



Jordan University of Science and Technology
Faculty of Dentistry
Dental Surgery Department

DENT341 Dental Materials I
First Semester 2023-2024

Course Catalog
2 Credit Hours. This course is a solely theoretical course with no practical component. It is one of two dental materials courses that run over the course of the first and second semesters. The theory part of the course will be presented to students in the form of weekly 2 hour lectures that provide students of basic and advanced knowledge of dental materials composition, properties, manipulation and clinical handling. Such knowledge will be applied firstly in preclinical laboratories, and then as part of the dental services within the dental clinics. This knowledge will also be instrumental in educating patients in the home maintenance of restorations and prostheses.

Text Book	
Title	Applied Dental Materials
Author(s)	J.F. McCabe
Edition	9th Edition
Short Name	Reference 1
Other Information	

Course References

Short name	Book name	Author(s)	Edition	Other Information
Reference 2	Dental Materials, clinical applications for dental assistants and dental hygienists	C.D. Hatrick	1st Edition	

Instructor	
Name	Dr. Hanan Alzraikat
Office Location	-
Office Hours	
Email	hjsa@just.edu.jo

Class Schedule & Room
Section 1: Lecture Time: Mon : 19:00 - 20:00 Room: 1000 منصة الكرونية

Tentative List of Topics Covered		
Weeks	Topic	References
Week 1	Introduction to the course and discussion of the syllabus	From Reference 1
Week 2	Properties of dental material	chapter 2 From Reference 1
Week 3	Dental amalgam	chapter 21 From Reference 1
Week 4	Resin composite restorative materials	chapter 22 From Reference 1
Week 5	Glass ionomer cements	chapter 24, 25 From Reference 1
Week 6	Adhesives, etching, conditioning and bonding agents	chapter 23 From Reference 1
Week 7	Impression materials: Non-elastic impression materials: composition, properties, manipulation	chapter 16,17 From Reference 1
Week 8	Elastic Impression materials, composition, properties, manipulation	chapter 18,19 From Reference 1
Week 9	Gypsum products and their applications	chapter 3 From Reference 1
Week 10	Dental waxes and their clinical and laboratory applications	chapter 15 From Reference 2
Week 11	Denture base acrylic resin materials Part I	chapter 13,14,15 From Reference 1
Week 12	Denture base acrylic resin materials Part II	chapter 13,14,15 From Reference 1

Mapping of Course Outcomes to Program Outcomes	Course Outcome Weight (Out of 100%)	Assessment method

1. List the different classes of dental materials and their classification and how selection process is performed. 2. Define and explain the different properties of dental materials (physical, mechanical, chemical, optical, electrical) 3. Define, describe and discuss dental amalgam restorative material in terms of composition, properties, manipulation and clinical use. 4. Define, describe and discuss direct esthetic restorations (composites and compomers) in terms of composition, properties, manipulation and clinical use. 5. Describe and discuss glass ionomer cements in terms of composition, properties, advantages, manipulation and recent advances 6. List, define, and explain different generations of adhesive systems and the bonding procedure used for esthetic restorative materials. 7. Recognize, define and discuss various types of impression materials, their properties, manipulation, uses and different aspects. 8. List various types and applications of gypsum products and their laboratory uses and modifi	1%	
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Relationship to Program													
1. Knowledge	1. Knowledge	1. Knowledge	1. Knowledge	1. Knowledge	2. Cognitive:	2. Cognitive	2. Cognitive	2. Cognitive	2. Cognitive	2. Cognitive	2. Cognitive	3. Psychomotor/manual	3. Psychomotor/mani

Evaluation	
Assessment Tool	Weight
Midterm	50%
Final	50%

Date Printed: 2023-10-29