

Republic of Yemen
Ministry of Higher Education & Scientific Research
Emirates International University



Faculty of dentistry
Department of Conservative Dentistry
Doctor of Dental Surgery (DDS)

Course Specification of
Endodontic II (Pre-clinical)
Course No. (.....)



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Review committee:

Head of the Department

Quality Assurance head

Dean of Faculty



I. Course Identification and General Information:

1	Course Title:	Endodontic II (Pre-clinical)			
2	Course Code & Number:	-----			
3	Credit Hours:	Credit Hours	Theory Hours		Lab. Hours
			Lecture	Exercise	
		3	2	--	2
4	Study Level/ Semester at which this Course is offered:	3 rd Level / 2 nd Semester			
5	Pre –Requisite (if any):	Endodontic I (Pre-clinical))			
6	Co –Requisite (if any):	Operative dentistry II			
7	Program (s) in which the Course is Offered:	Doctor of Dental Surgery (DDS)			
8	Language of Teaching the Course:	English			
9	Study System:	Semester based System			
10	Mode of Delivery:	Full Time			
11	Location of Teaching the Course:	Faculty of dentistry			
12	Prepared by:	Dr. Balsheer Hamed Hamood AL-Shameri			

II. Course Description:

Endodontics II (Pre-clinical) course facilitates the transition from pre-clinical to clinical. It offers an introduction to endodontics instruments, vital pulp therapy, root canal treatment, root canal retreatment, and the restoration of the Endodontically treated tooth. Accordingly, students should be able to identify the basic set of instruments appropriate for different procedures, describe the proper use of the tools, develop the right comprehensive, prioritized, and sequenced endodontics treatment procedures, and recognize the basic concepts of non-surgical endodontics treatment or retreatment and their applications. The laboratory part train in procedures locating, preparing, and filling the root canals system of natural molar teeth

III. Course Intended Learning Outcomes (CILOs) : (maximum 8) Upon successful completion of the course, students will be able to:		Referenced PILOs Learning out of program	
A. Knowledge and Understanding:		I, A or E	
a1	Describe the vital pulp therapy for reversible pulpitis		A1
a2	Recognize the basic concepts of non-surgical endodontics treatment or retreatment and their applications.		A2
B. Intellectual Skills:			
b1	Describe the proper use of instruments to prevent breakage within the canal.		B1
b2	Describe the different producers use for endodontics treatments and the material used for that		B2
C. Professional and Practical Skills:			
c1	Perform endodontic treatment on multiple natural upper and lower molar teeth, both handheld and mounted in blocks and dentiform		C1
c2	Define a basic set of instruments appropriate for these procedures: diagnosis, emergency treatment, canal preparation, obturation, and bleaching.		C2
D. Transferable Skills:			
d1	Select appropriate sterilization methods for each instrument type to maintain a safe practice with proper infection control measures		D3
d2	Learn how to use the latest technology for endodontics treatment		D4

(A) Alignment of Course Intended Learning Outcomes (Knowledge and Understanding) to Teaching Strategies and Assessment Methods:			
Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies	
a1	Describe the vital pulp therapy for reversible pulpitis	<ul style="list-style-type: none"> ▪ Lecture ▪ Discussion 	<ul style="list-style-type: none"> ▪ Quizzes ▪ Midterm Exam ▪ Final Exam
a2	Recognize the basic concepts of non-surgical endodontics treatment or retreatment and their applications.	<ul style="list-style-type: none"> ▪ Lecture ▪ Discussion 	<ul style="list-style-type: none"> ▪ Quizzes ▪ Midterm Exam ▪ Final Exam
(B) Alignment of Course Intended Learning Outcomes (Intellectual Skills) to Teaching Strategies and Assessment Methods:			
Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies	
b1	Describe the proper use of instruments to prevent breakage within the canal.	<ul style="list-style-type: none"> ▪ Lecture ▪ Discussion ▪ Problem-solving ▪ Small groups work 	<ul style="list-style-type: none"> ▪ Quizzes ▪ Midterm Exam ▪ Final Exam
b2	Describe the different producers use for endodontics treatments and the material used for that	<ul style="list-style-type: none"> ▪ Lecture ▪ Discussion ▪ Problem-solving ▪ Small groups work 	<ul style="list-style-type: none"> ▪ Quizzes ▪ Midterm Exam ▪ Final Exam
(C) Alignment of Course Intended Learning Outcomes (Professional and Practical Skills) to Teaching Strategies and Assessment Methods:			
Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies	
c1	Perform endodontic treatment on multiple natural upper and lower molar teeth, both handheld and mounted in blocks and dentoform	<ul style="list-style-type: none"> ▪ Training ▪ Problem-solving 	<ul style="list-style-type: none"> ▪ Observation ▪ Practical Exam
c2	Define a basic set of instruments appropriate for these procedures: diagnosis, emergency treatment, canal preparation, obturation, and bleaching.	<ul style="list-style-type: none"> ▪ Training ▪ Problem-solving 	<ul style="list-style-type: none"> ▪ Observation ▪ Practical Exam
(D) Alignment of Course Intended Learning Outcomes (Transferable Skills) to Teaching Strategies and Assessment Methods:			
Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies	

