

## Accreditation and Quality Assurance Centre Course Syllabus The University of Jordan

1	Course title	Orthodontics Practical-2-1303574
2	Course number	
3	Credit hours (theory, practical)	1 credit hour (practical)
	Contact hours (theory, practical)	32 contact hours practical (2hours every other week)
4	Prerequisites/corequisites	1303474
5	Program title	Doctor of Dental Surgery (DDS)
6	Program code	NA
7	Awarding institution	The University of Jordan
8	School	Faculty of Dentistry
9	Department	Pediatric dentistry, orthodontics and preventive dentistry
10	Level of course	Bachelor
11	Year of study and semester (s)	5th year – First and second semesters
12	Final Qualification	DDS
13	Other department (s) involved in teaching the course	None
14	Language of Instruction	English
15	Date of production/revision	Aug 2019

### 16. Course Coordinator:

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### 17. Other instructors:

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### **18. Course Description:**

This course is taught during the first and second semester of the 5th year. The aim of the course is to enable the students to advise patients on orthodontic treatment in a general dental practice environment and identify patients that are in urgent need for orthodontic treatment and treat or refer.

**A- 19. Course aims and outcomes: Aims:**

- To provide students with basic diagnostic skills needed for orthodontic assessment of patients, including cephalometric and space analysis.
- To use data collected from patient assessments for diagnosis and development of a treatment plan. Special consideration will be given to identifying those patients that can benefit from preventive and/or interceptive orthodontics.
- To provide students with the clinical skills needed to design and adjust removable and functional orthodontic appliances and manage orthodontic emergencies.

B- Intended Learning Outcomes (ILOs): Upon successful completion of this course students will be able to

- 1) **Obtain** and **record** an accurate and comprehensive orthodontic extra oral and intra oral examination.
- 2) **Analyse** data collected from clinical and radiographic examinations to **produce** a comprehensive problem list, case summary, appropriate diagnosis of different malocclusions and a provisional treatment plan
- 3) **Apply** cross infection control methods.
- 4) **Produce** an accurate lateral cephalogram analysis and **utilize** it to formulate a clinically meaningful report.
- 5) **Produce** an accurate space analysis on study models and **utilize** it to formulate a clinically meaningful report.
- 6) **Design** and **adjust** orthodontic removable and functional appliances for different malocclusions.
- 7) **Identify** the appropriate retention regimens for different malocclusions
- 8) **Identify** those cases that will benefit from interceptive orthodontics and / or removable appliance and fixed appliance treatment.
- 9) **Select** appropriate timing for referral of patients for specialized orthodontic treatment.
- 10) **Advise** patients on orthodontic treatment in a general dental practice environment.
- 11) **Diagnose** and **manage** orthodontic emergencies

**20. Topic Outline and Schedule:**

**First semester 2019 – 2020**

Topic	Week	Instructor	Achieved	Evaluation	Reference

			ILO's	method	
An introduction to Orthodontic clinic. Discuss requirements. Demo on patient examination. Examination and diagnosis of new patient (1) in clinic	<b>1-2</b>	assigned as per schedule	1	22(1,2,3)	references specified in theoretical courses
Examination and diagnosis of new patient (2) in clinic	<b>3-4</b>	assigned as per schedule	1,2,3,9,10 ,11	22(1,2,3)	references specified in theoretical courses
Examination and diagnosis of case records (1)	<b>5-6</b>	assigned as per schedule	1,2,3,9,10 ,11	22(1,2,3)	references specified in theoretical courses
Examination and diagnosis of case records (2)	<b>7-8</b>	assigned as per schedule	1,2,3,9,10 ,11	22(1,2,3)	references specified in theoretical courses
Case 1: CI malocclusion with crowding and a single tooth in crossbite.	<b>9-10</b>	assigned as per schedule	1,2,3,9,10 ,11	22(1,2,3)	references specified in theoretical courses
Case 1: CI malocclusion with crowding and a single tooth in crossbite.	<b>11-12</b>	assigned as per schedule	7	22(1,2,3)	references specified in theoretical courses
Case 2: CI malocclusion in a growing child with posterior crossbite.	<b>13-14</b>	assigned as per schedule	1,2,9,10,1 1	22(1,2,3)	references specified in theoretical courses
Case 2: CI malocclusion in a growing child with posterior crossbite.	<b>15-16</b>	assigned as per schedule	1,2,5,7,8, 9,10,11	22(1,2,3)	references specified in theoretical courses

