated at CADE. Upon completion of this course participants will be granted certification from integration into private practice the SureSmile and 3-shape systems. Additional certifications and product offerings will be added as they become available.

**Prerequisite(s):** ORTH 6010**Restrictions:**

Enrollment limited to students in the Center for Advanced Dental Ed college.

**ORTH 6050 - Scenario Based Case Analysis**

0 Credits

The course provides an opportunity for Residents to gain an understanding of case analysis in a scenario format. Scenarios will be reviewed for development of critical thinking skills in Orthodontic Diagnosis and Treatment Planning as prescribed by the American Board of Orthodontics for its clinical exam.

**Restrictions:**

Enrollment limited to students in the Center for Advanced Dental Ed college.

**ORTH 6110 - Advanced Orthodontic Studies for 36 Month Program**

**Requirements**

2 Credits

This course will provide an in depth additional orthodontic educational experience beyond the completion of the 30-month Orthodontic Residency. Experiences will include Case Seminars/Discussions; Production of Manuscript Articles, and Case Reports for Publication; and Assistance with current student research; etc.