

Department: Orthodontics, pedodontics and preventive

Title of the Program: *Bachelor of Dental Surgery BDS*

Course Specification of Orthodontics (1)

I. Course Identification and General Information:					
1	Course Title:	Orthodontics (1)			
2	Course Code & Number:	DBOR3102			
3	Credit hours:	C.H			
		Lecture	Seminar/Tutorial	Practical	Training
		1		2	-
4	Study level/ semester at which this course is offered:	3 rd Level / 2 nd Semester			
5	Pre –requisite (if any):	DBOH2101& DBOH2102			
6	Co –requisite (if any):	None			
7	Program (s) in which the course is offered:	Bachelor of Dental Surgery (BDS)			
8	Teaching Language:	English			
9	Study System:	Semester based System			
10	Location of teaching the course:	Faculty of Dentistry			
11	Prepared by:	Prof. Ghamdan Abdullah Al-Harazi Dr. Rami Ishaq			
12	Approval date:	2023/2024			
13	Approved by:	Dr. Naela Almojahed, Dr.Fouad Al-Mutareb & Dr. Muneer Al-azzani			

II. Course Description:

This course is an introduction to orthodontics to provide students with basic principles of orthodontics, knowledge of growth and development of face, arch and dentitions, for identifying existing and developing problems associated with dental and skeletal malocclusion, tracing cephalometric radiographs, manipulation of orthodontic wires and acrylics, process of soldering and welding, the most appropriate appliances for malocclusion with practical applications and demonstrations. This course has a preclinical practice that helps in offering experience needed for the preceding clinical courses.

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III. Course Intended learning outcomes (CILOs) of the course		Referenced PILOs
knowledge and Understanding		
By the end of this course, the student will be able to:		
a.1	Identify the principles and fundamentals of orthodontics	A1
a.2	Understanding the normal facial, dental and occlusal development and recognize the deviations from normal	A1
a.3	Recognize dental and skeletal malocclusion	A2
a.4	Describe the outline cephalometric lines and points and analyze the results	A1,A4
Intellectual Skills:		
By the end of this course, the student will be able to		
b.1	Construct preventive and interceptive treatment	B4
b.2	Design different types of orthodontic appliances using selected instruments and materials	B5
Professional and Practical Skills		
By the end of this course, the student will be able to		
c.1	Apply infection control protocols during lab sessions	C3
c.2	Perform fabrication of orthodontic appliances including wires bending, soldering and welding and acrylic base	C1,C4
Transferable (General) Skills:		
By the end of this course, the student will be able to		
d.1	Use the latest technology for presenting and collecting data.	D2
d.2	Manage time and resources.	D4

(A) Alignment Course Intended Learning Outcomes of Knowledge and Understanding to Teaching and Assessment Strategies:		
Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
a.1 Identify the principles and fundamentals of orthodontics	<ul style="list-style-type: none"> Lectures Group Discussion Exercises Brainstorming 	<ul style="list-style-type: none"> Coursework activity Exams Midterm exam. Final exam. Oral exam.
a.2 Understanding the normal facial, dental and occlusal development and recognize the deviations from normal		
a.3 Recognize dental and skeletal malocclusion		
a.4 Describe the outline cephalometric lines and points and analyze the results		

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(B) Alignment Course Intended Learning Outcomes of Intellectual Skills to Teaching and Assessment Strategies:

Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
b.1 Construct preventive and interceptive treatment	<ul style="list-style-type: none"> Lectures Lab sessions and training 	<ul style="list-style-type: none"> Coursework activity Exams
b.2 Design different types of orthodontic appliances using selected instruments and materials		

(C) Alignment Course Intended Learning Outcomes of Professional and Practical Skills to Teaching and Assessment Strategies:

Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
c.1 Apply infection control protocols during lab sessions	<ul style="list-style-type: none"> Lectures Lab sessions and training 	<ul style="list-style-type: none"> Coursework activities Exam Practical session
c.2 Perform fabrication of orthodontic appliances including wires bending, soldering and welding and acrylic base		

(D) Alignment Course Intended Learning Outcomes of Transferable Skills to Teaching Strategies and Assessment Strategies:

Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
d.1 Use the latest technology for presenting and collecting data.	<ul style="list-style-type: none"> Lab Sessions Exercises 	<ul style="list-style-type: none"> Coursework activities Practical sessions
d.2 Manage time and resources.		

