



Jordan University of Science and Technology
Faculty of Applied Medical Sciences
Department of Applied Dental Sciences
Course syllabus
Second Semester 2016-2017

Course Information	
Course Title:	Dental Materials
Course Code:	ADS 222
Course Credit:	2 Cr Hour Theoretical
Prerequisite Or Co-requisite:	Prerequisite: ADS 102
Lecture Time:	Thursday 11:15 am -1:15 pm
Course Coordinator:	Ms. Zain Malkawi, MSDH
Office phone:	02/7201000 Ext. 26878
Office location:	Applied Medical Sciences Building- Second floor
Office hours:	TBA
Email:	malkawiz@just.edu.jo
Course Description:	
<p>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.</p>	
Required Texts:	
1. Gladwin. M. A., Bagby, M. D. Clinical Aspects of Dental Materials. (2009). Philadelphia: Lippincott Williams & Wilkins.	
2. McCabe J. and Walls A. Applied Dental Materials 9 th edition. Blackwell Publishers	
3. Instructor Handouts	
Reference Texts:	
1. Van Noort R. (2002). Introduction to Dental Materials, second edition Publisher Mosby.	
2. Anusavice, K.J. Science of Dental Materials. (1996). 10 th edition. Philadelphia: W.B Saunders Co.	
3. Finkbeiner, B.L., & Johnson, C.S. (1995) 1 st edition. Comprehensive Dental Assisting. St. Louis: CV Mosby publishers.	
4. Phillips R.W., & Moore B.K. (1994). 5 th edition. Elements of dental materials for dental hygienists and dental assistants. Philadelphia: W.B. Saunders Co.	



Teaching & Learning Methods

There will be one lecture for two hours each week which will include Discussion , Assigned reading , Assigned writing, and Handouts.

<u>Methods of Evaluation:</u>	<u>Percentage</u>
1 st Exam	30%
2 nd Exam	30%
Final Exam	40%

General Course Objectives: Upon the completion of this course, students will be able to:

1. Describe the physical, electrical, and biological characteristics of dental materials
2. Identify the physical properties of dental materials
3. Utilize safety procedures as it relates to each product introduced
4. Differentiate between the elastomeric impression materials and inelastic impression materials
5. Recognize the various formulations of gypsum products
6. Be familiar with the investing and casting procedures and the different materials used in these processes
7. Be familiar with the different types of metal alloys used in the dental practice
8. Know of composition of dental amalgam, finishing and polishing.
9. Identify different dental waxes used in dental practice.
10. Differentiate between different types and uses of dental implants, indications and contraindications for dental implants, and maintenance of dental implants.
11. List the use of acrylic resins in dentistry
12. Differentiate between the different types of dental cements, the indications and contraindications to use each one of them
13. Determine the indications and selection of various restorative materials such amalgam, ceramics and composite materials.
14. Determine factors that determine success of sealants.
15. Be familiar with chemical agents used in tooth bleaching.
16. To be able to differentiate between different polishing agents and their specific indications
17. To be able to sequence polishing agents by abrasively and assign to use.
18. Discuss different specialty materials used in dentistry
19. Identify the different oral appliances used in the dental profession.



Course Content		
Week	Topics	Chapter in Textbook (handouts)
1	Course Orientation	Planner Discussion
2	<ul style="list-style-type: none"> • Introduction : (History, Types of materials, Specifications, Evaluation of dental material selection of dental materials) 	<ul style="list-style-type: none"> • Lecture notes • Clinical Aspects of DM (Ch 1)
3	<ul style="list-style-type: none"> • Properties of Materials (physical, mechanical, thermal, electrical, light properties biological) 	<ul style="list-style-type: none"> • Clinical Aspects of DM (Ch 2 & 3) • Applied dental materials (Ch 2)
4	<ul style="list-style-type: none"> • Impression Materials (Hydrocolloid systems, Rubber systems, Compound systems, Others). 	<ul style="list-style-type: none"> • Clinical Aspects of DM (Ch 8) • Applied dental materials (Ch 16 ,17,18,19) • Applied dental materials (Ch.4)
5	<ul style="list-style-type: none"> • 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) 	<ul style="list-style-type: none"> • Clinical Aspects of DM (Ch 9) • Applied dental materials (Ch 3) • Applied dental materials (Ch 16 ,17,18,19) • Applied dental materials (Ch.4)
6	First exam	Study Well.....!!
7	<ul style="list-style-type: none"> • Metal alloys • Investment + Ceramics • Amalgam: (Finishing and Polishing) 	<ul style="list-style-type: none"> • Applied dental materials (Ch 5) • Applied dental materials (Ch 6,7,8) • Introduction to Dental Materials Van Noort chapter 3.4 pages 231-236) Applied dental materials (Ch 21) • Clinical Aspects of DM (Ch 10) • Clinical Aspects of DM (Ch 6 & 23)
8	<ul style="list-style-type: none"> • Dental Implants • Adhesive Materials 	<ul style="list-style-type: none"> • Clinical Aspects of DM (Ch 4& 15)
10	<ul style="list-style-type: none"> • Removable prostheses and Acrylic Resins • Polymers (Denture base materials) 	<ul style="list-style-type: none"> • Clinical Aspects of DM (Ch 11) • Applied dental materials (Ch 13,14)



