

1	Course title	Orthodontics theory-1
2	Course number	1303473
3	Credit hours (theory, practical)	1 credit hour (theory)
	Contact hours (theory, practical)	30 hours
4	Prerequisites/corequisites	
5	Program title	DDS
6	Program code	
7	Awarding institution	University of Jordan
8	School	Dentistry
9	Department	Paediatric Dentistry, Orthodontics & Preventive Dentistry
10	Level of course	Introductory course (level 1) for fourth year students
11	Year of study and semester (s)	4 th year, first and second semesters
12	Final Qualification	
13	Other department (s) involved in teaching the course	Oral surgery
14	Language of Instruction	English
15	Date of production/revision	September, 2022/2023

16. Course Coordinator:

Office numbers, office hours, phone numbers, and email addresses should be listed.

Dr. H. Sonbol

hsonbol@hotmail.com

17. Other instructors:

Office numbers, office hours, phone numbers, and email addresses should be listed.

Zaid Al-Bitar: z.bitar@ju.edu.jo

Mariam Al-Abdallah: m.alabdallah@ju.edu.jo

18. Course Description:

As stated in the approved study plan.

19. Course aims and outcomes:

A- Aims:

To provide the students with:

- Knowledge of normal facial, dental and occlusal development and recognize deviations from normal.
- An understanding of the aetiology of malocclusion.
- An understanding of the clinical approach to management of patients and the timing of treatment appropriate to physical and psychological development.
- Be familiar with the protocol for examination, diagnosis and treatment planning for orthodontic patient.
- An understanding of the principles and practice of orthodontic treatment, including an understanding of a variety of treatment methods.
- Be able to prescribe and interpret radiographs (including cephalograms).
- Be able to diagnose and plan treatment for interceptive orthodontic patients with simple malocclusions.

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

- Students should be able to fully understand pre- and post-natal facial growth and development
- Have a sound basis of the different etiological factors of malocclusions
- An understanding of various treatment methods
- Know the principles of cephalometry
- Be familiar with the scope of the full range of orthodontic appliances

- Ability to formulate a complete list of orthodontic problems
- Reach a proper diagnosis and treatment plan
- Assess the need for orthodontic treatment, in the context of general and oral health.
- An ability to diagnose anomalies of the dentition and cranio-facial structures
- Carry out interceptive orthodontic measures.
- Execute both simple and complex treatment procedures.
- Interpret the cephalometric analysis values

- Formulate a treatment plan and predict its course
- Prescribe and use simple appliances to treat common malocclusions.
- Be able to design, construct, adjust, repair and modify simple orthodontic appliances.
- Process letters of referral, to prioritize appointments, and liaise with general dental practitioners.

20. Topic Outline and Schedule:

Topic	Week	Instructor	Achieved ILOs	Evaluation Methods*	Reference**
An introduction to orthodontics	1	Ahmad Hamdan	-Definitions & terminology - Knowledge of Normal Occlusion & malocclusions - Aims of Orthodontic Treatment & limitations of treatment - Definition of index - Properties of ideal index - Classifications of indices		
Cranio-facial growth and development	2,3	Zaid Al-Bitar	- Postnatal growth - Growth pattern and variability - Growth Mechanism - Growth of craniofacial complex - Theories of growth control		
Development of normal occlusion	4	Mariam Al-Abdallah	- Ideal vs. normal occlusion -Tooth development - stages of occlusal development		
Classification of malocclusion, Aetiology of malocclusion-skeletal factors	5	Ahmad Hamdan	- Aetiology of malocclusion - Classification of Malocclusion - Classification Systems - orthodontic indices - The role of skeletal factors as an important cause of malocclusion in all dimensions <ul style="list-style-type: none"> • A-P • Vertical • Transverse 		
Aetiology of malocclusion- soft tissue factors	6	Ahmad Hamdan	Soft tissues and aetiology of common malocclusions		
Aetiology of malocclusion- local factors	7, 8	Abdelrahman Shqaidef	- Reinforce the multifactorial aetiology of malocclusion - Definition of local factors - Describe the role of local factors in the aetiology of malocclusion		
Orthodontic materials and their properties	9	Zaid Al-Bitar	To understand the followings with respect to orthodontic materials: <ol style="list-style-type: none"> 1. Physical properties 2. Chemical properties 3. Mechanical properties 		
Principles and design of removable appliances	10, 11	Abdelrahman Shqaidef	- Definition & principles of uses of RA - Components of RA - Advantages & disadvantages of RA - Case selection -Management of RA including instructions, failures & its causes..etc. -Cases to illustrate uses of RA		

