

**The University of Jordan**  
**Faculty of Dentistry**  
**Department of Child Dental Health**  
**2011/2012**

**Course Title:** Practical Orthodontics 2

**Course Code:** 1303574

**Semester:** 1<sup>st</sup> and 2<sup>nd</sup> / 5<sup>th</sup> year

**Prerequisite:** None

**Department:** Child Dental Health.

**Module Coordinator(s):** Dr. Ahmad Hamdan

**Instructor (s):**

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**Course Objectives:**

The objectives of this course are:

- To provide students with basic diagnostic skills needed for orthodontic assessment of patients, including cephalometric analysis.
- To use data collected from patient assessments to develop a treatment plan. Special consideration will be given to identifying those patients that can be treated with removable appliances.
- To provide students with the clinical skills needed to treat a range of malocclusions considered to be within the scope of general dental practitioners.

**Learning Outcomes:**

**A. Knowledge and understanding, student should:**

- Students should be able to apply the cross infection control methods.
- Clinical and radiographic assessment of new patients attending orthodontic clinics
- Clinical and radiographic assessment of patients under treatment by 5<sup>th</sup> Year students of the previous academic year referred for treatment

- Advanced radiographic analysis including location of impacted teeth using parallax and removable appliance prognosis tracings
- Pouring and trimming of orthodontic study casts to a high standard
- Design and construction (wire work only) of removable appliances
- Insertion of removable appliances and patient instructions
- Retention regimens for different malocclusions

**B. Intellectual skills, with ability to:**

- Analysis of data collected from clinical and radiographic examinations and the development of treatment objectives and a definitive treatment plan
- Ability to identify those cases that will benefit from removable appliances and can be treated by a general dental practitioner, and those cases which require fixed appliance treatment and should be referred to a specialist orthodontist
- Ability to identify those patients that will benefit from mixed dentition treatment
- Ability to monitor treatment progress in an objective manner
- Ability to identify loss of anchorage and adverse effects of treatment

**C. Subject specific skills, with ability to:**

- Adjustment of removable appliances at follow up visits
- Presentation of completed cases in a logical and scientific manner

**D. Transferable skills, with ability to:**

Advise patients on orthodontic treatment in a general dental practice environment  
Identify patients that are in urgent need for treatment and treat or refer

**Teaching Methods:**

**Duration:** 32 weeks in 1<sup>st</sup> and 2<sup>nd</sup> semesters (5<sup>th</sup> year), 16 hours in total.

**Practical sessions:** 16 hours, one 2-hour session every two weeks (including one 2-hour final practical exam).

*Each clinical session will be divided into 2 parts;*

1. The *1<sup>st</sup> hour in semester 1 and the first half of semester 2* will be reserved for the *clinical examination and treatment planning of new patients*.
2. The *1<sup>st</sup> hour in the second half semester 2* will be reserved for *the presentation of cases treated by students* and a short tutorial by a faculty member.
3. The *2<sup>nd</sup> hour of all clinical sessions (semesters 1 & 2)* will be reserved for treatment of patients (referred and new) and appointments should be given to patients accordingly.

## **Requirements:**

- Instruments:
  - Two patient examination sets.
  - Two metal rulers that can be sterilized.
  - One pair of Adams Pliers.
  - One Pair of Spring Forming Pliers.
  - Impression trays that can be sterilized.
  - Bowl and mixing spatula.
  - Metal dividers.
  - Marking pencil.
  - Protective eye shields.
  
- Cases:
  - One fully documented case where at least one appliance has been inserted.  
Documentation should include:
    - **Trimmed study models:** should be presented to a Faculty member for marking at the *next session* following impression taking.
    - **Radiographic report for traced cephalometric x-ray:** should be presented at the *treatment planning session*. If the patient did not require an x-ray, a Faculty member will provide one to trace.
    - **Clinical notes (signed Logbook):** including at least 3 follow up visits.  
The marking system will include tidiness, correct completion of patient forms and signatures of supervising Faculty.
  
- **A PowerPoint presentation of the treated case:** presentation date will be arranged during the second semester.
  
