University of East

MASTER OF SCIENCE IN DENTISTRY *(ORTHODONTICS)*

Subject Code	Subject Title	Units	Hours per week		
			Lec.	Lab.	Cl.
FIRST YEAR					
1st Semester					
DENT 511	Advanced Oral Biology	2	2		
DENT 513	Craniofacial Genetics, Growth and Development	2	2	3	
DENT 514	Dento-Craniofacial Radiology (Cephalometrics)	2	1		
ORTHO 551	Biomechanics: Theoretical Basis of Tooth Movement	3	2	3	
ORTHO 563	Orthodontic Technique	2	1	3	
ORTHO 516	Clinical Practice & Conference (Internship)	1			3
TOTAL		**12**	**8**	**9**	**3**
2nd Semester					
DENT 531	Interdisciplinary Diagnosis and Treatment Plan	2	2		
DENT 591	Biostatistics	2	1	3	
DENT 592	Research Methods & Design	2	2		
ORTHO 562	Biomaterials & Biomechanics	2	2		
ORTHO 572B	Advanced Ortho Clinic 1	4			12
TOTAL		**12**	**7**	**3**	**12**
SECOND YEAR					
1st Semester					
DENT 512	Cell and Molecular Biology	2	2		
DENT 522	Occlusion, TMJ Dysfunction & Pain	2	2		
ORTHO 561	Dento-Craniofacial Anomalies	2	2		
ORTHO 573B	Advanced Ortho Clinic 2	5			15
TOTAL		**11**	**6**	**0**	**15**
2nd Semester					
DENT 521	Oral Immunology & Microbiology	2	2		
DENT 593	Research Analysis & Interpretation	2	2		
ORTHO 564	Mixed Dentition Seminar	1	1		
ORTHO 581	Orthognathic Surgery	2	1		3
ORTHO 574	Advanced Ortho Clinic 3	5			15
TOTAL		**12**	**6**	**0**	**18**
	COMPREHENSIVE EXAMINATIONS				
THIRD YEAR					
1st Semester					
ORTHO 571	Speech Physiology & Pathology	2	2		
ORTHO 582	Ortho-Perio Seminar	1	1		
ORTHO 575	Advanced Ortho Clinic 4	5		Res	15
DENT 597A	Orthodontic Research 1	3		Lab	
TOTAL		**11**	**3**	**0**	**15**
2nd Semester					
ORTHO 583	Ortho-Prostho Seminar	1	1		
ORTHO 585	TMJ & Occlusion Seminar	1	1		
PROS 584	Cleft Lip & Palate Seminar	1	1	Res	
DENT 595B	Orthodontic Research 2	3		Lab	
TOTAL		**6**	**3**	**0**	**0**

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Major in **Orthodontics**

OBJECTIVES:

To provide qualified dentists strong educational background and training in science and research methodology in the speciality of Orthodontics through a scientific approach so that patient-care decisions may be formulated on principles and procedures that have biological significance and clinical relevance.

EXPECTED OUTCOMES:

1. Graduate students must have a thorough understanding of the growth and development of the facial structures and dentition.
2. Graduate students must have gained adequate knowledge on the theories and principles of tooth movement and alteration of the bones of the facial complex.
3. Graduate students must have achieved competencies in research.
4. Graduate students must have developed an appreciation of optimal occlusion with special cnsideration given to function, stability and esthetics.
5. Graduate students must have acquired an understanding of the principles and materials involved in bio-mechanics of treatment and proficiency in the techniques involved.
6. Graduate students must be able to engage in research and scholarly activities that will generate new knowledge and solutions to oral and health-related problems.

ORTHO 551 – Biomechanics

Theoretical Basis for Tooth Movement: Introduces the Physical science of mechanics and engineering statics as applied to orthodontics force systems. Emphasizes equilibrium and the biologic manifesttations of force systems applied to the definition and craniofacial skeleton. ***Credit: 3 units***

ORTHO 561 – Dentocraniofacial Anomalies

A course that covers the cooperative efforts of the oral and maxillofacial surgical and orthodontics specialties to find solutions to problems that individual discipline could not handle independently. ***Credit: 2 units***

ORTHO 562 – Biomaterials and Biomechanics

This course introduces the student to the physical properties of orthodontics wires and force systems. The subject of moments, couples, orthodontic tooth movement in three planes of space and the requirements of static equilibrium will also be discussed. ***Credit: 2 units***

ORTHO 563 – Orthodontic Technique

A comprehensive study of the mechanical principles and practices that are used in the clinical correction of dental and skeletal malocclusions. ***Credit: 2 units***

ORTHO 564 – Mixed Dentition Seminar

Covers the areas of treatment in mixed definition with different approaches to various dento-skeletal problems. ***Credit: 1 unit***

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ORTHO 671 – Speech Physiology and Pathology

A detailed consideration of oral, facial and pharyngeal physiology, with particular attention to functions of mastication, deglutition and speech. ***Credit: 2 units***

ORTHO 572 – Advanced Orthodontic Clinic 1

Introduces the students to the rigors, pace and environment of a modern-day orthodontic practice. ***Credit: 3 units***

ORTHO 573 – Advanced Orthodontic Clinic 2

A continuation of ORTHO 572. ***Credit: 3 units***

ORTHO 581 – Orthognathic Surgery

Students present cases requiring coordinated orthodontics and oral surgery care. ***Credit: 2 units***

ORTHO 582 – Ortho-Perio Seminar

Students present and defend cases that they have treated jointly. Discusses treatment planning and anaylsis of patients requiring combined orthodontics and periodontics care. ***Credit: 1 unit***

ORTHO 583 – Ortho-Prostho Seminar

Students present and defend cases that they have treated jointly. Discusses treatment planning and analysis of patients requiring combined orthodontics and prosthodontics care. ***Credit: 1 unit***

PROS 584 – Cleft Lip and Palate Seminar

A course designed to provide a forum for the discussion of management of cleft lip palate cases, including other congential malformations. ***Credit: 2 unit***

ORTHO 585 – TMJ and Occlusion Seminar

Involves discussion of current concepts of mandibular movement as related to semi-adjustable articulator. Concepts of different types of tooth position and jaw positions are explained. ***Credit: 1 unit***