

Course Specification Student Version

Course Title:	Preclinical Operative Dentistry - 2
Course Code:	RDC 312
Department:	Dentistry
Program:	Bachelor of Medicine and Surgery
College:	Vision College in Riyadh
Institution:	Vision College in Riyadh
Revised:	July 2025

A. Course Identification

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| 1. Credit hours: 3 (1+2+0) |
| 2. Level/year at which this course is offered: Level 6/Year 3 |
| 3. Pre-requisites for this course (if any): RDC 311 |
| 4. Co-requisites for this course (if any): None |

B. Teaching Methods

1	Lecture
2	Practical Session

C. Course Description and Objectives

This is the third course in Dental Biomaterials Science. It consists of didactic and practical components.

It has two parts:

- (1) is to give the student a theory background about some dental biomaterials (like impression, die, wax, ceramic, preventive materials and polymer).
- (2) the practical components covering some of the basic technical aspects related to the manipulating some dental biomaterials.

2. Course Main Objective

At the end of this course, students will be able to:

- Describe fundamental strengths and weaknesses of each material.
- Understand and use different dental biomaterials (impression, model & casting biomaterials).
- Characterize each material as to its proper selection and intended use.
- List laboratory and/or clinical advantages and disadvantages for each material.

Manipulate prosthetic dental biomaterials.

3. Course Objectives

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

- List basic characteristics of composite resin material advantages, disadvantages, indications and contraindications
- Describe basic principles and different techniques of tooth Preparation for composite restorations of dentistry.
- Define GIC; discuss its composition, chemistry, setting reaction & List the differences between conventional GI, resin modified GI, and compomers
- Discuss pulp protection by using bases and liners Establish collaborative teamwork and leadership responsibility
- Perform preparation ,restoration and finishing of class I, II ,III,IV and V composite
- Establish collaborative team work and leadership responsibility in dental lab

D. Course Content

No	List of Topics
1	Introduction to the course
2	Composite Resin Material : (classifications, indications , contra indications, advantages and disadvantages)
3	Clinical considerations of composite resin material: Etching, Bonding, and Restorative Procedure.
4	Principles of Tooth Preparation for Composite Restoration / Class III Composite Resin Cavity Preparation
5	Class IV, V Composite Resin Cavity Preparations
6	Direct Posterior Composite Restorations
7	Glass Ionomer Restorations, RMGI, Compomers
8	Pulp Protection by the Use of Insulating Bases and Liners
9	Recent technique for composite (stamp tech., Back to back tech., Butty index tech. and Injectable composite technique) 1
10	Biological influence of restorative procedures and materials
11	Simulation-based laboratory sessions

E. Assessment Tools

#	Assessment task	Percentage of Total Assessment Score
1	Written Exam (Midterm)	15%
2	Written Exam (Quizzes)	5%
3	Simulation-Based evaluation	30%
4	Objective Structured Practical Examination (OSPE)	20%
5	Written Exam (Final)	30%
	Total	100%

F. Learning Resources

Essential References	Sturtevant's Art and science of operative dentistry. Seventh edition (2018)
Supportive References	-
Electronic Materials	- Composite Cavity Preparation Videos. Dentistry online, you tube channel. -- https://www.slideshare.net/ - Online resources on MOODLE
Other Learning Materials	None