- Student should provide evidence of having examined and/or presented a treatment plan for at least **four new patients during the first semester.**
  
- **Seminars to be presented by staff during the 2<sup>nd</sup> semester:**
  - Orthodontic diagnosis, treatment planning and model analysis

- Removable appliance designs – CI, CII/1, CII/2, CIII
- Follow up visits – What to do? What to look for?
- Patients to treat and patients to refer?
- Evidence based dentistry
- Risks and benefits of orthodontic treatment
- Late lower incisor crowding
- Presentation of finished / treatment cases (throughout 2<sup>nd</sup> half of second term)

▪ Evaluation system:

- 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.
- A final clinical examination which will account for 30% of the final score.
- A viva voce examination in conjunction with an external examiner which will account for 10% of the final score.

▪ Attendance:

- According to University regulations students are allowed *a maximum of 15% absence* without cause, this translates into *2.4 clinical sessions*. Students exceeding this limit without cause *will not be allowed to sit for the final examination*.

**Feedback:**

Concerns or complaints should be expressed in the first instance to the course instructor. If no resolution is forthcoming then the issue should be brought to the attention of the Department Chair and if still unresolved to the Dean. Questions about the material covered on clinics, notes on the content of the course, its teaching and assessment methods can be also sent by e-mail.

**References and reading materials:**

- Houston W.J.B, Stephens C.D. and Tulley W.J. (2003)

A Textbook of Orthodontics, 3<sup>rd</sup> Edition

Wright, Butterworth-Heinemann Ltd.

- L. Mitchell, N.E. Carter (2007) 3<sup>rd</sup> edition. An Introduction to Orthodontics. Oxford University Press.
  
- W.R. Proffit (2007) 4<sup>th</sup> edition. Contemporary Orthodontics. Mosby Year Book.

### Appendix 1: Student assessment form

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

Group: \_\_\_\_\_ 1<sup>st</sup> 2<sup>nd</sup>

Requirements	Date	Signature	Mark (/10)		Mark			
Study Models	/ /				/5			
Ceph. Tracing & Prognosis	/ /				/10			
Logbook	/ /				/10			
New patient assessment					/10			
1.	/ /							
2.	/ /							
3.	/ /							
4.	/ /							
Conduct	Absences	Pt care	Clothes	Home w.	Logbook	Bench	Infection c.	/10
Treated cases								/15

	Imp. SM	Tx. Plan & Design	Work. Imp.	Fitting	Review	Review	Review
1 <sup>st</sup> pt. :W.L ..... Tel:	/ /	/ /	/ /	/ /	/ /	/ /	/ /
	/10	/10	/10	/10	/10	/10	/10
2nd pt: W.L ..... Tel:	/ /	/ /	/ /	/ /	/ /	/ /	/ /
	/10	/10	/10	/10	/10	/10	/10
1 <sup>st</sup> pt: Ref ..... Tel:	/ /	/ /	/ /	/ /	/ /	/ /	/ /
	/10	/10	/10	/10	/10	/10	/10

## Appendix 2: Case log book

**Faculty of Dentistry**

**University of Jordan**

### **Clinical session Schedule – 5<sup>th</sup> Year 1<sup>st</sup> Semester**

<i>Week</i>	<i>Session</i>	<i>Note</i>
<b>1</b>	<b>Introduction</b> Assignment of referred cases	<b>Group 1 + 2 (week1)</b>
<b>2-3</b>	<b>Examination of New patient</b> Review of referred + Seminar (Tx. planning: URA adjustment)	<b>1<sup>st</sup> hour</b> <b>2<sup>nd</sup> hour</b>
<b>4-5</b>	<b>Examination of New patient</b> Review of referred/waiting list	<b>1<sup>st</sup> hour</b> <b>2<sup>nd</sup> hour</b>
<b>6-7</b>	<b>Examination of New patient</b> Review of referred/ WL	<b>1<sup>st</sup> hour</b> <b>2<sup>nd</sup> hour</b>
<b>8</b>	<b>Eid Al Adha – Eid Mubarak</b>	<b>Estimated November 5-9</b>
<b>9-10</b>	<b>Examination of New patient</b> Review of referred/ WL	<b>1<sup>st</sup> hour</b> <b>2<sup>nd</sup> hour1</b>
<b>11-12</b>	<b>Examination of New patient</b> Review of referred/ WL	<b>1<sup>st</sup> hour</b> <b>2<sup>nd</sup> hour</b>
<b>13-14</b>	<b>Examination of New patient</b> Review of referred / WL	<b>1<sup>st</sup> hour</b> <b>2<sup>nd</sup> hour</b>
<b>15</b>	<b>Review of referred / WL</b>	<b>1<sup>st</sup> hour</b> <b>2<sup>nd</sup> hour</b>
<b>1<sup>st</sup> Semester Break</b>		

