

## Course Specification Student Version

|               |                           |
|---------------|---------------------------|
| Course Title: | Preclinical Endodontics I |
| Course Code:  | RDC 421                   |
| Department:   | Dentistry                 |
| Program:      | Dentistry                 |
| College:      | Vision College in Riyadh  |
| Institution:  | Vision College in Riyadh  |
| Revised:      | July 2025                 |

## A. Course Identification

|   |
|---|
| 1. Credit hours: 2 (1+1+0)  |
| 2. Level/year at which this course is offered: Level 7/Year 4                           |
| 3. Pre-requisites for this course (if any): 312 RDC: Preclinical Operative Dentistry II |
| 4. Co-requisites for this course (if any): None   |

## B. Teaching Methods

|   |                 |
|---|-----------------|
| 1 | Lecture         |
| 2 | Simulation Labs |

## C. Course Description and Objectives

### 1. Course Description

This course is considered as a first step in endodontics. Accordingly, a dental student must be prepared to understand morphology of the root canal system and recognize the instruments and materials used during root canal treatment. Practically, demonstrate the steps root canal treatment procedure and are applied on mounted acrylic teeth as laboratory exercises.

### 2. Course Main Objective

The scope of this course is to provide the dental students with the knowledge and skills that would enable them to perform a proper access cavity preparation and apply different materials in endodontics. By the end of this course, the students should be able to:

- Identify different instruments and materials in endodontics.
- Perform root canal treatment of anterior and premolar teeth.

### 3. Course Objectives

**By the end of this course, students should be able to:**

- Describe the internal anatomy of the pulp space and the process of crown, root and pulp development.
- Describe the procedure, burs used, and sequence of preparation to start and complete access preparations on various teeth.
- Recognize the mechanical behavior, manipulation and physical properties of different instruments and materials used in endodontics.
- Describe the procedural accidents that may encounter unwanted or unforeseen circumstances during root canal treatment that can affect the prognosis.
- Manipulate different instruments used in complete access preparations.
- Identify and manipulate instruments and materials appropriate for Canal Preparation & obturation.
- Demonstrate ethical, professional, and legal responsibilities in the dentistry professional.
- Establish collaborative teamwork and leadership responsibility in the dental practice

## D. Course Content

| No | List of Topics                               |
|----|--|
| 1  | Introduction to course                       |
| 2  | Endodontic instruments & isolation           |
| 3  | Tooth Morphology (1)                         |
| 4  | Tooth Morphology (2)                         |
| 5  | Access cavity preparation (1)                |
| 6  | Access cavity preparation (2)                |
| 7  | Root canal preparation (1)                   |
| 8  | Root canal preparation (2)                   |
| 9  | Intra- canal medication                      |
| 10 | Root canal filling material (obturation) (1) |
| 11 | Root canal filling material (obturation) (2) |
| 12 | Rotary canal preparation                     |
| 13 | Endodontic mishaps (1)                       |
| 14 | Endodontic mishaps (2)                       |
| 15 | Histology and physiology of pulp             |
| 16 | Simulation-based laboratory sessions         |

## E. Assessment Tools

| # | Assessment task             | Percentage of Total Assessment Score |
|---|-----------------------------|--------------------------------------|
| 1 | Simulation-Based Assessment | 30%                                  |
| 2 | Written Exam (Quizzes)      | 10%                                  |
| 3 | Written Exam (Midterm)      | 10%                                  |
| 4 | Case-Based Exam             | 10%                                  |
| 5 | OSPE                        | 10%                                  |
| 6 | Written Exam (Final)        | 30%                                  |
|   | <b>Total</b>                | <b>100%</b>                          |

## F. Learning Resources

|                                 |  |
|---------------------------------|--|
| <b>Essential References</b>     | <ul style="list-style-type: none"> <li>• Endodontic principles and practices. Mahmoud Torabinejad and Richard 5th Walton; 6th Edition, 2020.</li> <li>• Pathways of the Pulp. S. Cohen, and K. M. Hargreaves, K. Keiser.; 12th edition, 2020.</li> </ul> |
| <b>Supportive References</b>    | -  |
| <b>Electronic Materials</b>     | <ul style="list-style-type: none"> <li>• <a href="https://www.slideshare.net/">https://www.slideshare.net/</a></li> <li>• Course page on Vision Colleges Website (moodle)</li> </ul>   |
| <b>Other Learning Materials</b> | CD available with text books   |