

## Faculty of Oral & Dental Medicine

### Applied Dental Biomaterials

**Information :**

**Course Code :** DBM 212      **Level :** Undergraduate      **Course Hours :** 3.00- Hours

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

**Instructor Information :**

Title	Name	Office hours
Lecturer	MOHAMED MAHMOUD ABDELFAH AMMAR	
Assistant Lecturer	WALAA MOSTAFA NEMR BAYAA	
Teaching Assistant	Ahmed Mohamed Abdelaleem Mohamed elsaid Shhatah	

**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.

**Description :**

Impression materials, Model and Die Materials, Investment Materials, Casting technology , Dental Casting Alloys , None Metallic Denture Base.

**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.
<b>d.General and Transferable Skills: :</b>	
1 -	Communicate effectively with colleagues, staff members for information gathering.
2 -	Demonstrate appropriate professional attitude and behavior in different situations.

<b>Course Topic And Contents :</b>			
<b>Topic</b>	<b>No. of hours</b>	<b>Lecture</b>	<b>Tutorial / Practical</b>
1. Impression materials			
2. Model and Die Materials			
3. Investment Materials			
4. Casting technology			
5. Dental Casting Alloys.			
6. None Metallic Denture Base.			

<b>Teaching And Learning Methodologies :</b>
Lectures
Small group sessions.
Demonstration
E-Learning
Self-learning
Problem based learning (PBL)

<b>Course Assessment :</b>			
<b>Methods of assessment</b>	<b>Relative weight %</b>	<b>Week No</b>	<b>Assess What</b>
5.1. Written examinations knowledge and understanding and intellectual skills.	25.00		
5.2. Oral examination	10.00		
5.3. Practical examination	15.00		
5.4. Mid-term Examinations	30.00		
5.5. Semester Work	20.00		

<b>Course Notes :</b>
yes

<b>Recommended books :</b>
Restorative Dental materials edited by RG Craig.
Phillips' Science of Dental materials.