11	Second Exam	Study Well...!!
12	<ul style="list-style-type: none"> Composites Bonding agent, pit and fissure sealants 	<ul style="list-style-type: none"> Introduction to Dental Materials Van Noort chapter 2.2 Applied Dental Materials (Ch 25 pages 225-229) Clinical Aspects of DM (Ch 5 & 22)
13	<ul style="list-style-type: none"> Glass ionomer, Bases , liners and Cements Polishing Materials and Abrasives Tooth bleaching 	<ul style="list-style-type: none"> Introduction to Dental Materials Van Noort chapter 2.4 , 2.3 Clinical Aspects of DM (Ch 13, 17, 24, 29)
14	<ul style="list-style-type: none"> Speciality Materials Oral Appliances 	<ul style="list-style-type: none"> Clinical Aspects of DM (Ch 16 & 18)
15	Final Practical Exam	Study Well...!!
TBA	Final Theoretical Exam	

Course Content			
Week	Date	Title of the Lecture	Lecturer
1.	Jan.29 - Feb2nd, 2017	<ul style="list-style-type: none"> Course Planner Orientation 	Ms. Zain Malkawi
2.	Feb 5 th – 9 th , 2017	<ul style="list-style-type: none"> Introductory information to (History, Types of materials, Specifications, Evaluation of dental material selection of dental materials) 	Ms. Zain Malkawi
3.	Feb.12-16, 2017	<ul style="list-style-type: none"> Properties of Materials (physical, mechanical, thermal, electrical, light properties biological) 	Ms. Zain Malkawi
4.	Feb.19-23, 2017	<ul style="list-style-type: none"> Impression Materials (Hydrocolloid systems, Rubber systems, Compound systems, Others) 	Ms. Zain Malkawi
5.	Feb 26 – March 2 nd , 2017	<ul style="list-style-type: none"> Gypsum materials Waxes (Sources of dental waxes and their properties, Clinical and laboratory) 	Ms. Zain Malkawi



		waxes, Handling characteristics of waxes)	
6	<i>March, 5th-9th, 2017</i>	Revision Class First Exam	Study Well...!!
7	March 12-16, 2017	<ul style="list-style-type: none"> • Metal alloys • Investment + Ceramics • Amalgam: (Finishing and Polishing) 	Ms. Zain Malkawi
8	March 19-23, 2017	<ul style="list-style-type: none"> • Dental Implants • Adhesive Materials 	Ms. Zain Malkawi
9	March 26-30, 2017	<ul style="list-style-type: none"> • Removable prostheses and Acrylic Resins • Polymers (Denture base materials) 	Ms. Zain Malkawi
10	<i>April 2nd – 6th, 2017</i>	Revision Class Second Exam	Study Well...!!
11	April 9 -13, 2017	<ul style="list-style-type: none"> • Composites • Bonding agent • Pit and fissure Sealants 	Ms. Zain Malkawi
12	April 16-20, 2017	<ul style="list-style-type: none"> • Glass ionomer, Bases, liners and Cements • Polishing Materials and Abrasives • Tooth bleaching 	Ms. Zain Malkawi
14	April 23-27, 2017	<ul style="list-style-type: none"> • Specialty Materials • Oral Appliances 	Ms. Zain Malkawi
16	TBA	Final Theoretical Exam	Study Well...!!



Additional Notes

Exams	Students are required to sit for the 3 semester examinations (1st, 2nd, and final) in addition to the final practical exam
Cheating	Cheating during exam will result in dismissal from the exam hall and the student will be penalized according to JUST regulations
Attendance	<p>- The students are expected to attend 90% of the practical sessions in order to pass the course.</p> <p>JUST requires the faculty member to assign ZERO grade (35%) if a student misses 20% of the classes without an excuse.</p> <ul style="list-style-type: none">• Any student who is absent on a test day, will have to demonstrate an acceptable medical or social statement explaining the illness or personal crisis as instructed by their faculty• No make-up exams or quizzes will be given for unexcused absences• Individual instructors may accommodate by arrangements for a make-up test only when a written request is sent to and approved by the Dean.
Feedback:	<p>Concerns or complaints should be expressed in the first instance to the course instructor. If no resolution is forthcoming, then the issue should be brought to the attention of the Department Chair and if still unresolved to the Dean. Questions about the material covered in the lecture, notes on the content of the course, its teaching and assessment methods can be also sent by e-mail to the following address:</p> <p>malkawiz@just.edu.jo</p>