

## Faculty of Oral & Dental Medicine

### Applied Dental Biomaterials

#### Information :

**Course Code :** DBM 213

**Level :** Undergraduate

**Course Hours :** 3.00- Hours

**Department :** Faculty of Oral & Dental Medicine

#### Area Of Study :

- To present the applied aspects of dental materials as they are related to clinical manipulation by the dentist.
- To bridge the gap between the knowledge obtained in the basic course in materials science, chemistry, and physics and the dental operatory.
- To analyze the benefits and limitations of dental materials.
- To make rational decisions on the selection of dental materials and use in a clinical practice.

#### Course outcomes :

##### **a. Knowledge and Understanding: :**

1 -	Recognize the ideal requirements of the different dental materials according to their clinical applications.
2 -	Identify the different applied dental materials types and classifications.
3 -	Recognize the different applied dental materials preparation or processing procedures.
4 -	Understand the properties, chemistry of setting reactions, compositions and microstructures.
5 -	List technical considerations, possible errors and defects.
6 -	Describe / discuss strengthening or improving or modifying procedures of applied dental materials and properties of newly introduced/modified materials.

##### **b. Intellectual Skills: :**

1 -	Relate composition and microstructure of the different applied dental materials to their properties and behaviors.
2 -	Compare between the applied dental materials according to their properties and use
3 -	Criticize prepared / processed applied dental materials.

##### **c. Professional and Practical Skills: :**

1 -	Identify the different dental materials and their mode of supply.
2 -	Recognize the appropriate material suitable for each clinical situation.
3 -	Illustrate probably the manipulation steps of the different applied dental materials.
4 -	Asses prepared / processed dental materials for possible defects.

##### **d. General and Transferable Skills: :**

1 -	Communicate effectively with colleagues, staff members for information gathering.
2 -	Demonstrate appropriate professional attitude and behavior in different situations.

**Course Topic And Contents :**

Topic	No. of hours	Lecture	Tutorial / Practical
1. Dental Cements.			
2. Direct Esthetic Restorative Materials.			
3. Dental Amalgam.			
4. Dental Ceramics			
5. Wrought wires.			
6. Joining of metals.			

**Teaching And Learning Methodologies :**

Lectures
Small group sessions.
Demonstration
E-Learning
Self-learning
Problem based learning (PBL)

**Course Notes :**

yes

**Recommended books :**

- Restorative Dental materials edited by RG Craig.
- Phillips' Science of Dental materials.