

1	Course title	Biomaterials
2	Course number	1302717
3	Credit hours (theory, practical)	2 hrs (theory)
	Contact hours (theory, practical)	2 hrs (theory)/ week
4	Prerequisites/corequisites	N/A
5	Program title	MSc in Fixed & Removable Prosthodontics
6	Program code	
7	Awarding institution	The University of Jordan
8	School	Faculty of Dentistry
9	Department	Department of Conservative Dentistry & Department of Removable Prosthodontics
10	Level of course	Masters
11	Year of study and semester (s)	First year, First semester
12	Final Qualification	MSc
13	Other department (s) involved in teaching the course	Department of Conservative Dentistry & Department of Removable Prosthodontics
14	Language of Instruction	English
15	Date of production/revision	August 2018

16. Course Coordinator:

Office numbers, office hours, phone numbers, and email addresses should be listed.

Coordinator: Prof. Wala Amin

Office Hours: Sunday 12-2

Phone Number: 06 5355000 Ext 23552

Email: wami@ju.edu.jo

17. Other instructors:

Office numbers, office hours, phone numbers, and email addresses should be listed.

Prof Kifah Jamani, office hours: Tue.10-12, Ext 23552, E-mail: kifah@ju.edu.jo

Prof Fouad Kathem, office hours: Sun.11-12, Tue: 12-1, Ext 23552, E-mail: fouadk@ju.edu.jo

Prof Ameen Khraisat, office hours: Sun. 9-11 phone: 23552, E-mail: a.khraisat@ju.edu.jo

Dr.Nadia Eriefij, office hours: Sun. 12-2.,phone: 23552, E-mail: nadia_ereifej116@hotmail.com

18. Course Description:

This course aims to improve knowledge in new materials used in clinical dentistry, their manipulation and uses in fixed and removable prosthodontic fields, maxillofacial prostheses and dental implants. In addition to the laboratory studies on physical and chemical properties for these materials their biocompatibility and effects on biological systems.

19. Course aims and outcomes:

A. Aims:
The objective of this course is to enable the students to recognize the properties of a variety of biomaterials and the clinical applications of those materials
B. Intended Learning Outcomes (ILOs): Upon successful completion of this course students will be able to ...
1) Recognize different aspects of conventional as well as recently developed biomaterials that are used in daily dental practice
2) Present data on different aspects of biomaterials through seminars sessions
3) Participate in interactive discussions on different aspects of biomaterials and their clinical significance
4) Analyze the behaviour of different biomaterials and its effect on selection of certain materials for specific clinical applications
5) Recognize physical, mechanical, and biological properties of materials utilized in fixed and removable prostheses fabrication procedures
6) Recognize different types of dental casting alloys, their properties, and clinical significance
7) Recognize the innovations in bonding mechanisms and composites
8) Recognize recent developments in impression materials and the clinical significance of the fit of definitive prostheses
9) Interpret recent research on advancements in dental ceramics
10) Interpret recent research on advancements in dental cements
11) Recognize different types of grafting materials
12) Recognize materials used in fabrication of maxillofacial prostheses

20. Topic Outline and Schedule:

Topic	Week	Instructor	Achieved ILOs	Evaluation Methods	Reference
The clinical significance and implications of the physical and mechanical properties of materials pertinent to removable prosthodontics	1	Prof. Wala Amin	1-5	22	All
The clinical significance and implications of the physical and mechanical properties of materials pertinent to fixed prosthodontics	2	Prof. Wala Amin	1-5	22	All
The clinical and technical handling of the metallic and polymeric base materials used in removable and fixed prosthodontics	3	Prof. Wala Amin	1-5	22	All
Resilient liners and tissue conditioners	4	Prof. Wala Amin	1-5	22	All
Polymer innovations	5	Prof. Khraisat	1-5	22	All
Metal technology and alloys	6	Prof. Wala Amin	1-6	22	All
Bonding strategies	7	Prof. Al Shammari	1-5, 7	22	All
Nanotechnology and Nanocomposite	8	Prof. Khraisat	1-5, 7	22	All
New development in rubber impression materials and Techniques	9	Prof. Al Shammari	1-5, 8	22	All
Dental ceramics	10	Dr. Eirfeg	1-4, 9	22	All
Dental cements “luting agents”	11	Prof. Al Shammari	1-4, 10	22	All
Graft biomaterials for alveolar ridge enhancement	12	Prof. Khraisat	1-4, 11	22	All
Graft biomaterials for soft tissue replacement	13	Prof. Khraisat	1-4, 11	22	
Maxillofacial Prosthetic Biomaterials	14	Prof. Jamani	1-4, 12	22	

21. Teaching Methods and Assignments:

Development of ILOs is promoted through the following teaching and learning methods:

Seminar Sessions

Seminars will be lead by the faculty members listed in the course outline.

Every week a seminar of 2 hours is given to the students corresponding the designated topic.

Faculty members will distribute a number of "Key Scientific Articles" at least one week before the scheduled date of the seminar.

Each student will be responsible for reading and understanding all articles.

The seminar consists of a brief introduction of the subject (instructor), followed by a discussion of the most recent literature review.

Each student will be responsible for presenting one or two of the key articles during the seminar (10 – 15 min) and provide a typed and printed handout to everyone attending the seminar.

The seminar ends with an interactive discussion and exchange of ideas between students and staff members.

22. Evaluation Methods and Course Requirements:

Opportunities to demonstrate achievement of the ILOs are provided through the following assessment methods and requirements:

Student overall grade will be comprised of:

- 30% midterm written exam
- 15% seminar evaluation
- 15% Literature review
- 40% final written exam

23. Course Policies:

A- Attendance policies:

Seminar and clinic attendance is mandatory. However, 15% allowed absence is granted for students by the university law.

B- Absences from exams and handing in assignments on time:

A make up exam is allowed in cases where the students misses the exam due to an acceptable excuse, and the excuse is submitted in due time according tp the university regulations.

C- Health and safety procedures:

All patients must be approved by the faculty of the graduate program.

All postgraduates MUST abide by cross infection control measures and regulations.

D- Honesty policy regarding cheating, plagiarism, misbehavior:
 We follow the rules and regulations set by the University of Jordan.

E- Grading policy:

F- Available university services that support achievement in the course:
 Students can utilize the university main library, medical library or the electronic library (ezlibrary) for references. In addition, they can access staff websites for additional information related to the course.

24. Required equipment: (Facilities, Tools, Labs, Training....)

Seminar room and a projector with white smart board

25. References:

Required book (s), assigned reading and audio-visuals:
 Phillips' science of dental materials. Anusavice, Kenneth J. Elsevier/Saunders, c2013.

Recommended books, materials, and media:

- Clinical aspects of dental materials : theory, practice, and cases. Stewart, Marcia. 2013
- Dental materials : properties and manipulation. Powers, John M. Mosby/Elsevier, c2008

26. Additional information:

Name of Course Coordinator: -----Signature: ----- Date: -----

Head of curriculum committee/Department: ----- Signature: -----

Head of Department: ----- Signature: -----

Head of curriculum committee/Faculty: ----- Signature: -----

Dean: ----- -Signature: -----