d1	Select appropriate sterilization methods for each instrument type to maintain a safe practice with proper infection control measures	<ul style="list-style-type: none"> ▪ Training ▪ Discussion 	<ul style="list-style-type: none"> ▪ Observation ▪ Practical Exam ▪ Semester Work
d2	Learn how to use the latest technology for endodontics treatment	<ul style="list-style-type: none"> ▪ Assignments ▪ Discussion 	<ul style="list-style-type: none"> ▪ Observation ▪ Practical Exam ▪ Semester Work

IV. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	Review for endodontics	– Previous term topics	1	2	a2, d2
2	Strategies to treat reversible pulpitis	<ul style="list-style-type: none"> – Definitions – Pulp capping (Indirect, Direct), – Pulpotomy (conventional, partial) 	2,3	4	a1, b1, d2
3	Instruments in Modern Endodontic	<ul style="list-style-type: none"> – Diagnostic instruments. – Tooth isolation instruments (Rubber Dam) – Instruments used during access preparation – Root canal exploring & enlarging instruments. – Instruments for Obturation – Instruments for bleaching 	4,5	4	a1, a2, b2, c2, d1, d2
4	Access Preparations & WL determination	<ul style="list-style-type: none"> – Access preparations <ul style="list-style-type: none"> • Objectives • Required equipment • Guideline for Access cavity preparation – WL Determination 	6	2	a2, b1, b2, c1, c2, d2

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
5	cleaning, and shaping	<ul style="list-style-type: none"> - Objectives for cleaning and shaping - Principles of intra-radicular preparation - instrumentation motions - Preparation techniques 	7	2	a2, b1, b2
6	Midterm Exam		8	2	a1, a2, b1, b2
7	Irrigants and Intracanal Medicaments	<ul style="list-style-type: none"> - Optimal irrigant characteristics - Types of irrigants and irrigations method - Types of intracanal medications and their applications 	9	2	a2, b2
8	Obturation and Temporization	<ul style="list-style-type: none"> - Root canal sealer - Root canal filling materials - Obturation techniques - Temporization <ul style="list-style-type: none"> • Intraorifice Barriers • Occlusal access cavity filling • Temporary Filling Materials 	10	2	a1, a2, b2
9	Restoration of the Endodontically Treated Tooth	<ul style="list-style-type: none"> - Criteria for a restorable Tooth - Timing of Tooth Restoration - Restoration Design <ul style="list-style-type: none"> • Direct restoration • Indirect restoration • Post and core 	11,12	4	a1, a2, b2
10	Root Canal Retreatment	<ul style="list-style-type: none"> - Non-surgical retreatment <ul style="list-style-type: none"> • Indications • Contraindications • Procedures - Surgical retreatment <ul style="list-style-type: none"> • Indications • Contraindications 	13,14	4	a2, b2

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
11	Review	- Previous topics	15	2	a1, a2, b1, b2
12	Final Exam		16	2	a1, a2, b1, b2
Number of Weeks /and Units Per Semester			16	32	

B. Case Studies and Practical Aspect:

No.	Tasks/ Experiments	Week Due	Contact Hours	Learning Outcomes (CILOs)
1	Demo of Endodontics Practical	1 st	2	b1, b2, c1, c2, d1, d2
2	Root canal treatment of maxillary molar tooth	2 nd -7 th	12	b1, b2, c1, c2, d1, d2
3	Root canal treatment of mandibular molar tooth	8 th -12 th	10	b1, b2, c1, c2, d1, d2
4	Rubber-dam application	13 th	2	b1, b2, c1, c2, d1, d2
5	dentist and patient Positions	14 th	2	b1, b2, c1, c2, d1, d2
6	practical Exam	15 th	2	b1, b2, c1, c2, d1, d2
Number of Weeks /and Units Per Semester		15	30	

V. Teaching Strategies of the Course:

- Lectures
- Discussions
- Problem-solving
- Training
- Small groups work
- Assignments

VI. Assessment Methods of the Course:

- Quizzes
- Midterm Exam
- Final Exam
- Practical Exam
- Observation
- Semester Work

VII. Assignments:

No.	Assignments	Week Due	Mark	Aligned CILOs (symbols)
1	Assignment 1: write a paper about the applications of vital pulp therapy	3 rd -6 th	5	a1, b2, c2, d1, d2
2	Assignment 2: write a paper about the generations of apex locator in root canal treatment.	9 th -15 th	5	a2, b2, c2, d1, d2
Total			10	

VIII. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	Assignments	3 rd -13 th	10	10 %	a1, a2, b2, c2, d1, d2
2	Quizzes 1 & 2	6 th , 12 th	10	10 %	a1, a2, b1, b2
3	Midterm Exam	8 th	20	20 %	a1, a2, b1, b2
4	Practical Exam	15 th	20	20 %	b1, b2, c1, c2, d1, d2
5	Final Exam	16 th	40	40 %	a1, a2, b1, b2
Total			100	100%	

IX. Learning Resources:

1- Required Textbook(s) :

- 1- Nisha Garg, Amit Garg.,2015, Textbook of Endodontics, 3th Edition, India, Jaypee Brothers Medical Publishers (P) Ltd

2- Essential References:

- 1- Ilan R; John I I. Ingles Endodontics, 7th Edition, Raleigh, North Carolina, PMPH USA
- 2- Torabinejad et al., 2016, Endodontics. Principles and Practice, 6th Edition. China, Elsevier.

3- Electronic Materials and Web Sites etc.:

Websites:

- 1- American Association of endodontists: www.aae.org
- 2- Journal of Endodontics
- 3- Policies and guidelines of the American Academy of Pediatric Dentistry.
URL:<https://www.aapd.org/research/oral-health-policies--recommendations/>

X. Course Policies: (Based on the Uniform Students' By law (2007)

1	Class Attendance: Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.
2	Tardiness: A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
3	Exam Attendance/Punctuality: No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.
4	Assignments & Projects: Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
5	Cheating: Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
6	Forgery and Impersonation: Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
7	Other policies: The University official regulations in force will be strictly observed and students shall comply with all rules and regulations of the examination set by the Department, Faculty and University Administration.



Faculty of dentistry

Department of Conservative Dentistry

Program of Doctor of Dental Surgery (DDS)

Course Plan (Syllabus) of
Endodontic II (Pre-clinical)
Course No. (.....)

I. Information about Faculty Member Responsible for the Course:							
Name of Faculty Member:	Basheer Hamed Hamood AL-Shameri	Office Hours					
Location & Telephone No.:							
E-mail:	basheerhamed@qq.com	SAT	SUN	MON	TUE	WED	THU



II. Course Identification and General Information:

1	Course Title:	Endodontic II (Pre-clinical)			
2	Course Code & Number:	-----			
3	Credit Hours:	Credit Hours	Theory Hours		Lab. Hours
			Lecture	Exercise	
		3	2	--	2
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5	Pre –Requisite (if any):	Endodontic I (Pre-clinical))			
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9	Study System:	Semester based System			
10	Mode of Delivery:	Full Time			
11	Location of Teaching the Course:	Faculty of dentistry			
12	Prepared by:	Dr. Balsheer Hamed Hamood AL-Shameri			

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Endodontics II (Pre-clinical) course facilitates the transition from pre-clinical to clinical. It offers an introduction to endodontics instruments, vital pulp therapy, root canal treatment, root canal retreatment, and the restoration of the Endodontically treated tooth. Accordingly, students should be able to identify the basic set of instruments appropriate for different procedures, describe the proper use of the tools, develop the right comprehensive, prioritized, and sequenced endodontics treatment procedures, and recognize the basic concepts of non-surgical endodontics treatment or retreatment and their applications. The laboratory part train in procedures locating, preparing and filling the root canals system of natural molar teeth

IV. Course Intended Learning Outcomes (CILOs) :

Upon successful completion of the Course, student will be able to:

	A. Knowledge and Understanding:
a1	Describe the vital pulp therapy for reversible pulpitis
a2	Recognize the basic concepts of non-surgical endodontics treatment or retreatment and their applications.
	B. Intellectual Skills:
b1	Describe the proper use of instruments to prevent breakage within the canal.
b2	Describe the different producers use for endodontics treatments and the material used for that
	C. Professional and Practical Skills:
c1	Perform endodontic treatment on multiple natural upper and lower molar teeth, both handheld and mounted in blocks and dentoform
c2	Define a basic set of instruments appropriate for these procedures: diagnosis, emergency treatment, canal preparation, obturation, and bleaching.
	D. Transferable Skills:
d1	Select appropriate sterilization methods for each instrument type to maintain a safe practice with proper infection control measures
d2	Learn how to use the latest technology for endodontics treatment

V. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours
1	Review for endodontics	– Previous term topics	1	2
2	Strategies to treat reversible pulpitis	– Definitions – Pulp capping (Indirect, Direct), – Pulpotomy (conventional, partial)	2,3	4
3	Instruments in Modern	– Diagnostic instruments.	4,5	

V. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours
	Endodontic	<ul style="list-style-type: none"> - Tooth isolation instruments (Rubber Dam) - Instruments used during access preparation - Root canal exploring & enlarging instruments. - Instruments for Obturation - Instruments for bleaching 		
4	Access Preparations & WL determination	<ul style="list-style-type: none"> - Access preparations <ul style="list-style-type: none"> • Objectives • Required equipment • Guideline for Access cavity preparation - WL Determination 	6	2
5	cleaning, and shaping	<ul style="list-style-type: none"> - Objectives for cleaning and shaping - Principles of intra-radicular preparation - instrumentation motions - Preparation techniques 	7	2
6	Midterm Exam		8	2
7	Irrigants and Intracanal Medicaments	<ul style="list-style-type: none"> - Optimal irrigant characteristics - Types of irrigants and irrigations method - Types of intracanal medications and their applications 	9	2
8	Obturation and Temporization	<ul style="list-style-type: none"> - Root canal sealer - Root canal filling materials - Obturation techniques - Temporization 	10	2

V. Course Contents:				
A. Theoretical Aspect:				
No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours
		<ul style="list-style-type: none"> • Intraorifice Barriers • Occlusal access cavity filling • Temporary Filling Materials 		
9	Restoration of the Endodontically Treated Tooth	<ul style="list-style-type: none"> - Criteria for a restorable Tooth - Timing of Tooth Restoration - Restoration Design <ul style="list-style-type: none"> • Direct restoration • Indirect restoration • Post and core 	11,12	4
10	Root Canal Retreatment	<ul style="list-style-type: none"> - Non-surgical retreatment <ul style="list-style-type: none"> • Indications • Contraindications • Procedures - Surgical retreatment <ul style="list-style-type: none"> • Indications • Contraindications 	13,14	4
11	Review	- Previous topics	15	2
12	Final Exam		16	2
Number of Weeks /and Units Per Semester			16	32

B. Case Studies and Practical Aspect:			
No.	Tasks/ Experiments	Week Due	Contact Hours
1	Demo of Endodontics Practical	1 st	2
2	Root canal treatment of maxillary molar tooth	2 nd -7 th	12
3	Root canal treatment of mandibular molar tooth	8 th -12 th	10

B. Case Studies and Practical Aspect:			
No.	Tasks/ Experiments	Week Due	Contact Hours
4	Rubber-dam application	13 th	2
5	dentist and patient Positions	14 th	2
6	practical Exam	15 th	2
Number of Weeks /and Units Per Semester		15	30

VI. Teaching Strategies of the Course:
<ul style="list-style-type: none"> - Lectures - Discussions - Problem-solving - Training - Small groups work - Assignments

VII. Assessment Methods of the Course:
<ul style="list-style-type: none"> - Quizzes - Midterm Exam - Final Exam - Practical Exam - Observation - Semester Work

VIII. Assignments:			
No.	Assignments	Week Due	Mark
1	Assignment 1: write a paper about the applications of vital pulp therapy	3rd -6th	5
2	Assignment 2: write a paper about the generations of apex locator in root canal treatment.	9th -15th	5

No.	Assignments	Week Due	Mark
Total			10

IX. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment
1	Assignments	3 rd -13 th	10	10 %
2	Quizzes 1 & 2	6 th , 12 th	10	10 %
3	Midterm Exam	8 th	20	20 %
4	Practical Exam	15 th	20	20 %
5	Final Exam	16 th	40	40 %
Total			100	100%

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2- Essential References:

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3- Electronic Materials and Web Sites etc.:

Websites:

- 1- American Association of endodontists: www.aae.org
- 2- Journal of Endodontics
- 3- Policies and guidelines of the American Academy of Pediatric Dentistry.
URL:<https://www.aapd.org/research/oral-health-policies--recommendations/>

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