

1	Course title	Conservative Dentistry practical-2
2	Course number	1302317
3	Credit hours (theory, practical)	1
	Contact hours (theory, practical)	30
4	Prerequisites/corequisites	none
5	Program title	DDS program
6	Program code	
7	Awarding institution	University of Jordan
8	Faculty	Dentistry
9	Department	Conservative Dentistry
10	Level of course	3 <sup>rd</sup> year
11	Year of study and semester (s)	1 <sup>st</sup> and 2 <sup>nd</sup> semesters 2019 /2020
12	Final Qualification	DDS
13	Other department (s) involved in teaching the course	none
14	Language of Instruction	English
15	Date of production/revision	September 2019

#### 16. Course Coordinator:

Office numbers, office hours, phone numbers, and email addresses should be listed.

Dr. Sari Mahasneh . Office hours: ,phone no. 235552 , E-mail: [sari\\_mahasneh@ju.edu.jo](mailto:sari_mahasneh@ju.edu.jo)

#### 17. Other instructors:

*Office numbers, office hours, phone numbers, and email addresses should be listed.*

##### Full-time staff:

Dr. Rada Haddadin. Office hours: , phone no. 23552, E-mail: [r.haddadin@ju.edu.jo](mailto:r.haddadin@ju.edu.jo)

Dr. Rawan Abu Zaghlan. Office hours: phone no.23552, E-mail: [r.abuzaghlan@ju.edu.jo](mailto:r.abuzaghlan@ju.edu.jo)

##### Part-time staff:

Dr. Eyad Al Khateeb  
*Dr.Muna Alali*  
*Dr.Ali Abu Neme*

### 18. Course Description:

A 28-weeks preclinical laboratory course. One session of 2-hours duration per week. Practical preclinical training of root canal treatments on extracted human teeth mounted in plaster blocks or on the phantom-head.

### 19. Course aims and outcomes:

Course objectives are:

- To teach the students the necessary fundamental manual practical skills for root canal treatment that would furnish the ability to deal with patients that need endodontic treatment in a clinical setting.
- To familiarize students with the internal anatomy of teeth, pulp and root canal system.
- The students should be able to carry out access cavity, cleaning and shaping and obturation of root canals of human extracted teeth.
- The students should learn when and how to use radiographs during root canal treatment.
- The students should learn when and how to use various endodontic instruments and devices during root canal treatment.
- To practice proper basic occupational and patient safety standards (patient position, practitioner seating, hand piece grip and support, indirect vision, rubber dam) in a simulated clinical setting.
- To introduce the general principles of cross-infection control standards and management of sharps in a simulated clinical setting.
- Students should work in teams in order to prepare a short oral presentation in relevant endodontic topics.

### **Intended Learning Outcomes:**

Successful completion of this course should lead to the following:

- Students should gain practical skills related to the concepts, principles and methods of root canal treatment.
- Students should be able to identify and use various endodontic instruments and materials used for root canal treatment teeth.
- Students should be able to recognize and evaluate the complexity of the internal anatomy of the tooth and the pulp and root canal system.
- Students should be able to use manual and digital radiographs and to identify when they are used
- Student should be able to apply various rubber dam isolation techniques and identify when they are used.
- Student should be able to understand and apply inter-appointment management strategies.
- Students should be able to perform simple retreatment cases.

**A. Knowledge and Understanding:**

- To gain full knowledge of the internal anatomy of the tooth and the pulp and root canal system.
- To understand the principles and concepts of methods and practices used for root canal treatment.
- To understand when and how to use the different endodontic instruments, materials and devices including radiographs.
- To gain basic understanding of the process of clinical and radiographic examination plus record keeping
- To understand the pre-treatment considerations in endodontic treatment and how the treatment can be modified accordingly
- To present a short oral presentation in relevant endodontic topics.

**B. Manual skills, with ability to:**

- Recognize and evaluate the complexity of the internal anatomy of the tooth and the pulp and root canal system.
- Gain the ability to effectively use endodontic instruments and materials
- Practically carry out access cavity, cleaning and shaping and root canal filling on extracted human teeth.
- Apply various rubber dam isolation techniques and carry out treatments while in situ
- Use apex locators for working length determination
- Manage severely broken down teeth effectively
- Manage teeth between appointments effectively
- Carry out simple retreatment and gutta percha removal methods
- take and develop dental manual and digital radiographs.

**20. Topic Outline and Schedule:**

Root canal treatments practical lab training from September 2017 to June 2018.

**Duration:** 32 weeks in 1<sup>st</sup> and 2<sup>nd</sup> semester (3<sup>rd</sup> year), 64 hours in total

**Lectures/Practical Sessions :** 64 hours, a 2-hour session every week (including a 2-hour final practical exam).

Students will be asked to perform root canal treatment on extracted human teeth mounted in blocks

and into artificial upper and lower jaws.

