

# ORTHODONTICS (ORTH)

---

## **ORTH 532. Biomechanics: Theoretical Basis for Tooth Movement. 1 Hour.**

Semester course; 15 lecture/seminar hours. 1 credit. Introduces physical science of mechanics and engineering statics as applied to orthodontic force systems. Emphasizes equilibrium and the biological manifestation of force systems applied to the dentition and craniofacial skeleton.

## **ORTH 620. Orthodontic Clinic for Non-orthodontic Graduate Students. 1 Hour.**

Semester course; 30 clinical sessions. 1 credit. Must be taken every semester of the program. Allows residents to diagnose and treat limited orthodontic problems with special emphasis on the primary and mixed dentitions. Includes, but is not limited to, anterior and posterior crossbites, space and tooth loss, transient or definitive crowding and tooth irregularities, oral habits, ectopic and other tooth eruption problems.

## **ORTH 623. Orthodontics Lecture. 2 Hours.**

Semester course; 2 lecture contact hours. 2 credits. An introduction to orthodontics meant to provide second-year dental students with a basic understanding of the diagnosis and treatment of orthodontic problems. The emphasis will be on understanding basic, universally applicable orthodontic concepts rather than on learning specific details relating to particular treatment mechanisms or appliances. This is consistent with current trends in the specialty, which recognize that orthodontic solutions are often attainable by many routes, with a common goal of maximizing the functional, esthetic and stable end result. There will be an overview of growth and development, emphasizing how favorable or unfavorable growth may influence orthodontic diagnosis and treatment. A detailed description of the development of occlusion will also be presented with an emphasis on recognizing and diagnosing abnormalities related to tooth eruption and craniofacial growth.

## **ORTH 650. Literature Review. 2 Hours.**

Semester course; 30 seminar hours. 2 credits. Must be taken every semester of the program. Reviews classical articles in areas of special orthodontic interest. Establishes the state-of-the-art and existing information base. Gives special attention to research methodology and conclusions reached.

## **ORTH 652. Growth and Development. 2 Hours.**

Semester course; 30 lecture/seminar hours. 2 credits. Must be taken every semester of the program. Discusses the increases in size and complexity that occur in the craniofacial region including variations in proportionality and related variations in facial form and dental occlusion. Provides special emphasis on compensations in skeletal and soft tissue structures. Examines the basis for prediction of change.

## **ORTH 654. Orthodontic Diagnosis and Treatment Planning. 2 Hours.**

Semester course; 30 seminar hours. 2 credits. Must be taken every semester of the program. Considers and discusses available and theoretical options for clinical management of variations in facial form and dental occlusion.

## **ORTH 656. Current Literature. 2 Hours.**

Semester course; 30 seminar hours. 2 credits. Must be taken every semester of the program. Presents in a journal-club-format evaluation of current information in orthodontics and related disciplines. Includes special emphasis on research methodology and the contributions of current research to advances in orthodontics.

## **ORTH 658. Analysis of Orthodontic Treatment. 1.5 Hour.**

Semester course; 22.5 seminar hours. 1.5 credits. Must be taken every semester of the program. Analyzes cephalometric and other objective measures of the outcomes of orthodontic therapy. Reviews treatment objectives with respect to actual changes effected in patients. Delineates changes resulting from therapy from normal variations in craniofacial development.

## **ORTH 660. Orthognathic Conference. 1 Hour.**

Semester course; 15 seminar hours. 1 credit. Must be taken every semester of the program. Presents patients requiring coordinated orthodontic and oral surgery care. Emphasizes long- and short-term biologic stability of alterations in the structure and function of the craniofacial skeleton with increased emphasis on facial form and dental occlusion.

## **ORTH 662. Craniofacial Anomalies. 1 Hour.**

Semester course; 15 lecture/seminar hours. 1 credit. Must be taken every semester of the program. Discusses the etiology and embryologic basis of congenital and acquired deformities in the craniofacial structures. Emphasizes syndromes with craniofacial manifestations and the diagnosis and treatment planning for patients with facial clefts.

## **ORTH 680. Orthodontic Clinic. 2.5 Hours.**

Semester course; 7.5 clinic hours. 2.5 credits. Enrollment is restricted to students enrolled in the M.S.D. program. Students will learn the clinical management of orthodontic patients. Involves supervised experiences in treatment of a complete spectrum of normally occurring orthodontic problems in an environment simulating private practice. Must be taken both fall and spring of the first and second years of the program for a total of 10 credits. May be taken without credit in additional semesters as needed to complete clinical training. Graded as pass/fail.

## **ORTH 700. Senior Selective in Orthodontics. 4 Hours.**

Semester course; 4 clinical and 1 seminar hours per week. 4 credits. Prerequisites: successful completion of ORTH 623, ORTH 733, ORTH 739 and permission of the course director. A clinical and didactic course designed for students who wish to gain advanced knowledge of orthodontics in an environment simulating a practice setting. The course will include participation in seminars, clinical activities and hospital rotations for craniofacial patients. The course will extend over the fall and spring semesters and will provide an excellent preparation for students entering the private practice of dentistry or students seeking graduate education in the field of orthodontics. A maximum of four students will be chosen to participate in this selective each year. Graded CO for the fall semester and P/F for the spring.

## **ORTH 733. Orthodontic Therapy. 1 Hour.**

Semester course; 1 lecture contact hour. 1 credit. Consists of didactic lectures, a continuation of ORTH 623.

## **ORTH 739. Clinical Orthodontics III. 1 Hour.**

Yearlong course; 2.5 hour clinic sessions. 1 credit. The purpose of this clinical course is to give the student practical, hands-on, orthodontic diagnosis and treatment experience to supplement the didactic material learned in preclinical orthodontic courses. The student will learn how to diagnose orthodontic problems so that normal developmental processes, minor occlusal discrepancies with simple solutions and more complex problems requiring referral to a specialist may be differentiated. Diagnosis and treatment of cases requiring limited orthodontic therapy will be the focus of the course during the junior year when students will rotate through the orthodontic clinic in eight-week block rotations. Students receive CO grading in the fall and pass/fail grade and credit are awarded in spring.