

1	Course title	Orthodontics Practical-2
2	Course number	1303574
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	Sept 2022

16. Course Coordinator:

Prof. Mariam Al-Abdallah

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17. Other instructors:

Prof. Zaid Al Bitar

email: z.bitar@ju.edu.jo

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 and formulate a clinically meaningful report.
- 6) **Design** 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 (1 credit hour where students attend 2-hour session once every other week)**

Session No.	Topic	Week	Requirements in the session	Evaluation required
Online material	An introduction to Orthodontic clinic. Discuss ILOs & requirements. Instructions to fill orthodontic form.	Online material	Get familiar with the examination form and how to fill it.	None
1	Clinical demo: examination and diagnosis of simple Class I orthodontic case	1-2	Get familiar with the examination form and how to fill it.	None
2	Examination and diagnosis (1) of Class I malocclusion with crowding (review Space analysis, space provision & extraction decision)	3-4	Complete the examination form, aetiology, problem list and treatment plan.	Correct the examination form
3	Examination and diagnosis (2) of Class I malocclusion with a single posterior tooth in crossbite. (Review URA components and design)	5-6	Complete the examination form, aetiology, problem list, treatment plan and URA design.	Correct the examination form
4	Examination and diagnosis (3) of Class I malocclusion with an instanding incisor	7-8	Complete the examination form, aetiology, problem list, treatment plan and URA design.	Correct the examination form
5	Examination and diagnosis (4) of Class I malocclusion with unilateral buccal crossbite with mandibular displacement	9-10	Complete the examination form, aetiology, problem list, treatment plan and URA design.	Correct the examination form
6	Examination and diagnosis (5) of Class II d1 adult patient. Ceph analysis exercise and report	11-12	Group discussion (case based) 1) Ceph report. 2) Problem list and aetiology.	Correct the examination form & Ceph report
7	Examination and diagnosis (6) of Class II d1 growing patient. Ceph analysis exercise and discussion and appliance	13-14	Group discussion (case based) 1) Ceph report. 2) Problem list and aetiology. 3) Treatment plan.	Correct the examination form & Ceph report

Orthodontics Practical II – 5th year**Second semester (1 credit hour where students attend 2-hour session once every other week)**

Session No.	Topic	Week	Requirements in the session	Evaluation required
1	Examination and diagnosis of simple orthodontic case: (case summary)	1-2	Group discussion (case based) 1) Problem list and aetiology. 3) case summary	Correct the examination form & case summary
2	Examination and diagnosis (7) of Pseudo CIII malocclusion in a growing child. Referral letter	3-4	Group discussion (case based) 1) Problem list. 2) Treatment plan. 3) URA design. 4) referral letter	URA design & referral letter
3	Examination and diagnosis (8) of Class III adult patient.	5-6	Group discussion (case based) 1) Ceph report. 2) Problem list and aetiology. 3) Treatment plan.	Correct the examination form & Ceph report
4	Interceptive cases e.g. 6s with poor prognosis, Impaction and early loss of primary teeth. Practice viva.	7-8	Group discussion (case based)	Quiz or oral assessment
5	Interceptive cases e.g. 6s with poor prognosis, Impaction and early loss of primary teeth. Practice viva.	9-10	Group discussion (case based)	Quiz or oral assessment
6	Orthodontic appliances (fixed, URA, functional) and emergencies . Practice viva.	11-12	Group discussion (case based)	Quiz or oral assessment
7	Competencies and Final exam	13-14		

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 3 hours for 5 weeks in the first semester and another 5 weeks in the second semester.

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 during the session in the form of case presentations, an evaluation of the process of diagnosis, treatment planning, quizzes, assignments, punctuality, and general professional 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.

Guidelines for Marking System

Grade	Description
A 5/5	Student performed clinical task to <i>high</i> standard with <i>minimal</i> assistance
B 4/5	Student performed clinical task to <i>good</i> standard with <i>limited</i> assistance
C 3/5	Student performed clinical task to an <i>acceptable</i> standard with <i>considerable</i> assistance
D 2/5	Student <i>did not</i> perform clinical task to an acceptable standard with <i>considerable</i> assistance
F 0/5	An outright fail

Course work requirements:

1. Examination and diagnosis of **8 case records** and completing the diagnostic form for each.
2. Examination and diagnosis of case 1 and provide evidence of developing accurate problem list and aetiology.
3. Examination and diagnosis of case 2, 3 & 4 and provide evidence of developing accurate problem list and aetiology and designing a proper removable appliance for treatment.

