



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

<b>Course Information</b>	
<b>Course Title:</b>	<b>Dental Materials Practical</b>
<b>Course Code:</b>	<b>ADS 224</b>
<b>Course Credit:</b>	<b>1Cr Hour Practical</b>
<b>Co-requisite:</b>	<b>ADS 222</b>
<b>Course Coordinator:</b>	<b>Ms. Zain Malkawi, <i>MSDH</i></b>
<b>Office phone:</b>	<b>02/7201000 Ext. 26878</b>
<b>Office location:</b>	<b>Applied Medical Sciences Building- Second floor</b>
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<b>Course Description:</b>	
<p>This course is designed to the undergraduate students at the 2nd year and it is a one credit hour practical course which enables the second year students to be introduced, to examine and be able to differentiate between the different types of dental materials used in dental practice. This course is also linked to a theoretical course (ADS 222) which provides introduction, knowledge and understanding of the dental materials commonly used in dental practice which may require use by the dental assistant and dental hygienist.</p>	
<b>Required Texts:</b>	
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 <sup>th</sup> edition. Blackwell Publishers	
3. Instructor Handouts	
<b>Reference Texts:</b>	
1. Van Noort R. (2002). Introduction to Dental Materials, second edition Publisher Mosby.	
2. Anusavice, K.J. Science of dental materials. (1996). 10 <sup>th</sup> edition. Philadelphia: W.B Saunders Co.	
3. Finkbeiner, B.L., & Johnson, C.S. (1995) 1 <sup>st</sup> edition. Comprehensive Dental Assisting. St. Louis: CV Mosby publishers.	
4. Phillips R.W., & Moore B.K. (1994). 5 <sup>th</sup> edition. Elements of dental materials for dental hygienists and dental assistants. Philadelphia: W.B. Saunders Co.	



## Teaching & Learning Methods

There will be one lab session for 3 hours every week during which a demonstration will be given for 30 minutes.

Students will be able to see and identify different dental materials during lab sessions

<b>Methods of Evaluation:</b>	<b>Percentage</b>
Quizzes and Continuous Assessment Midterm exam	30 % 30%
Final Practical exam	40%

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

1. Utilize safety procedures needed in the use of different dental materials
2. Differentiate between the elastomeric impression materials and inelastic impression materials
3. Recognize the various formulations of gypsum products
4. Be familiar with the different types of metal alloys used in the dental practice
5. Differentiate between the different types of dental cements, the indications and contraindications to use each one of them
6. Identify different dental waxes used in dental practice.
7. Determine the indications and selection of various restorative materials such as amalgam, ceramics and composite materials.
8. To be able to differentiate between different polishing agents and their specific indications in dental use.
9. Differentiate main components and uses of acrylic resin, glass ionomers, sealants and chemical agents for tooth bleaching.
10. Recognize different types of oral appliances and specialty dental materials that used in dentistry