Treatment will be divided into three major steps; access cavity, cleaning and shaping and obturation.

Apex locators will be used on plastic tooth model and extracted teeth

Interim and temporary restorations will be performed and intracanal medicaments will be placed. gutta percha removal as a practice for simple retreatment.

Treatment will be carried out on anterior, premolar and molar teeth

**First Semester 2017 Endodontic laboratory Syllabus**

Week	Date	Topic		
		Procedures	Tooth	Area
1	17/9	<b>Introduction:</b> <ul style="list-style-type: none"> <li>• Mounting</li> <li>• Disinfection of teeth</li> <li>• Cross infection and laboratory safety</li> <li>• Radiographs</li> <li>• Radiographic anatomy</li> <li>• Instruments &amp; materials</li> </ul>	-	-
2	24/9	Pre-operative assessment Access cavity preparation	Maxillary anterior	Blocks
3	1/10	Access cavity preparation	Maxillary anterior	Blocks
4	8/10	Rubber dam isolation Access cavity preparation	Maxillary anterior	Phantom head
5	15/10	Pre-operative assessment Rubber dam isolation Access cavity preparation	Mandibular anterior	Phantom head
6	22/10	Pre-operative assessment Access cavity preparation	Maxillary Premolar	Blocks
7	29/10	Rubber dam isolation Access cavity preparation	Maxillary Premolar	Phantom head

8	5/11	Working length Canal preparation	Anterior	Blocks
9	12/11	Obturation	Anterior	Blocks
10	19/11	Working length Canal preparation	Maxillary Premolar 2 canals	Blocks
11	26/11	Working length Canal preparation Intracanal medicaments Temporary restoration	Maxillary Premolar 2 canals	Blocks
12	3/12	Obturation	Maxillary Premolar 2 canals	Blocks
13	10/12	Pre-operative assessment Rubber dam isolation Access cavity preparation	Mandibular premolar	Phantom head
14	17/12	RCT single rooted tooth	Single rooted tooth	Blocks

### Second Semester 2017 Endodontic laboratory Syllabus

Week	Date	Topic		
		Procedures	Tooth	Area
1		Pre-operative assessment Access cavity preparation	Maxillary Molars	Blocks
2		Working length Canal preparation	Maxillary Molar	Blocks
3		Working length Canal preparation Intracanal medicament Temporary restoration	Maxillary Molar	Blocks
4		Obturation	Maxillary Molar	Blocks
5		Pre-operative assessment Rubber dam isolation Access cavity preparation	Plastic Maxillary Molar	Phantom head
6		Apex locator usage Working length Canal preparation	Plastic Maxillary Molar	Phantom head

7		Pre-operative assessment Rubber dam isolation Investigation Access cavity preparation Interim restoration	Mandibular Molar	Phantom head
8		Access cavity preparation through interim restoration Working length Canal preparation	Mandibular Molar	Phantom head
9		Working length Canal preparation Intracanal medicament Temporary restoration	Mandibular Molar	Phantom head
10		Obturation	Mandibular Molar	Phantom head
11		Retreatment single canal Removal of GP Working length	Any canal	Blocks
12		Access cavity preparation / Training	Mandibular Molar	Blocks
13		Pre-operative assessment Access cavity preparation RCT mesial root	Mandibular Molar	Phantom Blocks
		OSCE	-	-
14		Pre-operative assessment Access cavity preparation RCT mesial root	Mandibular Molar	Phantom Blocks





## 21. Teaching Methods and Assignments:

Development of ILOs is promoted through the following teaching and learning methods:

### Teaching and learning methods:

- Data show presentations
- Visual Videos
- Live demonstrations
- Class discussions
- Pre-operative assessment form, *will help student in achieving:*
  - Tooth identification
  - Examination of the tooth visually and radiographically
  - Drawing and understanding of external and internal anatomy of teeth
  - Drawing and understanding access cavity form and outline
  - Record keeping
- Practically apply on extracted human teeth
- Informal assessments according to a set assessment criteria for each procedure
- Reflective learning through self-assessment

### Assignments:

Students working in teams to prepare and present a 10-minute Oral presentation in a relevant endodontic topic in the *second semester*.

Preparedness for procedures visual videos and lecture notes.