**Second semester 2019 – 2020**

<b>Topic</b>	<b>Week</b>	<b>Instructor</b>	<b>Achieved ILO's</b>	<b>Evaluation method</b>	<b>Reference</b>
Case 3: CII div 1 malocclusion in a growing child with moderate CII skeletal pattern.	<b>1-2</b>	assigned as per schedule	1,2,7,8,9,10,11	22(1,2,3)	references specified in theoretical courses
Case 3: CII div 1 malocclusion in a growing child with moderate CII skeletal pattern.	<b>3-4</b>	assigned as per schedule	1,2,4,9,10,11	22(1,2,3)	references specified in theoretical courses
Case 4: pseudo CIII malocclusion in a growing child with mild CIII skeletal pattern and no family history.	<b>5-6</b>	assigned as per schedule	1,2,4,7,8,9,10,11	22(1,2,3)	references specified in theoretical courses
Case 4: pseudo CIII malocclusion in a growing child with mild CIII skeletal pattern and no family history.	<b>7-8</b>	assigned as per schedule	1,2,4,9,10,11	22(1,2,3)	references specified in theoretical courses
Interceptive cases of 6s with poor prognosis, Impaction and early loss of primary teeth.	<b>9-10</b>	assigned as per schedule	1,2,4,7,8,9,10,11	22(1,2,3)	references specified in theoretical courses
Orthodontic appliances (fixed, URA, functional) and emergencies. in clinic	11-12	assigned as per schedule	6,9,10	22(1,2,3)	references specified in theoretical courses
Orthodontic appliances (fixed, URA, functional) and emergencies. in clinic	13-14	assigned as per schedule	12	22(1,2,3)	references specified in theoretical courses
Final exam and viva	15-16				

## 21. Teaching Methods and Assignments:

Development of ILOs is promoted through the following teaching and learning methods:

*Duration:* 32 weeks (2 exam weeks + 30 teaching weeks)= (60 teaching hours in total).

*Practical Sessions:* 1 session of 2 hours every 2 weeks over 30 weeks

## 22. Evaluation Methods and Course Requirements:

Opportunities to demonstrate achievement of the ILOs are provided through the following assessment methods and requirements:

- 1) Continuous assessments of students will be held on clinic in the form of case presentations, an evaluation of quality of patient care, punctuality, and general professional and clinical attitudes. This will account for **60%** of the final score.
- 2) A final clinical examination which will account for **20%** of the final score.
- 3) A viva voce examination in conjunction with an external examiner which will account for **20%** of the final score.

### Course work requirements:

1. Student should provide evidence of having examined **2new patients** during the first semester and filled diagnostic form for each.
2. Examination and diagnosis of **2case records** completing the diagnostic form for each.
3. Examination and diagnosis of case 1 and perform space analysis with full report and provide evidence of designing a proper removable appliance for treatment
4. Examination and diagnosis of case 2 and provide evidence of developing accurate problem list and aetiology, case summary and designing a proper removable appliance for treatment.
5. Examination and diagnosis of case 3 and perform ceph analysis with full report and provide evidence for accurate treatment objectives and treatment plan.
6. Examination and diagnosis of case 4 and perform ceph analysis with full report and provide evidence of writing a referral letter.
7. Exhibit competence at understanding principles of Interceptive orthodontics

8. Exhibit competence at understanding orthodontic appliances and the management of orthodontic emergencies.

**Competencies:**

**Clinical skills**

- Competent at diagnosing the main features of skeletal, soft tissue and local causes of malocclusions.
- Competent at the principles of designing orthodontic removable appliances.
- Have knowledge in the principles of treatment planning of orthodontic problems.
- Competent in understanding of the basics of interceptive orthodontic treatment.

**Practical skills**

- Competent at understanding the principles of radiographic analysis including cephalometrics.
- Competent at understanding the principles of space analysis
- Competent at understanding principles of management of orthodontic emergencies

**Patient management:**

- Competent at understanding the principles of management of patients with removable and functional appliances including adjustment of appliances.
- Familiar with identifying those cases that will benefit from interceptive treatment or treatment with removable .
- Have knowledge with cases which require fixed appliance treatment and should be referred to a specialist orthodontist

Competency evaluations are reflected in the student's assessment form (attached). If a student is not competent in any of the treatment stages he/she should repeat that stage until proves competence.

