

Course Description Form

1. Course Name:					
Orthodontic					
2. Course Code: ZUDE0403					
3. Semester / Year: 2025-2026					
Annual					
4. Description Preparation Date:					
11/8/2025					
5. Available Attendance Forms:					
Weekly					
6. Number of Credit Hours (Total) / Number of Units (Total)					
30 hours (Theoretical) + 60 hours (Practical). (One theoretical hours and two practical hours week)					
7. Course administrator's name (mention all, if more than one name)					
Name: Tiba Sajad Mohsen teeba.sajad@alzahu.edu.iq					
8. Course Objectives					
Course Objectives	Theoretical and practical education for dental, facial and jaws examinations for patients suffering from malocclusion as well as cosmetic problems. In addition, teach them how to design a treatment plan and definition of types of orthodontic appliances. As well as treating the patients seeking orthodontic treatment by the students under our supervision.				
9. Teaching and Learning Strategies					
Strategy	The definition of different types of orthodontic appliances and the theoretical and practical explanation of the steps to treat patients suffering from malocclusion. In addition to the definition of the problems that can be encountered during the work of orthodontic appliances and how to avoid them and ways to correct them if they occur and the identification of materials and tools that can be used and help to do a perfect work.				

10.Course structure					
Week	Hours	Subject name	Required learning outputs	Learning method	Assessment method

1	1	Introduction - Definition of orthodontics -Definition of occlusion, normal, ideal and malocclusion	Learn on to terms of orthodontics	Power point	quiz
2	1	- Six keys of normal occlusion Aims of orthodontic treatment	Learn the methods of examination	Power point	Quiz
3	1	- Important orthodontic definitions Classification of malocclusion	Learn how to diagnose the classification of malocclusion	Power point	quiz
4	1	Growth and development - Definitions of growth, development and maturity Stages of development (ovum till birth)	Learn about medical terms of growth and development	Power point	Quiz
5	1	- Theories of bone growth Definitions of growth site, growth center, displacement, and drift	Information about theories on growth and development	Power point	Quiz
6	1	- Growth curve and maximum growth spurt Prenatal and postnatal growth and development of hard tissues	Learn about mode of growth in skeleton in human beings prenatal and postnatal	Power point	Quiz
7	1	- Prenatal and postnatal growth and development of soft tissues Developmental anomalies	Information about soft tissue growth and anomalies	Power point	Quiz
8	1	- Jaw rotation Compensation and adaptation	Information about the direction of growth	Power point	Quiz
9	1	-Principle of genetics in relation to malocclusion	Learn on the principles of genetic	Power point	Quiz
10	1	Development of occlusion a. new born oral cavity. b. deciduous dentition stage- dental changes until 6 years	Information about occlusion in new born and deciduous dentition	Power point	Quiz
11	1	c. Early mixed dentition stage - eruption of first molars and incisors. d. Late mixed dentition stage - eruption of canines and premolars Permanent dentition - eruption second	Information about occlusion in mixed dentition	Power point	Quiz

		and third molars.			
12	1	Deciduous and permanent dentition a-Stages of tooth development: (Formation, calcification and root completion)	Information about occlusion in permanent dentition	Power point	Quiz
13	1	b-Tooth eruption (stages and theories): Sequences and timing	Information about tooth development stages	Power point	Quiz
14	1	Tooth movement a. Tissue changes associated with tooth movement: i. Histology of periodontium ii. Theories of tooth movement b. Accelerated tooth movement.	Learn about mechanism of bone remodeling	Power point	Quiz
15	1	c. Biomechanics i. Force (application, type, magnitude, duration and direction) ii. Center of resistance and rotation, moment of force and moment of couple. iii. Types of tooth movement iv. Rate of tooth movement and factors affecting it.	Information about amount of the force and how to apply	Power point	Quiz
16	1	d. iatrogenic effect of tooth movement (pain, mobility, pulp effect, root resorption, white spot lesions).	Learn about side effect of orthodontic treatment	Power point	Quiz
17	1	Etiology of malocclusion:	Information of etiological factors	Power point	Quiz
18	1	-Classification of etiological factors a. General factors i. Skeletal factors	Learn about the causes of malocclusion in general and skeletal	Power point	Quiz
19	1	ii. Soft tissue factors	Learn about the causes of malocclusion in soft tissues	Power point	Quiz

20	1	iii. dental factors	Learn about the causes of malocclusion dentally	Power point	Quiz
21	1	b. Local factors (definitions without treatment)	Learn about the causes of malocclusion locally	Power point	Quiz
22	1	Orthodontic appliances a. Overview: i. passive orthodontic appliances (habit breaker, retainer and space maintainer) ii. active orthodontic appliances (removable, fixed, orthopedic and myofunctional, and combination) iii. Other active appliances: space regainer, Invisalign	Information about the types of orthodontic appliances	Power point	Quiz
23	1	b. Removable Orthodontic Appliance: i. Properties of various components (SS wire, acrylic) ii. Components: 1) active components (springs, screws and elastics) 2) retentive components (clasps) 3) acrylic base plate and bite planes 4) anchorage	Learning about components of removable orthodontic appliances	Power point and laboratory work	Quiz
24	1	iii. Design of a removable orthodontic appliance iv. Construction of a removable orthodontic appliance v. Soldering and welding vi. Post-insertion instructions and guidelines	Learn about how to construct the orthodontic appliance in laboratory	Power point and laboratory work	Quiz
25	1	c. Fixed orthodontic appliance: Types, components, advantages,	Information about fixed orthodontic appliances	Power point	Quiz

		limitation.			
26	1	<u>continue</u> Fixed orthodontic appliance: biomechanics, banding vs. bonding, lin orthodontics.	Information about fixed orthodontic appliances	Power point	Quiz
27	1	Anchorage: definition, indications, types, extra-oral, TADs.	Information about terms of anchorage	Power point	Quiz
28	1	d. Orthopedic and Myofunctional appliance: Types, components, advantages, limitation, mode of action	Learn about the myofunctional appliance	Power point	Quiz
29	1	<u>continue</u> Orthopedic and Myofunctional appliance: Types, components, advantages, limitation, mode of action	Learn about the myofunctional appliance types and mode of action	Power point	Quiz
30	1	f. Retention and retainers Retention (definition, reason, time) Retainers (Hawley, clear overlay, positioners, permanent fixation, precision)	Information about retention and types of it in orthodontic	Power point	Quiz

11- Course Evaluation	
• Midyear written exam: 15 marks • Annual pursuit: 25 marks • Final clinical exam: 20 marks • Final written exam; 40 marks	
12- Learning and Teaching Resources	
Required textbooks (curricular books, if any)	An Introduction to Orthodontics. 5 TH . Edition Simon Littlewoods and Laura Mitchell.2019
Main references (sources)	Orthodontics: principles and practice /2 nd . Edition 2017
Recommended books and references (scientific journals, reports...)	American journal of orthodontics and dent facial orthopedic, 2. Angle orthodontics, journal of clinical orthodontics
Electronic References, Websites	Google .com