IV. Course Content:

First: Theoretical Aspects

Order	Units/Topics List	Learning Outcomes	Subtopics List	Number of Weeks	contact hours
1	Fundamentals of orthodontics	a1	<ul style="list-style-type: none"> Definition and terminology Aims of orthodontics scope of orthodontics 	1	1
2	Craniofacial growth and development	a2, d2	<ul style="list-style-type: none"> Postnatal growth Growth pattern and variability Nature of skeletal growth Growth in craniofacial complex Theories of growth 	2	2

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			control		
3	Development of occlusion	a2, d2	<ul style="list-style-type: none"> Ideal VS. normal occlusion Tooth development Stages of occlusal development 	1	1
4	Malocclusion	a3, d1, d2	<ul style="list-style-type: none"> Etiology of malocclusion Classification of malocclusion Factors that has role in malocclusion: <ul style="list-style-type: none"> Skeletal Soft tissue Local factors 	2	2
5	Orthodontic Materials and instruments	b2, d1, d2	<ul style="list-style-type: none"> Materials used in orthodontics Instruments used in orthodontics 	1	1
6	Midterm Exam	a1, a2, b1, b2	Written exam	1	1
7	Interceptive treatment	b1, b2, d1, d2	<ul style="list-style-type: none"> Principles of interceptive orthodontics Components of removable appliance The most appropriate removable appliances for different malocclusions Indications for fabrication of orthodontic appliances. Procedures for fabrication of orthodontic appliances <ul style="list-style-type: none"> Manipulation of orthodontics wires and acrylics Characters of different wires and acrylic 	3	3
8	Cephalometric identification and analysis	a4, d1, d2	<ul style="list-style-type: none"> Definition Indications Cephalometric points and lines Cephalometric analysis Tracing and interpretation 	2	2
9	Review	a1-a4, b1, b2, d2	Previous topics	2	2
10	Final Exam	a1, a4, b1, b2	MCQs	1	1

Number of Weeks /and Units Per Semester	16	16
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Second: Practical/Tutorial/Clinical Aspects Write up practical/tutorial/clinical topics				
No.	Practical/Tutorial/Clinical topics	No. of Weeks	Contact Hours	CILOs
1	Wire bending Zigzag, square Adam's Labial bow z-spring	13	26	c1,c2,d1,d2
2	Practical exam	1	2	c1,c2,d1,d2
Total number of weeks and hours		14	28	

V. Teaching strategies of the course:
<ul style="list-style-type: none"> Lectures Group discussions Exercises Brainstorming Lab sessions

VI. Assignments:				
No	Assignments	Aligned CILOs	Week Due	Mark
1	Requirements	c1, c2, d1, d2	1 st -14 th	20
Total				20

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VII. Learning Assessment

No.	Assessment Tasks	Week due	Mark	Proportion of Final Assessment	Aligned CILOs
1	Requirements	1 st -13 th	20	20%	c1, c2, d1, d2
2	Mid-Term exam (theoretical)	8 th	20	20%	a1, a2, b1, b2,
3	Final exam (Practical)	14 th	10	10%	c1, c2
4	Oral Exam	15 th	10	10%	a1, a2, a3, b1, b2
5	Final Exam (theoretical)	16 th	40	40%	a1-a4, b1, b2,
Total			100	100%	

VIII. Learning Resources:

1- Required Textbook(s) (maximum two).

Proffit W., Fields H., Larson B., Sarver D. 2018. Contemporary Orthodontics. 6thed. Mosby, USA

2- Essential References.

Graber L., Vanarsdall R., Vig K., Huang G. 2016. Orthodontics current principles and techniques. 6th ed. Mosby, USA.

3- Electronic Materials and Web Sites *etc.*

- <https://www.ajodo.org/>

IX. Course Policies:

1	(Class Attendance) Attendance of students is taken at beginning of lecture time. - The allowed absence percentage is 20% without excuse and 30% with acceptable excuse, - When student has been absent for more than 30% of course lectures without acceptable excuse, the student will be prohibited from entering subject the final exam.
2	(Tardy) If the student came late to class for 15 minutes, he/she is registered absent but he/she allowed to enter the hall to listen lecture presentation.
3	(Exam Attendance/Punctuality): According to examination roles or policies: - If the student is absent in the year works exams, the

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	<p>decision is referred to the teacher whether to allow or to reject according to the offered excuse. - If the student is absent in the final exam with an acceptable excuse, the student would be attended the re-sit exam as 1st trial. - If the student is absent in the final exam without an acceptable excuse, the student would be attended re-sit exam as 2nd trial.</p>
4	<p>(Assignments & Projects):</p> <p>According to examination roles or policies: - The student should be attended the final exam at certain time and according to the accredited exam table. - If the student came late after 15 minutes from the exam beginning, the student would be to attend the exam with oral monition of never repeat. - In case of the repeat, the student prevented from entrance and considered absent.</p>
5	<p>(Cheating):</p> <p>According to examination roles or policies: - If the student cheated in the year works exams of the course, the student prohibited from entrance the final exam and given zero degree with prevented him from entrance the re-sit exam of this course. - If the student cheated in the final exam of the course, the student prohibited from the cheated course and the followed course and given zero degree in both courses, and prevented him from entrance the re-sit exams of them. - If the cheated course is the last at the exam table, the student prohibited from the cheated course and the past course and given zero degree in both courses, and prevented him from entrance the re-sit exams of them. - If the cheating is discovered in subsequent time, the cheated student didn't escape from payment and ordinance is referred to precision committee and the final decision is referred to the collage council. - If the cheating is discovered during the correcting the answered books, the corrector has written a report to the chairman of concerned department for taking available procedure. - The faculty council is able to segregate the student for one academic year in 2nd cheating trial and final segregation from the university after accreditation of university council in 3rd cheating trial.</p>
6	<p>(Plagiarism):</p> <p>According to examination roles or policies: Plagiarism means a student plagiarizes the personality of another student. Plagiarism for exam purpose: 1- Both students are prohibited from the plagiarized academic year and all results of them are rejected with prohibition of them from entrance the re-sit exam. 2- If the plagiarized student is from outside the university, the student is referred to the university police. -Plagiarism for other purposes: 1- Both students are warned as segregation. 2- If the plagiarized student is from outside the university, the student is referred to the university police.</p>
7	<p>(Other policies):</p> <p>The student should be followed the instructions for the exam entrance. - The student should be followed all systems & laws of the university.</p>

