



Jordan University of Science and Technology
Faculty of Applied Medical Sciences
Allied Dental Sciences Department

ADS222 Dental Materials - JNQF Level: 7

Second Semester 2023-2024

Course Catalog

2 Credit Hours. This course is designed to the undergraduate students at the 2nd year and it is a two Credit hour theoretical course. This course will provide introduction, knowledge and understanding of the dental materials with emphasis on those restorative and impression materials and techniques commonly used in dental practice which may require use by the dental assistant and dental hygienist. This course is also linked with a practical course (ADS 224) which enables the students to see and examine the different dental materials used in dental practice. An overview of current trends in dental materials is presented.

Teaching Method: Blended

Text Book

Title	Clinical Aspects of Dental Materials
Author(s)	Bagby M. & Gladwin M.,
Edition	5th Edition
Short Name	Dental Materials
Other Information	

Instructor

Name	Mrs. Zain Malkawi
Office Location	Faculty of Applied Medical Sciences/Second Floor
Office Hours	Sun : 09:00 - 11:00 Mon : 08:30 - 10:30 Wed : 12:15 - 14:15 Thu : 10:30 - 11:00
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Class Schedule & Room

Section 1:

Lecture Time: Sun : 11:30 - 12:30

Room: N1302

Tentative List of Topics Covered

Weeks	Topic	References
Week 1	Course Orientation	
Week 2	Introduction : (History, Types of materials, Specifications, Evaluation of dental material selection of dental materials)	
Week 3	Properties of Materials (physical, mechanical, thermal, electrical, light properties biological)	
Week 4	Impression Materials (Hydrocolloid systems, Rubber systems, Compound systems, Others).	
Week 5	Gypsum (Impression plaster, Dental plaster, Dental stone, Special die stone) ? Waxes (Sources of dental waxes and their properties, Clinical and laboratory waxes, Handling characteristics of waxes)	
Week 6	Metal alloys Investment + Ceramics Amalgam: (Finishing and Polishing)	
Week 7	Holiday.Happy Eid (^_^)	
Week 8	Prepare for MidTerm Exam Study Well revision class!!	
Week 9	Mid Term Exam (Lectures from week 2 to week 6): 5 Lectures	
Week 10	Dental Implants and Adhesive Materials	
Week 11	Removable prostheses and Acrylic Resins and Polymers (Denture base materials)	
Week 12	Composites Bonding agent, and pit and fissure sealants	
Week 13	Glass ionomer, Bases , liners and Cements , Polishing Materials and Abrasives and Tooth bleaching	
Week 14	Speciality Materials and Oral Appliances	
Week 15	Prepare and Study for Final Exam, Revision catch up Class.	
Week 16	Final Exam	