## 22. Evaluation Methods and Course Requirements:

Opportunities to demonstrate achievement of the ILOs are provided through the following assessment methods and requirements:

A combination of informal assessments, pop quizzes, formal mid term evaluation, Oral presentation, OSCE and final formal examination. The following table shows the tasks to be completed

Tasks to be completed		Assessment	Marks
<b>1<sup>st</sup> Semester</b>	Maxillary Anterior RCT	-	<b>0</b>
	Mandibular Anterior RCT	<i>Informal</i>	<b>5</b>
	Maxillary Premolar (2 canals) RCT	<i>Informal</i>	<b>8</b>
	Lower Premolar access cavity only	<i>Informal</i>	<b>2</b>
	Rubber dam placement	<i>Informal</i>	<b>3</b>
	Intracanal medicament placements Temporary filling placement		
	Mid-term evaluation <b>RCT for single rooted tooth</b>	<i>Formal</i> <i>Practical</i>	<b>10</b>
<b>2<sup>nd</sup> Semester</b>	Maxillary Molar RCT	<i>Informal</i>	<b>10</b>
	Mandibular Molar RCT	<i>Informal</i>	<b>10</b>
	Apex locator usage	<i>Informal</i>	<b>1</b>
	Investigation of Mandibular Molar Interim restoration	<i>Informal</i>	<b>2</b>
	Access cavity through the interim restoration		
	Rubber dam placement	-	<b>0</b>
	Intracanal medicament placements Temporary filling placement		
	Retreatment of single canal <i>(GP removal and WL determination only)</i>	-	<b>0</b>
	10 minutes Oral presentations <i>(Students allocated into groups of 3)</i>	<i>Informal</i>	<b>5</b>

<b>On going</b>	Pop quizzes throughout the year	<i>Written/Oral</i>	<b>4</b>
	Violations: <ul style="list-style-type: none"> <li>• <i>Professionalism</i></li> <li>• <i>Cross infection control</i></li> <li>• <i>Handling of Sharps</i></li> <li>• <i>Lack of preparedness for the procedure</i></li> </ul>	<i>Mark deductions</i>	<b>1 mark per violation</b>
		<b>Total</b>	<b>60</b>
<b>Final examination</b>	Mandibular Molar on blocks <b>Access cavity + RCT for mesial root only</b>	<i>Formal practical</i>	<b>30</b>
	<b>OSCE</b> <i>10 questions</i>	<i>Formal OSCE</i>	<b>10</b>
			<b>Total</b>
		<b>Overall</b>	<b>100</b>

### 23. Course Policies:

#### A- Attendance policies:

- Students are allowed 15% absence according to university laws. This translates into 5 clinics for 3<sup>rd</sup> year students in the conservative dentistry practical 2 course (endodontics).
- Any student who comes late to the clinic.

#### B- Absences from exams and handing in assignments on time:

According to the roles and regulations of the University of Jordan

#### C- Health and safety procedures:

According to the roles and regulations of the Faculty of Dentistry

D- Honesty policy regarding cheating, plagiarism, misbehaviour:

According to the roles and regulations of the University of Jordan

E- Grading policy:

According to the roles and regulations of curriculum for the academic degree of Doctor of Dental Surgery (DDS)

F- Available university services that support achievement in the course:

None

G- Violation system will incur mark deduction after three warnings in the following:

- Professionalism
- Cross infection control
- Handling of Sharps
- Lack of preparedness for the procedure

## 24. Required equipment:

Handpieces, high and low  
Radiographic films and processing solutions  
Apex locators

### Instruments:

Low and high speed burs, mirror, tweezers, endodontic explorer, Rubber dam kits (sheet, various clamps, frame) K-files of various sizes and lengths, H-files of various sizes, Gates Glidden burs, irrigating needles, hand or finger spreaders, pluggers, endodontic spoon, plastic instrument, scissors, radiograph clip, radiograph envelopes, mixing bowl and spatula, matrix band and retainer,

### Materials:

Extracted human teeth, dental radiographs, gutta percha and sealer, glass ionomer cement, Temporary restorative material, intracanal medicament, gutta percha solvent.

**25. References:**

A- Required book (s), assigned reading and audio-visuals:

Endodontics: Principles and Practice, 4<sup>th</sup> edition, Walton and Torabinejad

B- Recommended books, materials, and media:

Pathways of the pulp, 11<sup>th</sup> edition, Hargreaves and Cohen

**26. Additional information:**

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 lectures, notes on the content of the course, its teaching and assessment methods can be also sent by e-mail or discussed directly with the corresponding lecturer on their designated office hours.

Name of Course Coordinator: Dr. Sari Mahasneh Signature: ----- Date: 9/9/2019

Head of curriculum committee/Department: ----- Signature: -----

Head of Department: ----- Signature: -----

Head of curriculum committee/Faculty: ----- Signature: -----

Dean: ----- -Signature: -----

Copy to:

Head of Department  
Assistant Dean for Quality Assurance  
Course File