Course Plan of Orthodontics (1)

I. Information of Faculty Members responsible for the course:

Name of Faculty Member	Dr. Ghamdan Al-Harazi	Office Hours					
Location & Telephone No.	Sana'a university 777422337	SAT	SUN	MON	TUE	WED	THU
E-mail	drghamdan@yahoo.com						

II. Course Identification and General Information:

1-	Course Title:	Orthodontics (1)				
2-	Course Number & Code:	DBOR3102				
3-	Credit hours:	C.H				Total
		Th.	Seminar	Pr.	F. Tr.	
		1		2		
4-	Study level/ semester at which this course is offered:	3 rd Level / 2 ^{snd} Semester				
5-	Pre –requisite (if any):	DBOH2101& DBOH2102				
6-	Co –requisite (if any):	None				
7-	Program (s) in which the course is offered:	Bachelor of Dental Surgery (BDS)				
8-	Teaching Language:	English				
9-	Study System:	Semester based System				
10-	Location of teaching the course:	Faculty of Dentistry				
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IV. Intended learning outcomes (ILOs) of the course

After completing this course, students will be able to:

a.1	Identify the principles and fundamentals of orthodontics
a.2	Understanding the normal facial, dental and occlusal development and recognize the deviations from normal
a.3	Recognize dental and skeletal malocclusion
a.4	Describe the outline cephalometric lines and points and analyze the results
b.1	Construct preventive and interceptive treatment
b.2	Design different types of orthodontic appliances using selected instruments and materials
c.1	Apply infection control protocols during lab sessions
c.2	Perform fabrication of orthodontic appliances including wires bending, soldering and welding and acrylic base
d.1	Use the latest technology for presenting and collecting data.
d.2	Manage time and resources.

V. Course Content:

A. Theoretical Aspect:

Order	Units/Topics List	Sub-Topics List	Number of Weeks	contact hours
1	Fundamentals of orthodontics	<ul style="list-style-type: none"> Definition and terminology Aims of orthodontics scope of orthodontics 	1 st	1
2	Craniofacial growth and development	<ul style="list-style-type: none"> Postnatal growth Growth pattern and variability Nature of skeletal growth Growth in craniofacial complex Theories of growth control 	2 nd , 3 rd	2
3	Development of occlusion	<ul style="list-style-type: none"> Ideal VS. normal occlusion Tooth development <ul style="list-style-type: none"> Stages of occlusal development 	4 th	1
4	Malocclusion	<ul style="list-style-type: none"> Etiology of malocclusion Classification of malocclusion Factors that has role in malocclusion: <ul style="list-style-type: none"> Skeletal Soft tissue Local factors 	5 th , 6 th	2
5	Orthodontic Materials and	<ul style="list-style-type: none"> Materials used in orthodontics Instruments used in orthodontics 	7 th	1

	instruments			
6	Midterm Exam	Written exam	8 th	1
7	Interceptive treatment	<ul style="list-style-type: none"> Principles of interceptive orthodontics Components of removable appliance The most appropriate removable appliances for different malocclusions Indications for fabrication of orthodontic appliances. Procedures for fabrication of orthodontic appliances <ul style="list-style-type: none"> Manipulation of orthodontics wires and acrylics Characters of different wires and acrylic 	9 th , 10 th , 11 th	3
8	Cephalometric identification and analysis	<ul style="list-style-type: none"> Definition Indications Cephalometric points and lines Cephalometric analysis <ul style="list-style-type: none"> Tracing and interpretation 	12 th , 13 th	2
9	Review	<ul style="list-style-type: none"> Previous topics 	14 th , 15 th	2
10	Final Exam	<ul style="list-style-type: none"> MCQs 	16 th	1
Number of Weeks /and Units Per Semester			16	16

B. Practical/ /Clinical Aspects			
No.	Practical/ /Clinical topics	No. of Weeks	Contact Hours
1	Wire bending Zigzag, square Adam's Labial bow z-spring	1 st -13 th	26
2	Practical exam	14 th	2
Total number of weeks and hours		14	28

VI. Teaching strategies of the course:

- Lectures
- Group discussions
- Exercises
- Brainstorming
- Lab sessions

VII. Assignments:

No	Assignments	Week Due	Mark	Proportion of Final Assessment
1	Requirements	1 st -13 th	20	20%
Total				20

VIII. Learning Assessment

No.	Assessment Tasks	Week due	Mark	Proportion of Final Assessment
1	Requirements	1 st -13 th	20	20%
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