

The University of Jordan
Faculty of Dentistry
Department of Paediatric dentistry and Orthodontics

Course Title: Orthodontics 1 (theory)

Course Code: 1303473

Prerequisite: None

Course Coordinator: Dr Serene Badran

Year: 4th year, first and second semesters

Credit: 2 credit hours

Prerequisite for:

Considered as an introductory course for Orthodontics

Instructors: Dr Ahmad Hamdan, Dr Zaid Al-Bitar, Dr Iyad Al-Omari, Dr Serene Badran and Dr

Mariam Al-abdallah

Course Objectives:

By the end of the course students will have attained the following:

- 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 orthodontic patients with simple malocclusions.
- Have a thorough understanding of the theoretical background relating to the above

Learning Outcomes:

Successful completion of this module should lead to the following learning outcomes:

A. Knowledge and Understanding (student should)

- 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.
- Knowledge of the principles of cephalometry.

B. Intellectual skills - with ability to

- 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.
- Prescribe and interpret appropriate radiographs
- Execute both simple and complex treatment procedures.
- Be able to diagnose and plan treatment for orthodontic patients with simple malocclusions.
- Interpret the cephalometric analysis values
- Be familiar with the scope of the full range of orthodontic appliances.

C. Subject specific skills – with ability to

- Formulate a treatment plan and predict its course
- Prescribe and use simple appliances to treat the commoner 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.

D. Transferable skills – with ability to

- Have acquired sufficient diagnostic expertise to differentiate between simple cases and those which require referral to a specialist.
- Work as part of a multi-disciplinary team.
- The development of a critical attitude towards the outcome of treatment.

Teaching methods:

- Duration: 32 weeks, (32 hours in total)
- Lectures: 32 hours, 1 per week (including two 1-hour midterm exams)
- Laboratory: none

Modes of assessment:

Assessment during the year will be in the form of three written examinations divided as follows:

- First and second examinations. A 25% of the total score is allocated for each part.
- Final exam which will account for 50% of the final score.

Attendance policy:

Lecture attendance is obligatory. The handout and recommended textbook are not comprehensive and additional material will be covered in lectures. You are responsible for all material covered in lectures.

Expected workload:

On average you should expect to spend between 3 and 5 hours per week on this course.

Course Content & Weight:

No. of lectures	Lecture title	Material covered
1	An introduction to Orthodontics	<ul style="list-style-type: none"> • Introduction to orthodontics including definition of orthodontics and malocclusion , scope and aims of orthodontic treatment . limitation of orthodontic treatment. range of orthodontic appliances used.
2	Cranio-facial growth and development	<ul style="list-style-type: none"> • Craniofacial embryology, postnatal growth of the facial bones, control and timing of growth
1	Development of normal occlusion	<ul style="list-style-type: none"> • Development of occlusion from birth until adulthood, Eruption times of deciduous and permanent dentition
1	Classification of malocclusion (skeletal and dental)	<ul style="list-style-type: none"> • Commonly used classifications including skeletal dental and Angles classifications
3	Aetiology of malocclusion – skeletal, soft tissue and local factors	<ul style="list-style-type: none"> • Genetic and environmental factors responsible for causing malocclusion, localized factors in the number, size and shape of the dentition associated with occlusal anomalies
2	Cephalometry – Identification points and planes	<ul style="list-style-type: none"> • Indication and uses of cephs, Basic tracing techniques and visualized treatment planning
1	Orthodontic Materials and their properties	<ul style="list-style-type: none"> • Be familiar with contemporary orthodontic materials and their development and knowledge of the currently used adhesives
2	Orthodontic tooth movement (Force systems + (Biomechanics)	<ul style="list-style-type: none"> • Physiology of tooth movement. • Biomechanics in relation to orthodontic tooth movement. Mechanisms of tooth

		eruption
3	Principles and design of removable functional and fixed appliances	<ul style="list-style-type: none"> • Mechanism of action for each of the orthodontic appliance available. Indication and advantages and disadvantages.
2	Patient assessment Extra-Intra-oral examination	<ul style="list-style-type: none"> • Examination and history taking for orthodontic patients. Special tests and records needed to allow full diagnosis.
1	Provision of space in orthodontics	<ul style="list-style-type: none"> • Means of providing spaces in orthodontics, Advantages and indication of each method.
1	Extraction of teeth in orthodontics	<ul style="list-style-type: none"> • Indication for extraction of each tooth for orthodontic purposes
1	Extra-oral anchorage / traction	<ul style="list-style-type: none"> • Uses and mechanisms of action of the orthodontic headgear, Types and their indications, potential hazards associated with their use
2	Planning for orthodontic treatment	<ul style="list-style-type: none"> • Development of a problem list of occlusal anomalies and treatment objectives. Formulation of treatment plan considering all treatment options
1	Application of diagnosis and treatment planning principles	<ul style="list-style-type: none"> • Student ability to formulate a number of treatment plans. Understanding when referral to specialist is necessary.

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 in the lecture, notes on the content of the course, teaching and assessment methods can be discussed with the instructor after the lecture or during the office hours.

References and Supporting Material:

Suggested text book:

- *Textbook of Orthodontics* Houston, Stephen& Tulley, 3rd edition, Wright
- *An Introduction to Orthodontics* Mitchell, 3rd edition, oxford.

Additional recommended text books:

Contemporary Orthodontics Proffit, Third edition, Mosby