

ORTHODONTICS

Person who is responsible to explain this section to the visitors:

Name: Dr. Sepideh Arab

E-mail: arabs@razi.tums.ac.ir

Introduction

The aim of the orthodontic curriculum is to ensure that dental students acquire the most current knowledge and skills in diagnosis of orthodontic problems and prevention of malocclusions from developing which finally leads to improved oral health. Orthodontic training is incorporated at the 4th, 5th and 6th year of the dental curriculum. (7th to 11th semester). It contains three theoretical and four practical courses. The department of orthodontics also offers postgraduate orthodontic program and craniofacial orthodontics fellowship.

Primary Aims

The students should have a broad basic scientific knowledge of orthodontics including development of occlusion and related factors, etiology of malocclusions, prevention from malocclusions, diagnosis, treatment plan, limitations of orthodontic intervention by general dentists and referral system, with extreme emphasis on preventions. General skills such as infection control, communication skills and oral hygiene improvement as a whole are also taken in consideration.

Main Objectives

Students should have the knowledge of:

- Definition, classification, ethology and epidemiology of malocclusions
- Facial growth and development of occlusion
- Orthodontic examinations and analysis of diagnostic records (space analysis, cephalometric analysis, ...)
- Diagnosis and arranging problem lists
- Biology of tooth movement and tissue reaction, biomechanics and anchorage
- Space management and preventive orthodontics
- Treatment planning for moderate dental malocclusions and skeletal problems in children and adolescents
- Designing and application of different removable appliances
- Detrimental effects of orthodontic treatment, retention and relapse
- Taking impression, trimming dental casts, chart filling
- Wire bending and delivering appliances to patients and importance of follow up sessions

Hours in the Curriculum and distribution of hours across semesters, trimesters, modules, years

	4th year		5th year		6th year	
	7th semester	8th semester	9th semester	10th semester	11th semester	12th semester
<u>lectures</u>	17hours	17 hours	17 hours			
<u>Courses/seminars</u>			4 hours	4 hours	4 hours	
<u>Clinical training</u>		34hours	30hours	30hours	30hours	
<u>Independent study</u>						
<u>ECTS credits</u>	1	2	2	1	1	

Methods of Learning / Teaching

- Theoretical knowledge: is mostly achieved via lectures by professors.
- Clinical practice: At the 8th semester, the whole class is divided into groups of about 6-9 students. Each group will be trained for wire bending and fabrication of different components of removable orthodontic appliances as well as impression taking and analysis of records 3 hours a day in a two week period. Treatment of patients starts from 9th semester by starting a new patient. Students practice in department of orthodontics 4 hours a week, every other week. The process includes chart filling, history taking, diagnostic data ordering and analysis, diagnosis, treatment planning, appliance fabrication and delivery, and follow up under precise supervision of one of the faculty members. At the 10th semester, they continue follow up of their patients while they will take the responsibility of follow up of the patients referred from the graduated seniors. They also might be given another new patient in case. The follow ups continue at the 11th semester and in the end of this semester, they will leave the department of orthodontics and the patients will be referred to the junior students. Case presentation, small group discussion and seminars are other important parts of clinical learning through these years. Logbooks help students get informed about their strength point and weak points in clinical courses.

Assessment Methods

Theoretical subjects: are assessed in the final exam by a written examination in MCQ form.

Clinical courses:

8th semester

<i>Laboratory work</i>	<i>Final written exam</i>	<i>Final practical exam</i>	<i>Infection control</i>	<i>Total</i>
<i>10</i>	<i>3</i>	<i>6</i>	<i>1</i>	<i>20</i>

9th semester

<i>Clinical practice</i>	<i>Seminar and oral exam</i>	<i>Midterm exams</i>	<i>Final written exam</i>	<i>Infection control and professionalism</i>	<i>Total</i>
10	3	2	3	2	20

10th semester

<i>Clinical practice</i>	<i>Case presentation Seminar</i>	<i>Final written exam</i>	<i>Infection control and professionalism</i>	<i>Total</i>
11	4	3	2	20

11th semester

<i>Clinical practice</i>	<i>Case presentation Seminar</i>	<i>Final written exam</i>	<i>Infection control and professionalism</i>	<i>Total</i>
12	4	2	2	20

- Both the student's acquired skills and theoretical knowledge are assessed during clinical practice.

Strengths

- Well trained and experienced academic staff including 4 full professors.
- International postgraduate students can register for the 3 year post graduate program.
- There are appropriate clinical equipment and adequate patient supply.
- Regular case presentation seminars.
- Cleft lip and palate section allocated to treat such patients.
- Accepting international post-graduate students
- Many researches have been carried out in terms of undergraduate and postgraduate thesis which their results have been published in reputable dental journals.

Weaknesses

- Lack of patients for some special types of malocclusion.
- We still do not have computer based archive.
- Lack of photography room.

Innovation and Best Practices

- We use the newly revised curriculum.

- Some patients have been treated with clear aligners and Damon system.
- We have craniofacial orthodontics fellowship program.
- Four international postgraduate students have been graduated from our department.
- Intra oral scanner is available in case of need for digital impression

Plans For Future Changes

- We plan to apply digital orthodontics by purchasing oral scanner and state of the art soft wares
- Clear aligners and lingual orthodontics should become more frequently applied in future