## Clinical session Schedule – 5<sup>th</sup> Year 2<sup>nd</sup> Semester

<b>Week</b>	<b>Session</b>	<b>Quiz</b>
1-2	<b>Seminar: Tx. Planning and SM analysis</b> <b>Review of referred/ Waiting list</b>	Tx. Planning and SM analysis
3-4	<b>Seminar: Management of Removable Appliances</b> <b>Review of referred/ Waiting list</b>	Reviewing & Managing patients with Removable Appliances
5-6	<b>Assignments Class I / case presentation</b> <b>Review of referred/ Waiting list</b>	Class I interception
7-8	<b>Assignment Class II / case presentation</b> <b>Review of referred/ Waiting list</b>	Class II
9	<b>Review of referred/ Waiting list</b>	
10-11	<b>Assignment Class III /case presentation</b> <b>Review of referred/ Waiting list</b>	Class III
12-13	<b>case presentation</b> <b>Review of referred/ Waiting list</b>	
14-15	<b>Final Exam</b>	



### **Course Description:**

The course will run throughout the academic year (32 weeks) and students will attend 2-hour clinical sessions **once every 2 weeks** (16 sessions in total). Both groups will attend the 1<sup>st</sup> clinical session (week 1) where general instructions will be given followed by a demonstration on clinical examination of orthodontic patients.

*In the event that a national holiday prevents one group from attending a session, both groups will shift down one week allowing students to attend the same number of sessions in total.*

### **Aims of the course:**

1. To provide students with basic diagnostic skills needed for orthodontic assessment of patients, including cephalometric analysis.
2. To use data collected from patient assessments to develop a treatment plan. Special consideration will be given to identifying those patients that can be treated with removable appliances.
3. To provide students with the clinical skills needed to treat a range of malocclusions considered to be within the scope of general dental practitioners.

*Each clinical session will be divided into 2 parts;*

1. The *1<sup>st</sup> hour in term 1* will be reserved for the clinical examination and treatment planning of new patients.
2. The *1<sup>st</sup> hour in the term 2* will be reserved for the presentation of a seminar by students.
3. The *2<sup>nd</sup> hour of all clinical sessions (term 1 & 2)* will be reserved for treatment of patients (referred and new) and appointments should be given to patients accordingly.

According to University regulations students are allowed *a maximum of 15% absence* without cause, this translates into *3 clinical session (Term 1+2)*. Students exceeding this limit without cause *will not be allowed to sit for the final examination.*

### **Marking System and Exams:**

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**.
4. Signature of supervising Faculty should be must be obtained by students at the end of each session **even if the patient did not attend**.

### **Code of Conduct:**

Students are required to wear a clean and ironed white coat (**fully buttoned to the top**) with "**name badge**" for all clinical session. Males should wear trousers and females should wear trousers or a long skirt (**no jeans will be allowed for both sexes**). Females will be required to wear a hairstyle that does not interfere with patient examination.

Students **more than 15 min late** will not be allowed to attend the session and will be recorded as absent for that session

During clinical sessions all students must stay at the clinic **until the end of the session** even if his patient was dismissed or did not attend

***All students failing to comply with the "Code of Conduct" will be asked to leave the clinic and will be recorded absent for that session.***

## *Clinical Requirements for 5<sup>th</sup> Year* *Students in Orthodontics*

- One fully documented case where at least one appliance has been inserted.  
Documentation should include:
  - **Trimmed study models:** should be presented to a Faculty member for marking at the *next session* following impression taking.
  - **Radiographic report for traced cephalometric x-ray:** should be presented at the *treatment planning session*. If your patient does not require an x-ray, please ask your supervisor to provide you with one to trace.
  - **Clinical notes (signed Logbook):** including at least 3 follow up visits. The marking system will include tidiness, correct completion of patient forms and signatures of supervising Faculty.
  - **A PowerPoint presentation of your treated case:** presentation date will be arranged during the second semester.
  