4. Examination and diagnosis of case 5, 6 & 8 and perform ceph analysis with full report, provide evidence of developing accurate problem list and aetiology and treatment planning.
5. Examination and diagnosis of case 7 provide evidence for accurate treatment objectives and treatment plan, case summary and referral letter.
6. Exhibit competence at understanding principles of Interceptive orthodontics
7. 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 aknowledge with cases which require fixed appliance treatment and should be referred to a specialist orthodontist

Competency evaluations are reflect 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, misbehaviour:** students should adhere to all the stated rules and regulations regarding professional conduct.

24. Required equipment:

○ One pair of Adams Pliers.	
○ One Pair of Spring Forming Pliers.	
○ Metal dividers.	
○ Marking pencil.	
○ Protective mask.	
○ Protractor	
○ Plastic ruler	

25. References:

Suggested text books:

- Handbook of Orthodontics. **Martyn Cobourne & Andrew DiBiase**, 2nd (2015) Edition. Elsevier
- **An Introduction to Orthodontics**. L. Mitchell, N.E. Carter (2019) 5th edition.

Also recommended:

- **Contemporary Orthodontics**. W.R. Proffit (2018) 6th 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:

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Name of Course Coordinator: Dr. Mariam Al-Abdallah Signature: ----- Date: Sept /2022

Head of curriculum committee/Department: Dr. Suha Abo Ghazaleh Signature: -----

Head of Department: Dr. Suha Abo Ghazaleh Signature: -----

Head of curriculum committee/Faculty: Dr. Yazan Hassoneh Signature: -----

Dean: Dr. Zaid Al-Bitar Signature: -----

Orthodontic department

Student Name: _____ Group: _____

Session	Requirements	Date	Signature	Competent	Mark
<u>First semester:</u>					
First	Examination and diagnosis of case records	/ /		N/A	None
Second	Examination and diagnosis of case records (1)	/ /		N/A	/5
Third	Class I (2)	Problem list and aetiology	/ /		N/A
		Treatment plan & URA design	/ /		N/A
Fourth	Class I (3)	Problem list and aetiology	/ /		/5
		Treatment plan & URA design	/ /		/5
Fifth	Class I (4)	Problem list and aetiology	/ /		/5
		Treatment plan & URA design	/ /		/5
Sixth	Class II d1 (5)	Treatment objectives and plan	/ /		/5
		Ceph report	/ /		N/A
Seventh	Class II d1 (6)	Treatment objectives and plan	/ /		/5
		Ceph report	/ /		/5
<u>Second semester:</u>					
First	Examination and case summary	/ /		N/A	None
Second	Class III (7)	URA design	/ /		/5
		Referral letter	/ /		/5
Third	Class III (8)	Treatment objectives	/ /		/5
		Ceph report	/ /		/5
Fourth	Interceptive Orthodontics	/ /		N/A	/5
Fifth	Interceptive Orthodontics	/ /		N/A	/5
Sixth	Orthodontic appliances and emergencies (Shadowing)	/ /		N/A	/5
Seventh	Competencies and final exam	/ /		N/A	
Code of Conduct		Absences	Tools and preparation	Contribution in session	Other
/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

Cephalometric Report

Date:

Eastman analysis:

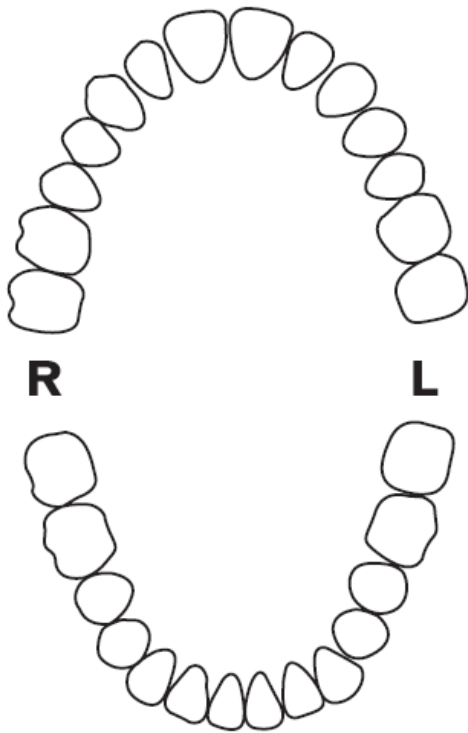
variable	Normal value	Measured value	variable	Normal value	Measured value
SNA	81		MMPA	27	
SNB	78		ALFH%	55%	
ANB	2-4		UIMxP	109	
SN-MxP	5-11		LIMnP	93	
Corrected ANB			IIA	135	

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: