



# Course Specifications

<b>Course Title:</b>	<b>Clinical Endodontics</b>
<b>Course Code:</b>	<b>RDS 423</b>
<b>Program:</b>	<b>Bachelor of Dentistry [ BDS ]</b>
<b>Department:</b>	<b>Restorative Dentistry Department [RDS]</b>
<b>College:</b>	<b>College of Dentistry</b>
<b>Institution:</b>	<b>Majmaah University</b>

## Table of Contents

<b>A. Course Identification .....</b>	<b>3</b>
6. Mode of Instruction (mark all that apply) .....	3
<b>B. Course Objectives and Learning Outcomes.....</b>	<b>4</b>
1. Course Description .....	4
2. Course Main Objective .....	4
3. Course Learning Outcomes .....	4
<b>C. Course Content .....</b>	<b>4</b>
<b>D. Teaching and Assessment .....</b>	<b>6</b>
1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods.....	6
2. Assessment Tasks for Students .....	7
<b>E. Student Academic Counseling and Support .....</b>	<b>8</b>
<b>F. Learning Resources and Facilities .....</b>	<b>8</b>
1. Learning Resources .....	8
2. Facilities Required .....	8
<b>G. Course Quality Evaluation .....</b>	<b>9</b>
<b>H. Specification Approval Data .....</b>	<b>9</b>

## A. Course Identification

<b>1. Credit hours:</b> 3
<b>2. Course type</b> a. University <input type="checkbox"/> College <input type="checkbox"/> Department <input checked="" type="checkbox"/> Others <input type="checkbox"/> b. Required <input checked="" type="checkbox"/> Elective <input type="checkbox"/>
<b>3. Level/year at which this course is offered:</b> 4 <sup>th</sup> Year / 1 <sup>st</sup> and 2 <sup>nd</sup> Semester
<b>4. Pre-requisites for this course (if any):</b> RDS 323
<b>5. Co-requisites for this course (if any):</b> NA

### 6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	15	35%
2	Blended	NA	NA
3	E-learning	NA	NA
4	Correspondence	NA	NA
5	Other - Laboratory	90	65%

### 7. Actual Learning Hours (based on academic semester)

No	Activity	Learning Hours
<b>Contact Hours</b>		
1	Lecture	15
2	Laboratory/Studio	90
3	Tutorial	-
4	Others (specify)	-
	<b>Total</b>	<b>105</b>
<b>Other Learning Hours*</b>		
1	Study	45
2	Assignments	15
3	Library	15
4	Projects/Research Essays/Theses	15
5	Others (specify)	-
	<b>Total</b>	<b>90</b>

\* The length of time that a learner takes to complete learning activities that lead to achievement of course learning outcomes, such as study time, homework assignments, projects, preparing presentations, library times

## B. Course Objectives and Learning Outcomes

### 1. Course Description

It is a one-year course, given as a one hour lecture in the 1st semester and a three hour practical session each in the 1<sup>st</sup> and 2<sup>nd</sup> semester of the same year Clinical Operative Dentistry is a course that focuses on diagnosis and treatment of root canals of individual teeth.

Clinical endodontic Dentistry is one of the most important courses in dentistry where the student deals with painful cases, restorative materials and better handling of clinical cases. A complete clinical history of the patient has to be taken and they have to arrive at a diagnosis and treatment plan.

### 2. Course Main Objective

The main purpose of the course is take a comprehensive patient history and relate it, so as to arrive at a diagnosis and treat caries according to risk assessment. Then, the case will treated in order to save the tooth if it is restorable.

### 3. Course Learning Outcomes

CLOs		Aligned PLOs
<b>1</b>	<b>Knowledge:</b>	
K3.25	Recall the various conditions related to the tooth and list the various concepts in endodontic treatment and suggest a differential diagnosis of infected lesions and derive an appropriate treatment plan	K3
<b>2</b>	<b>Skills :</b>	
S3.12	Students will be able to develop a critical thinking to suggest the differential diagnosis of the painful or infected cases and formulate a treatment plan	S3
S5.4	Evaluate the endodontic emergencies in dental practice and emerging trends in endodontic treatment to outline their clinical management at the graduate level.	S5
S6.10	Students should demonstrate hand – eye coordination skills in the treatment of endodontic problems and hence perform standard non-surgical endodontic treatment on single and multi-rooted teeth	S6
<b>3</b>	<b>Competence:</b>	
C3.8	Communicate with patients, instructors, and clinical staff and also demonstrate coordination among each other, choose and justify the restorative material for the management of a clinical cases	C3

## C. Course Content

No	List of Topics	Contact Hours
1	Introduction and orientation  1. Review of objectives and requirements of the course. 2. Introduction to all endodontic forms to be used in the clinic. 3. Documentation of procedures and treatment. 4. Clinical Protocol.	1
2	Clinical Diagnostic Procedures	1

	<ol style="list-style-type: none"> <li>1. Systematic approach to endodontic diagnosis.</li> <li>2. Taking chief complaint, medical and dental history.</li> <li>3. Endodontic radiography (buccal objective rules).</li> <li>4. Diagnosis and treatment planning.</li> </ol>	
3	<p>Clinical Endodontics I</p> <ol style="list-style-type: none"> <li>1. Local anaesthesia and supplementary injection techniques.</li> <li>2. Isolation: its importance, difficulties &amp; management.</li> <li>3. Access cavity preparation.</li> <li>4. Length determination.</li> </ol>	1
4	<p>Clinical Endodontics II</p> <ol style="list-style-type: none"> <li>1. Canal preparation techniques (hand and rotary instrumentation).</li> <li>2. Canal cleaning techniques.</li> <li>3. Importance of effectively sealing the root canal system.</li> <li>4. Timing of obturation.</li> <li>5. Preparation for obturation.</li> <li>6. Methods of obturation.</li> </ol>	1
5	<p>Restoration of Endodontically Treated Teeth</p> <ol style="list-style-type: none"> <li>1. Special features of endodontically treated teeth.</li> <li>2. Restorative materials and options.</li> <li>3. Pretreatment evaluation and treatment strategy</li> </ol>	1
6	<p>Management of Endodontic Emergencies</p> <ol style="list-style-type: none"> <li>1. Emergency classifications.</li> <li>2. Emergency endodontic management.</li> <li>3. Analgesics and antibiotics.</li> <li>4. Cracked and fractured teeth.</li> </ol>	1
7	<p>Traumatic Injuries I, II</p> <ol style="list-style-type: none"> <li>1. Classification – World Health Organization.</li> <li>2. Radiographic examination.</li> <li>3. Clinical management.</li> <li>4. Follow-up after dental trauma.</li> </ol>	2
8	<p>Endo-Perio Relationship</p> <ol style="list-style-type: none"> <li>1. Influence of pulpal pathologic condition on the periodontium.</li> <li>2. Influence of periodontal inflammation on the pulp.</li> <li>3. Differential diagnosis.</li> </ol>	1

	4. Treatment alternatives.	
9	Prognosis of Root Canal Therapy 1. Importance of recall. 2. Modalities used to determine success and failure. 3. Factors determine success and failure. 4. Causes that may lead to failure.	1
10	Endodontic Surgery 1. Indications for periradicular surgery. 2. Periradicular surgery. 3. Postoperative care.	1
11	Complication related to endodontic treatment 1. Causes of tooth discoloration. 2. Contraindications to bleaching. 3. Methods of bleaching discolored teeth: 4. Veneering discolored teeth.	1
12	Current topics in endodontics 1. Mechanical preparation. 2. Ultrasonic irrigation. 3. Radiographic methods. 4. Thermoplasticized obturation (materials and mechanism).	1
		<b>13</b>

## D. Teaching and Assessment

### 1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1	<b>Knowledge</b>		
K3.25	Recall the various conditions related to the tooth and list the various concepts in endodontic treatment and suggest a differential diagnosis of infected lesions and derive an appropriate treatment plan	-Lectures -Tutorials Clinical & practical sessions -Oral presentation -Take home assignments	-For didactic part, examinations, quizzes, and takes home assignments. - For clinical part, every step will be evaluated using student evaluation form
2	<b>Skills :</b>		
S3.12	Students will be able to develop a critical thinking to suggest the	Case presentations, Formulate	- Exams by written and oral quizzes

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
	differential diagnosis of the painful or infected cases and formulate a treatment plan	Treatment plans, Practicals	- Problem solving questions questioning, review test & performance notice.
S5.4	Evaluate the endodontic emergencies in dental practice and emerging trends in endodontic treatment to outline their clinical management at the graduate level.	Treatment plans, Practicals	- Problem solving questions questioning, review test & performance notice.
S6.10	Students should demonstrate hand – eye coordination skills in the treatment of endodontic problems and hence perform standard non-surgical endodontic treatment on single and multi-rooted teeth	Case presentations, Formulate Treatment plans, Practicals	- Exams by written and oral quizzes - Problem solving questions questioning, review test & performance notice.
<b>3</b>	<b>Competence:</b>		
C3.8	Communicate with patients, instructors, and clinical staff and also demonstrate coordination among each other, choose and justify the restorative material for the management of a clinical cases	1. Students will be assigned to a particular patient and will be held responsible – 2. Practical sessions with group discussion 3. Teach students how to deal with different patients' personalities and attitudes.).	1. Practical sessions 2. Questionnaire , problem solving , 3. Group discussion and assigned readings need to be presented and/or discussed

## 2. Assessment Tasks for Students

	Assessment task	Week Due	Proportion of Total Assessment
<b>1</b>	Quiz	During the semester	5%
<b>2</b>	Midterm written exam	Week 7	15%
<b>3</b>	Final written exam	End of the semester	15%
<b>4</b>	Weekly Practical assessment	During the semester	30%

5	Research	During the semester	5%
6	Behaviour and attitude	During the semester	5%
7	Final practical exam	End of the Semester	25%
<b>Total</b>			100%

### E. Student Academic Counseling and Support

Each group of students is assigned to a particular faculty where he will provide academic counselling during specific academic hours ( 2 hours / week )

Each group of students is assigned to a particular faculty where he will provide academic counselling during specific academic hours ( 2 hours / week )

### F. Learning Resources and Facilities

#### 1. Learning Resources

<b>Required Textbooks</b>	<b>1. List Required Textbooks :</b> ✓ Pathways of the Pulp Kenneth M. Hargreaves, and Louis H. Berman 2010, Mosby ✓ Problem solving in endodontics, prevention, identification and management, Ames L. Gutmann and Paul E. Lovdahl, 2010, ELSEVIER
<b>Essential References Materials</b>	<b>2. List Essential References Materials :</b> ✓ Endodontics 6th ed. by: Ingle, Bakland and Baumgartner. ✓ Principles & Practice of Endodontics 4th ed. by: Walton & Torabinejad
<b>Electronic Materials</b>	<input type="checkbox"/> Recommended selected articles will be posted in the course webpage. <input type="checkbox"/> www.pubmed.com <input type="checkbox"/> Google <input type="checkbox"/> www.sciencedirect.com
<b>Other Learning Materials</b>	<input type="checkbox"/> Library <input type="checkbox"/> Computers <input type="checkbox"/> Projects <input type="checkbox"/> Diagnostic instruments

#### 2. Facilities Required

Item	Resources
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Item	Resources
<b>Accommodation</b> (Classrooms, laboratories, demonstration rooms/labs, etc.)	<ul style="list-style-type: none"> <li>✓ Lecture room suitable for 30 students</li> <li>✓ Fully equipped dental clinics for practical sessions</li> </ul>
<b>Technology Resources</b> (AV, data show, Smart Board, software, etc.)	<ul style="list-style-type: none"> <li>✓ Projector</li> <li>✓ Smart board with all the accessories</li> <li>✓ Internet</li> </ul>
<b>Other Resources</b> (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	<ul style="list-style-type: none"> <li>✓ Sterilization equipment</li> <li>✓ Dental clinics</li> </ul>

## G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of teaching and assessment	Students	<ul style="list-style-type: none"> <li>✓ Course Evaluation Survey</li> <li>✓ Quality of Exam Survey</li> </ul>
	Faculty	<ul style="list-style-type: none"> <li>✓ CLO Mapping with teaching &amp; assessment.</li> <li>✓ Course Blueprinting</li> <li>✓ Grade Analysis</li> <li>✓ Psychometric Analysis</li> </ul>
	Peers	Grade Verification
Extent of achievement of course learning outcomes	Faculty member / Quality assurance committee	<ul style="list-style-type: none"> <li>✓ Direct assessment outcome analysis</li> <li>✓ Course report preparation</li> </ul>
Quality of learning resources, etc	Students / Faculty	<ul style="list-style-type: none"> <li>✓ Academic advising survey</li> <li>✓ Student experience survey</li> </ul>

**Evaluation areas** (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)

**Evaluators** (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify))

**Assessment Methods** (Direct, Indirect)

## H. Specification Approval Data

<b>Council / Committee</b>	<b>Department Council</b>
<b>Reference No.</b>	*****
<b>Date</b>	*****