Cephalometry-identification points and planes	12	Mariam Al-Abdallah	- Indications for cephalometric radiographs - definitions - Cephalometric points and lines and angles			
Cephalometric analysis	13	Mariam Al-Abdallah	- Cephalometric analysis - Prognosis tracing -interpretation and ceph report			
Principles and design of functional appliances	14	Mariam Al-Abdallah	- Mode of action - Classification - Examples of commonly used appliances - Advantages and limitations - Common functional appliances - Clinical management			
Orthodontic tooth movement (force systems + biomechanics)	15, 16	Mariam Al-Abdallah	<ul style="list-style-type: none"> • Overview /Physiology • Histological changes • Control of tooth movement Movement/Forces <ul style="list-style-type: none"> • Orthodontic force • Adverse effects 			
Patient assessment: extra and intra-oral examination	17, 18	Zaid Al-Bitar	-The process of diagnosis -The process of extra-oral examination - Discuss the process of intra-oral examination - Special investigations - How to write a case summary			
Patient assessment: space analysis	19	Zaid Al-Bitar	Process of orthodontic space analysis in permanent and mixed dentition			
Medical disorders and orthodontic treatment	20	Yazan Hassouneh	Orthodontic management of patients with common medical disorders.			
Provision of space in orthodontics	21	Ahmad Hamdan	- Reasons for provision of space in orthodontics. - Various options for creation of space.			
Extra- oral anchorage/ traction	22	Zaid Al-Bitar	- Types of extra-oral appliances and the indications for their use - Principles of directional force mechanics - Potential hazards of headgear wear and techniques for improved headgear safety			
Principles of fixed orthodontic appliances	23	Zaid Al-Bitar	- Indications for fixed appliances - Definition of important terms - Components of fixed appliances - Fixed appliance techniques - Advantages and disadvantages - Types of fixed appliances			
Planning for	24,	Ahmad	- Ability to formulate a complete list			

orthodontic treatment	25	Hamdan	of orthodontic problems - Reach a proper diagnosis and treatment plan - Assess the need for orthodontic treatment, in the context of general and oral health. - Formulate a treatment plan and predict its course			
Interceptive orthodontic	26, 27	Mariam Al-Abdallah	Carry out interceptive orthodontic measures			

***Evaluation methods: See section 22**

****References: See section 25**

21. Teaching Methods and Assignments:

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

1. Lectures
2. E-learning

22. Evaluation Methods and Course Requirements:

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

First exam (MCQs or essays), **e-learning discussions**: 25 points
Second exam (MCQs or essays), **e-learning discussions**: 25 points
Final exam (MCQs or essays): 50 points.

23. Course Policies:

A- Attendance policies:

Lecture attendance is obligatory. According to University regulations, students are allowed a **maximum of 15% absence** without cause, this translates into **2 lectures**. Students exceeding this limit without cause **will not be allowed to sit for the final examination**.

B- Absences from exams and handing in assignments on time:

If a student was unable to attend an exam, he/she should provide the Deanship with an acceptable excuse in due time as set by UJ's regulations, and if approved by the Deanship, the student is allowed

to sit for a make-up exam (usually essay). Students who do not attend an exam without an acceptable excuse will receive a zero mark on that exam. Contributions in e-learning forums are accepted if submitted in due time set by the instructor.

C- Health and safety procedures:

No special recommendations.

D- Honesty policy regarding cheating, plagiarism, misbehaviour:

Cheating is considered an unacceptable behaviour in exams and a reason for unsuccessful course result. Please refer for your *Student Guide* book for detailed regulations.

E- Grading policy:

Percentage marks are converted to letters. (A)/(A-) are usually given for top 10-15% of students. Percentage mark < 50 does not mean a mark of (D-) or (F).

F- Available university services that support achievement in the course:

Students can utilize UJ's medical or main library facilities. In addition, they can access e-journals and e-books within campus. They can access the Moodle e-learning through the UJ's wireless internet facilities for free or through the computer lab in the Faculty of Dentistry. A lot of other facilities and support can be provided through the Deanship of Student Affairs.

24. Required equipment: (Facilities, Tools, Labs, Training)

None

25. References:

Required book (s), assigned reading and audio-visuals:

1. **An Introduction to Orthodontics** – Laura Mitchell, 5th edition, Oxford University Press.
2. Reading material from scientific journals provided by instructors for specific topics.

Recommended books, materials, and media:

3. **Handbook of Orthodontics**, M. Cobourne & A. Dibiase. 2nd edition. Mosby
4. **Contemporary Orthodontics** – Proffit, 6th edition, Mosby Elsevier.

26. Additional information:

Expected workload:

On average, you are expected to spend 2 hours per week on this course.

Name of Course Coordinator: **Dr. H. Sonbol** Signature: ----- Date: Sep 2022/2023

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

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

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

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