

## 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
Professor	Gihan Hafiz Wally Ahamd Atallah	2
Associate Professor	Aiah Abdelwahab Elsayed Abdelfattah Elrashidy	1
Lecturer	MOHAMED MAHMOUD ABDELFATAH AMMAR	3
Teaching Assistant	Layla Mahmoud Mohamed Bakir Alamin	
Teaching Assistant	Mera Mohamed Hassan Emam	
Teaching Assistant	Ahmed Mohamed Abdelaleem Mohamed elsaid Shhatah	
Teaching Assistant	Lojain Ali Mohamed Fazzaa	

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

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

1 -	Criticize prepared / processed applied dental materials.
2 -	Compare between the applied dental materials according to their properties and use

3 -	Relate composition and microstructure of the different applied dental materials to their properties and behaviors.
<b>c. Professional and Practical Skills: :</b>	
1 -	Asses prepared / processed dental materials for possible defects.
2 -	Illustrate probably the manipulation steps of the different applied dental materials.
3 -	Recognize the appropriate material suitable for each clinical situation.
4 -	Identify the different dental materials and their mode of supply.
<b>d. General and Transferable Skills: :</b>	
1 -	Demonstrate appropriate professional attitude and behavior in different situations.
2 -	Communicate effectively with colleagues, staff members for information gathering.

**Course Topic And Contents :**

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

**Teaching And Learning Methodologies :**

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

**Course Assessment :**

Methods of assessment	Relative weight %	Week No	Assess What
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		

**Course Notes :**

yes
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**Recommended books :**

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