- Student should provide evidence of having examined and/or presented a treatment plan for at least **four new patients during the first semester.**
  
- As part of continuous assessment, there will be a **short quiz** at the beginning of each session.
  
- The marking system will also assess professional behavioural and conduct, patient management and communication, and cross infection control.

The following nomenclature and classification of the student cases will be followed throughout the year:

**New patients:**

- Those patients who attend for assessment, diagnosis and treatment planning.

**Referred patients:**

- Those patients who are still under orthodontic treatment by students from the previous year. These patients will be transferred to you to complete their treatment.

**Waiting list patients:**

- Patients who are indicated for treatment by students and are placed on the waiting list.
- Each student should submit a case report summarizing the orthodontic treatment for their waiting list patients.

The following instruments should be brought to each clinical session:

- i. Two patient examination sets.
- ii. Two metal rulers that can be sterilized.
- iii. One pair of Adams Pliers.
- iv. One Pair of Spring Forming Pliers.
- v. Impression trays that can be sterilized.
- vi. Bowl and mixing spatula.
- vii. Metal dividers.
- viii. Marking pencil.
- ix. Protective eye shields.

**Faculty of Dentistry**

**University of Jordan**

**Orthodontic Unit**

**Student Name:**

**Group:**

**Patient 1:           Waiting List / Referred**

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

**Telephone:** \_\_\_\_\_

**Supervisor:** \_\_\_\_\_

**Status: Discharge / under Treatment**

**Patient 2:           Waiting List / Referred**

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

**Telephone:** \_\_\_\_\_

**Supervisor:** \_\_\_\_\_

**Status: Discharge / under Treatment**

**Jordan University Hospital**

**Patient Examination Form**

**Department of Orthodontics**

**Patient:** Referred / Waiting list  
**Patient Tel.:**  
**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:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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

\_\_\_\_\_

**Intra-oral Examination**


**Tooth Quality and Oral Hygiene:** \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Teeth Present:

\_\_\_\_\_ | \_\_\_\_\_

**Occlusion**

- Incisor Classification: \_\_\_\_\_
- Overjet: \_\_\_\_\_
- Overbite: \_\_\_\_\_
- Molar Relationship:  
R \_\_\_\_\_  
L \_\_\_\_\_
- Canine Relationship:  
R \_\_\_\_\_ L \_\_\_\_\_
- Crossbite: \_\_\_\_\_  
\_\_\_\_\_
- Centrelines: \_\_\_\_\_ 

**Alignment and Space Condition**

**Space Condition:-**

Lower arch : .....(mm)

Upper arch: .....(mm)

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

\_\_\_\_\_

\_\_\_\_\_

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

\_\_\_\_\_

\_\_\_\_\_

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

\_\_\_\_\_

\_\_\_\_\_

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

\_\_\_\_\_

**Cephalometric Report:**My patient  Yes  No

Eastman analysis:			
SNA		MMPA	
SNB		ALFH%	
ANB		UIMxP	
SN-MxP		LIMnP	
Corrected ANB		IIA	
Prognosis Tracing:			
UIMxP		IIA	

**Cephalometric and Prognosis Tracing Report:****1. Skeletal relationship:****2. Dental relationship:****3. Soft tissue relationship:****4. Prognosis tracing:**



**Problem List**

**Aetiology of Malocclusion**

- |        |       |
|--------|-------|
| 1..... | ..... |
| 2..... | ..... |
| 3..... | ..... |
| 4..... | ..... |
| 5..... | ..... |
| 6..... | ..... |
| 7..... | ..... |

**Ideal Treatment Objectives**

**Proposed Treatment Objectives**

- |        |       |
|--------|-------|
| 1..... | ..... |
| 2..... | ..... |
| 3..... | ..... |
| 4..... | ..... |
| 5..... | ..... |
| 6..... | ..... |

**Treatment Plan**

- 1 Treatment need.....
- 2 Ideal / Compromise.....
- 3 Non-Extraction / Extraction.....
- 4 Type of appliance..... 5
- Buccal segment relationship.....
- 6 Retention: Duration.....Appliance.....