## Course content

Week	Lab. Subject	Areas of interest
1. Jan. 31, 2017	<ul style="list-style-type: none"> <li>▪ Introductory Lab</li> <li>▪ Laboratory safety</li> <li>▪ Laboratory requirements</li> </ul>	-
2. Feb. 7 <sup>th</sup> , 2017	<ul style="list-style-type: none"> <li>▪ Impression Materials ...<i>Part I</i></li> </ul>	<ul style="list-style-type: none"> <li>▪ To identify different types of impression material, their properties, uses and the correct method of mixing them:               <ul style="list-style-type: none"> <li>○ Hydrocolloid systems</li> <li>○ Rubber systems</li> <li>○ Compound systems</li> </ul> </li> </ul>
3. Feb. 14, 2017	<ul style="list-style-type: none"> <li>▪ Impression Materials...<i>Part II</i></li> <li>▪</li> </ul>	<ul style="list-style-type: none"> <li>▪ To identify different types of impression material, their properties, uses and the correct method of mixing them:               <ul style="list-style-type: none"> <li>○ Hydrocolloid systems</li> <li>○ Rubber systems</li> <li>○ Compound systems</li> </ul> </li> </ul>
4. Feb. 21 , 2017	<ul style="list-style-type: none"> <li>▪ <b>Quiz #1(10%)</b></li> <li>▪ Waxes</li> </ul>	<ul style="list-style-type: none"> <li>▪ To identify waxes used in dental laboratories and clinics and their properties.</li> </ul>
5. Feb. 28 , 2017	<ul style="list-style-type: none"> <li>▪ Gypsum</li> </ul>	<ul style="list-style-type: none"> <li>▪ To identify different gypsum materials, their properties and how to mix them:               <ul style="list-style-type: none"> <li>○ Plaster</li> <li>○ Stone</li> <li>○ Die stone</li> <li>○ Investment material</li> </ul> </li> </ul>
6. Mar, 7 <sup>th</sup> , 2017	<ul style="list-style-type: none"> <li>▪ <b>Quiz #2(10%)</b></li> <li>▪ Metal alloys</li> </ul>	<ul style="list-style-type: none"> <li>▪ To identify different types of alloys like precious metal alloys and base metal alloys.</li> <li>▪</li> </ul>
7. Mar, 14 , 2017	<ul style="list-style-type: none"> <li>• Ceramics</li> </ul>	<ul style="list-style-type: none"> <li>▪ To be familiar with the porcelain and its composition.</li> </ul>
8. Mar, 21, 2017	<ul style="list-style-type: none"> <li>▪ <b>Quiz #3 (10%)</b></li> <li>▪ Amalgam</li> </ul>	<ul style="list-style-type: none"> <li>▪ To be familiar with the composition, different techniques uses in mixing amalgam, and to be familiar with amalgam capsules and the amalgamator.</li> </ul>



9. Mar, 28, 2017	<ul style="list-style-type: none"> <li>▪ Polymers</li> </ul>	<ul style="list-style-type: none"> <li>▪ To identify dental acrylic materials compositions and their properties used as:               <ul style="list-style-type: none"> <li>▪ Denture base material</li> <li>▪ Denture teeth</li> </ul> </li> </ul> <p>**Identify dental adhesives that used in dental profession</p>
<b>10. Apr. 4<sup>th</sup>, 2017</b>	<b>Mid Term Exam</b>	○ <b>Study Well..!!</b>
11. Apr. 11 , 2017	<ul style="list-style-type: none"> <li>▪ Composites</li> <li>▪ Bonding agent, pit and fissure sealant</li> </ul>	<ul style="list-style-type: none"> <li>○ To identify composites and their properties and uses, identify the different types of composites (self cure or light cure).</li> <li>○ To identify the role of bonding agents and pit and fissure sealants and their composition.</li> <li>○</li> </ul>
12. Apr. 18 , 2017	<ul style="list-style-type: none"> <li>▪ Cements</li> <li>▪ Glass Inomer</li> </ul>	<ul style="list-style-type: none"> <li>• To be able to differentiate between the different types of cements, their properties, indications and contraindications to use each one of them.</li> </ul>
13. Apr. 25 , 2017	<ul style="list-style-type: none"> <li>▪ <b>Quiz #4 (10%)</b></li> <li>▪ Adhesives</li> </ul>	<ul style="list-style-type: none"> <li>○ To be able to identify and differentiate between the different types of glass Ionomer and their use in dentistry.</li> </ul>
14. Apr. 25 , 2017	<ul style="list-style-type: none"> <li>▪ Polishing materials and Abrasives</li> </ul>	<ul style="list-style-type: none"> <li>○ To be familiar with the different types of abrasives and polishing materials used in dental practice along with their composition and specific uses.</li> </ul>
<b>15. May 2<sup>nd</sup>, 2017</b>	<b>Final Practical Exam</b>	<b>Study Well...!!</b>



### Additional Notes

<b>Exams</b>	Students are required to sit for the 3 semester examinations (1st, 2nd, and final) in addition to the final practical exam
<b>Cheating</b>	Cheating during exam will result in dismissal from the exam hall and the student will be penalized according to JUST regulations
<b>Attendance</b>	<p>- The students are expected to attend 90% of the practical sessions in order to pass the course. 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"><li>• 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</li><li>• No make-up exams or quizzes will be given for unexcused absences</li><li>• Individual instructors may accommodate by arrangements for a make-up test only when a written request is sent to and approved by the Dean.</li></ul>
<b>Feedback:</b>	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: <a href="mailto:malkawiz@just.edu.jo">malkawiz@just.edu.jo</a>