

## **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
Associate Professor	MOHAMED MAHMOUD ABDELFATAH AMMAR	3
Associate Professor	Aiah Abdelwahab Elsayed Abdelfattah Elrashidy	3
Lecturer	Heba Mahmoud Abdel Hamid Seif Eldin	1
Teaching Assistant	Ola Gamal Aly Abdelsalam Youniss	
Teaching Assistant	Dina Ahmed Mohamed Abdallah El Seftawy	
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.Professio	onal 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. 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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Éxestorative Dental materials edited by RG Craig.Éxhillips' Science of Dental materials.