

Faculty of Oral & Dental Medicine

Endodontics Technology

Information :

Course Code : ENDO 411

Level : Undergraduate

Course Hours : 2.00- Hours

Department : Faculty of Oral & Dental Medicine

Area Of Study :

1. understand the full scope of endodontics
2. Be familiar with pulp space macroscopic anatomy, and variations of root canal system.
3. Be familiar with instruments and materials used in conventional endodontic treatment.
4. Develop sound technical excellence in performing coronal cavity preparation and intra-radicular cleaning and shaping in uncomplicated single and multi-canaled extracted human permanent teeth using low speed motors.
5. Be aware of procedural errors during root canal treatment, determine the effect on their prognosis.
6. Develop and acquire general skills and attitude including: communication skills (student-staff member and with other healthcare professionals), life-long learning, ethical behavior and the profession's wider responsibility towards the community as a whole.

Description :

The course is concerned with study of morphology, micro and macroscopic anatomy of pulp. Access cavity principles, instruments, cleaning and shaping and obturation techniques. Laboratory access cavity preparation and cleaning and shaping of anterior and premolar teeth.

Course outcomes :

a. Knowledge and Understanding: :

1 -	A1- describe the pulp space morphology and its major components of all dentition.
2 -	A2- describe the basic set of instruments appropriate for these procedures: coronal access preparation, tooth length determination and radicular preparation.
3 -	A3- Explain the basis for standardization of hand and rotary operated instruments.
4 -	A4- Describe the action, design and professional use of hand and rotary instruments used for shaping the root canal.
5 -	A5- Describe objectives for cleaning and shaping of root canal
6 -	A6- Describe techniques for standardized, flaring (step back and / or crown down) preparations, and determine the appropriate size of the master cone.
7 -	A7- List ideal irrigants properties, types used, and techniques that provide maximal and safe irrigants effects.
8 -	A8- Discuss the role of chelating and decalcifying agents.
9 -	A9- Describe the purpose of obturation,, technical and clinical reasons of its failure.
10 -	A10- List requirements, indications, mixing and placing techniques of available types of sealers.
11 -	A11- Discuss the technical and radiographic criteria for evaluating the quality of obturation.

b. Intellectual Skills: :

1 -	B1 . Negotiate modifications of the outline forms for extracted human anteriors, premolars and molars.
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2 -	B2 . Select the appropriate irrigant for different endodontic cases.
3 -	B3- decide when to obturate prepared root canals.

c. Professional and Practical Skills: :

1 -	C1-Draw the most common internal and external anatomy of each tooth in different planes including coronal, middle, and apical thirds of a root canal.
2 -	C2-Draw the outline form of the access cavity preparation for all teeth.
3 -	C3-avoid errors that might occur during access and radicular preparations.
4 -	C4-Perform coronal access cavities in extracted permanent anteriors and premolars teeth.
5 -	C5-perform step back root canal preparation technique.
6 -	C6-Practice the proper use of root canal instruments and their file motions.
7 -	C7- use the appropriate irrigating solution, needles and techniques that provide maximal and safe irrigant effect.

d. General and Transferable Skills: :

1 -	D1- Communicate effectively and ethically with members of the dental staff.
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Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
Scope of endodontics			
Pulp space morphology and macroscopic anatomy			
Endodontic access cavity preparation			
Endodontic instruments			
Working length determination			
Obturation			

Teaching And Learning Methodologies :

4-1. Lectures in campus and/or online.
4-2. Small group (Practical and clinical training)
4-3. online demonstrations.

Course Assessment :

Methods of assessment	Relative weight %	Week No	Assess What
5-1. written examination (quizzes, midterms, and final).	55.00		
5-2. Practical exam	15.00		
5-3. Oral examination	10.00		
5-4. class work (Log book, OSPE, attendance, participation)	20.00		

Course Notes :

Available for students on moodle

Recommended books :

- Pathways of the pulp by Stephan Cohen and Richard Burnes (library)
- Principles and practice of endodontics by Torabinejad (library)
- Endodontics by Ingle. (library)