**23. Course Policies:**

A- **Attendance policies:** Students are allowed 15% absence according to the laws of the university. This stands for 2 clinics for 5th year students in the Orthodontic practical course.

B- **Absences from exams and handing in assignments on time:** Any student who comes late to the clinic will lose the marks of the quiz of that clinic.

C- **Health and safety procedures:** students should adhere to all the stated rules and regulations regarding safety, cross infection control and patient care.

D- **Honesty policy regarding cheating, plagiarism, misbehavior:** students should adhere to all the stated rules and regulations regarding professional conduct.

**24. Required equipment:**

○ Two patient-examination sets.	
○ Two metal rulers that can be sterilized.	
○ One pair of Adams Pliers.	
○ One Pair of Spring Forming Pliers.	
○ Metal dividers.	

○ Marking pencil.	
○ Protective eye shields.	
○ Protractor	
○ Plastic ruler	

## 25. References:

### *Suggested text books:*

- Handbook of Orthodontics. **Martyn Cobourne&Andrew DiBiase**, 2nd Edition. Elsevier
- **An Introduction to Orthodontics**. L. Mitchell, N.E. Carter (2013) 4<sup>th</sup> edition. . Oxford University Press.

### *Also recommended:*

- **A Textbook of Orthodontics**. W.J.B. Houston, C.D. Stephens and W.J. Tulley (1992), 2<sup>nd</sup> Edition. Wright, Butterworth-Heinemann Ltd.
- **Contemporary Orthodontics**. W.R. Proffit (2013) 5<sup>th</sup> edition. Mosby Year Book.
- Orthodontics at a Glance, D. Gill (2008). Wiley-Blackwell.

**Important note:** Orthodontic staff might provide additional reading materials from journals or other textbooks related to specific session(s).

## 26. Additional information:

Name of Course Coordinator: -----Signature: ----- Date: -----

Head of curriculum committee/Department: ----- Signature: -----

Head of Department: ----- Signature: -----

Head of curriculum committee/Faculty: ----- Signature: -----

Dean: ----- -Signature: -----



## Orthodontic department

Student Name: \_\_\_\_\_ Group: \_\_\_\_\_

Requirements	Date		Mark		Signature	Competent	Mark
First semester:							
<b>New patient examination (1)</b>	/ /					N/A	
<b>New patient examination (2)</b>	/ /					N/A	/5
<b>Examination and diagnosis of case records (1)</b>	/ /						/5
<b>Examination and diagnosis of case records (2)</b>	/ /						/5
<b>Case 1 Space analysis</b>	/ /						/5
<b>Case 1 URA design</b>	/ /						/5
<b>Case 2 Problem list and aetiology</b>	/ /					N/A	/5
<b>Case 2 URA design</b>	/ /						/5
<b>Case 2 Case summary</b>	/ /						/5
<b>Case 3 Ceph analysis and report</b>	/ /						/5
<b>Case 3 Treatment objectives and treatment plan</b>	/ /					N/A	/5
<b>Case 4 Ceph analysis and report</b>	/ /						/5
<b>Case 4 Referral letter</b>	/ /					N/A	/5
<b>Interceptive Orthodontics</b>	/ /					N/A	/5
<b>Orthodontic appliances and emergencies</b>	/ /						/5
<b>Orthodontic appliances and emergencies</b>	/ /						/5
<b>Conduct</b>	<b>Absences</b>	<b>Pt care</b>	<b>Clothes</b>	<b>Tools</b>	<b>Infection control</b>	<b>Other</b>	/5