Mapping of Course Outcomes to Program Outcomes and NQF Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Describe the physical, electrical, and biological characteristics of dental materials [5PLO 9] [5L7K1]	5%	
Identify the physical properties of dental materials [2PLO 3, 2PLO 5, 2PLO 8, 1PLO 9] [2L7K1, 3L7S1, 2L7C1]	7%	
Know of composition of dental amalgam, finishing and polishing [2PLO 3, 2PLO 5, 2PLO 8, 2PLO 9] [2L7K1, 2L7S1, 2L7S2, 2L7C1]	8%	
Differentiate between different types and uses of dental implants, indications and contraindications for dental implants, and maintenance of dental implants. [1PLO 3, 2PLO 5, 1PLO 8, 1PLO 9] [2L7S3, 2L7C2, 1L7C3]	5%	
Determine factors that determine success of sealants. [1PLO 3, 2PLO 5, 1PLO 8, 1PLO 9] [2L7K1, 2L7S1, 1L7S3]	5%	
To be able to differentiate between different polishing agents and their specific indications [1PLO 3, 1PLO 5, 1PLO 8, 2PLO 9] [2L7S3, 2L7C3, 1L7C4]	5%	
Identify the different oral appliances used in the dental profession [1PLO 3, 1PLO 5, 2PLO 8, 1PLO 9] [2L7S2, 3L7S3]	5%	
Utilize safety procedures as it relates to each product introduced [2PLO 2, 1PLO 4, 2PLO 5] [2L7S1, 1L7S3, 2L7C2]	5%	
Differentiate between the elastomeric impression materials and inelastic impression materials [2PLO 2, 1PLO 4, 2PLO 5] [1L7S1, 2L7S3, 2L7C3]	5%	
Be familiar with the different types of metal alloys used in the dental practice [1PLO 2, 2PLO 4, 2PLO 5] [2L7K1, 1L7S3, 2L7C1]	5%	
List the use of acrylic resins in dentistry [2PLO 2, 1PLO 4, 2PLO 5] [1L7S1, 2L7S3, 2L7C2]	5%	
Determine the indications and selection of various restorative materials such amalgam, ceramics and composite materials. [2PLO 2, 1PLO 4, 2PLO 5] [2L7S1, 1L7C1, 1L7C3]	5%	
To be able to sequence polishing agents by abrasively and assign to use [2PLO 2, 2PLO 4, 1PLO 5] [1L7K1, 2L7S2, 2L7C1]	5%	
Recognize the various formulations of gypsum products [1PLO 1, 1PLO 6, 2PLO 7, 1PLO 10] [2L7S2, 2L7S3, 1L7C2]	5%	
Be familiar with the investing and casting procedures and the different materials used in these processes [2PLO 1, 1PLO 6, 1PLO 7, 1PLO 10] [2L7S2, 1L7S3, 2L7C1]	5%	
Identify different dental waxes used in dental practice. [1PLO 1, 1PLO 6, 2PLO 7, 1PLO 10] [1L7S1, 2L7S2, 2L7C1]	5%	
Differentiate between the different types of dental cements, the indications and contraindications to use each one of them [1PLO 1, 2PLO 6, 1PLO 7, 1PLO 10] [2L7K1, 3L7S2]	5%	

Be familiar with chemical agents used in tooth bleaching [2PLO 1, 1PLO 6, 1PLO 7, 1PLO 10] [2L7S2, 3L7S3]	5%	
Discuss different specialty materials used in dentistry [1PLO 1, 1PLO 6, 2PLO 7, 1PLO 10] [3L7K1, 2L7S1]	5%	

Relationship to Program Student Outcomes (Out of 100%)									
PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10
8	11	8	8	21	7	9	9	13	6

Relationship to NQF Outcomes (Out of 100%)							
L7K1	L7S1	L7S2	L7S3	L7C1	L7C2	L7C3	L7C4
19	16.5	17	20	13.25	7	6.25	1

Policy	
Statement on Professionalism	Professional behavior is expected of students at all times. Attitude and professional behavior are a minimum criterion for passing this class. Examples of unprofessional behavior include but are not limited to: missing classes, tardiness, lack of attention for a speaker, talking to others during lecture, leaving a lecture prior to its completion without prior authorization of the instructor, working on other class material during class, and sleeping during class.
Cheating	University regulations will be applied on cases of cheating and/or plagiarism
Cell phone:	The use of cellular phone is prohibited in class rooms and during exams. The cellular phone must be switched off in class rooms and during exams.
Attendance	No points will be count for points attendance of this class, however attending the lectures will greatly enhance your grade. The student is responsible for any information discussed in lecture sessions. It is imperative to attend all classes!
Absences:	University regulations will be applied. Students are not allowed to be absent for more than 20% of lectures for any reason or excuse. If a student exceeds the absence limit, he or she will not be allowed to sit for future course exams. (Please review university regulation for more details)
Make-Up-Exam	Make-up exams is entitled for students who miss the exam with accepted legal or medical excuse endorsed by the instructor within 24 hours after the scheduled exam (Please review university regulation for more details)
FeedBack	Concerns, complaints, questions, and/or feedback are appreciated and will be important for the instructor. You can contact your instructor using the e-mail or during office hours

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