**Orthodontic case**

**Patient Examination Form**

**Jordan University Hospital**

**Department of Orthodontics**

**Date:** \_\_\_\_\_

**Personal information**

**Patient Name:** \_\_\_\_\_

**Date of Birth:** \_\_\_\_\_ **Age:** \_\_\_\_\_

**Chief Complaint:** \_\_\_\_\_

**Relevant MH:** \_\_\_\_\_

**Dental History:** \_\_\_\_\_

**Extra-oral Examination**

**Skeletal Pattern:**

A-P: \_\_\_\_\_

Vertical: \_\_\_\_\_

Transverse: \_\_\_\_\_

**Soft Tissues and Habits:**

Lips: \_\_\_\_\_

Swallowing: \_\_\_\_\_

Habits: \_\_\_\_\_

**TMJ:** \_\_\_\_\_

**Intra-oral Examination**

**Oral Hygiene:** \_\_\_\_\_

**Tooth Quality and Caries risk:** \_\_\_\_\_

**Teeth Present:** \_\_\_\_\_

**Occlusion**

• **Incisor Classification:** \_\_\_\_\_

• **Overjet (mm):** \_\_\_\_\_

• **Overbite:** \_\_\_\_\_

• **Molar Relationship:**

R \_\_\_\_\_ L \_\_\_\_\_

• **Canine Relationship:**

R \_\_\_\_\_ L \_\_\_\_\_

• **Crossbite:** \_\_\_\_\_

• **Centrelines:** \_\_\_\_\_

**Alignment and Space Condition**

Lower Labial Segment \_\_\_\_\_

Lower Buccal Segment: \_\_\_\_\_

Upper Labial Segment: \_\_\_\_\_

Upper Buccal Segment: \_\_\_\_\_

**Problem List**

**Aetiology**

1. Non-orthodontic problems:

.....  
.....

2. Skeletal:

.....  
.....

3. Soft tissues

.....  
.....

4. Dental

.....  
.....  
.....

5. Others

.....  
.....

**Treatment Objectives**

- 1.....
- 2.....
- 3.....
- 4.....
- 5.....
- 6.....
- 7.....
- 8.....
- 9.....
- 10.....

**Treatment Plan**

- 1. Non-Extraction / Extraction.....
- 2. Type of appliance.....
- 3. Anchorage .....
- 4. Buccal segment relationship.....
- 5. Retention: Duration.....Appliance.....

## Space analysis form

**Mixed dentition analysis equation for Jordanians:**

**Upper arch:**  $10.94 + (\text{measured mesio-distal width of lower incisors} \times 0.46)$

**Lower arch:**  $8.43 + (\text{measured mesio-distal width of lower incisors} \times 0.55)$

### Lower arch:

- Lower central and lateral incisor width: (      ) mm

\_\_\_\_\_

- Space available: (      ) mm

\_\_\_\_\_

- Space required: (      ) mm

\_\_\_\_\_

- Space condition:

- Spacing: (      ) mm

- Crowding : (      ) mm      Mild / Moderate / Severe

### Upper arch:

- Space available: (      ) mm

\_\_\_\_\_

- Space required: (      ) mm

\_\_\_\_\_

- Space condition:

- Spacing: (      ) mm

- Crowding : (      ) mm      Mild / Moderate / Severe

<b>Cephalometric Report</b>			
<b>Date:</b>			
<b>Eastman analysis:</b>			
<b>SNA</b>		<b>MMPA</b>	
<b>SNB</b>		<b>ALFH%</b>	
<b>ANB</b>		<b>UIMxP</b>	
<b>SN-MxP</b>		<b>LIMnP</b>	
<b>Corrected ANB</b>		<b>IIA</b>	

### Cephalometric and Prognosis Tracing Report:

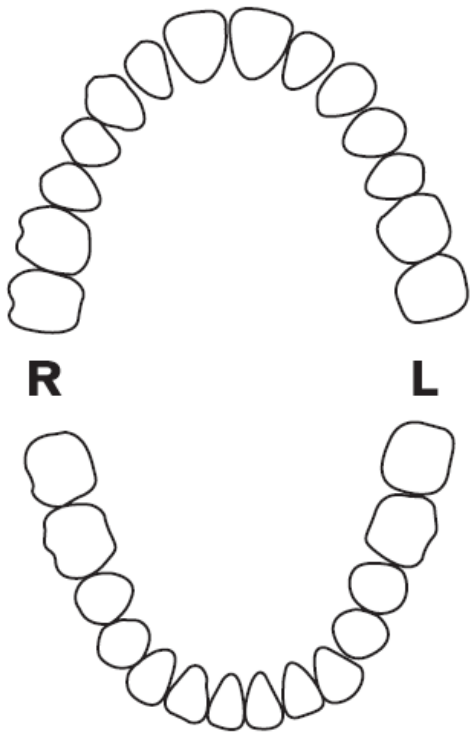
#### 1. Skeletal relationship:

#### 2. Dental relationship:

**Orthodontic Laboratory Request Form**

**Patient name:**..... **Date:**.....  
**Student:**..... **Group:**.....  
**Supervisor:**.....

**Appliance Design:**



**Supervisor's signature:**

**Delivery date:** .....