

1	Course title	Occlusion
2	Course number	1302721
3	<b>Credit hours (theory, practical)</b>	2 hrs (theory)
	<b>Contact hours (theory, practical)</b>	2 hrs (theory)/ week
4	Prerequisites/co requisites	
5	Program title	MSc in Fixed & Removable Prosthodontics
6	Program code	
7	Awarding institution	The University of Jordan
8	Faculty	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)	Third year, 1 <sup>st</sup> 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:

**Course Coordinator: Dr. Sandra AlTarawneh**

**office hours, Monday 12-2**

**phone numbers 065355000, Ext: 23552**

**email address: s\_altarawneh@ju.edu.jo**

#### 17. Other instructors:

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

**Dr Susan Hattar**, office hours: Mon.12-2, Ext 23552, Email: [s.hattar@ju.edu.jo](mailto:s.hattar@ju.edu.jo)

**Prof Fouad Kathem**, office hours: Sun.11-12, Tue: 12-1, Ext 23552, E-mail: [fouadk@ju.edu.jo](mailto:fouadk@ju.edu.jo)

**Prof Ameen Khraisat**, E-mail: [a.khraisat@ju.edu.jo](mailto:a.khraisat@ju.edu.jo)

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Dr. Abeer Alhadidi [a\\_7adidi@yahoo.com](mailto:a_7adidi@yahoo.com)

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**Prof Zaid Baqain** Email: [zbaqain@ju.edu.jo](mailto:zbaqain@ju.edu.jo)

**Dr.Ryalat** [sryalat@yahoo.com](mailto:sryalat@yahoo.com)

## 18. Course Description:

*As stated in the approved study plan.*

This course describe the normal occlusion for permanent dentition ,congenital anomalies ,and evaluation of normal occlusion .In addition to theories of reconstruction of occlusion , types of articulators , reconstruction of occlusion using provisional restoration clinically as a temporary solution till the final reconstruction is made by permanent fixed prostheses. It also deals with problems of malocclusion and their relation with TMJ, especially with mobile teeth, fillings, crowns, periodontal problems.

## 19. Course aims and outcomes:

### Aims:

To become familiar with basic and advanced occlusal concept for treatment of simple and advanced cases  
To provide the students with knowledge and understanding of the fundamentals & general concepts of occlusion and masticatory system and to introduce the students to concepts and different modalities of treatment of both Masticatory Muscle and Temporo-mandibular Disorders.

### B- Intended Learning Outcomes (ILOs):

- 1) Gain in depth knowledge of tooth wear problems and methods of management.
- 2) Acquire full understanding of biomechanics of stomatognathic system, including mandibular movements and determinants of occlusion.
- 3) Integrate the concepts of occlusion and different schools of thoughts when applying the holistic approach of full arch rehabilitation
- 4) Familiarize the students with different articulators and methods of occlusal relationship registration, facebow transfer and programming the articulators.
- 5) Diagnose and manage occlusal related problems, such as parafunction/bruxism and recognize its impact on the stomato-gnathic system.
- 6) Recognize and diagnose TMDs. Apply in depth knowledge of principles of management and discuss different therapy modalities.
- 7) Identify disorders of the stomatognathic system, whether related to muscles of mastication or temporomandibular joint. Be able to suggest different treatments for each clinical scenario.
- 8) Develop a back-ground knowledge and understanding of the basic principles and theories of occlusion.
- 9) Apply the knowledge of a 'harmonious healthy occlusion' in the understanding of the importance of anterior guidance, and criteria for establishing such guidance.
- 10) Fabricate different splints used to treat occlusal disorders. Knowing the indications for each type and the methods of construction
- 11) Proficiency in diagnosis and treatment of oro-facial pain, whether related to muscles or TMJ.
- 12) Co-ordinating and designing occlusal schemes of clinical cases, based on thorough understanding of main principles of occlusion.

**20. Topic Outline and Schedule:**

Seminar No.	Topic	Supervisor	Achieved ILOs	Evaluation Method	Reference
1	Functional Anatomy and Biomechanics of the masticatory System. <ul style="list-style-type: none"> <li>Criteria for optimum functional occlusion</li> <li>Importance of occlusion in dental practice</li> <li>What is the articulatory system</li> <li>Interconnections of the articulatory system</li> <li>Interconnections of the masticatory system</li> <li>What is ideal occlusion</li> </ul>	Dr. Tarawneh	2	22	25
2	Functions of the masticatory system. Mechanics of Mandibular movement <ul style="list-style-type: none"> <li>Muscle structure and function</li> <li>Reflex activity</li> <li>Mandibular movements</li> <li>Articular disc movements</li> <li>Empty-mouth-movements</li> <li>Stressed movements</li> </ul>	Dr. Tarawneh	2	22	25
3	Occlusal Concepts <ul style="list-style-type: none"> <li>Concepts of the norm</li> <li>Structural harmony</li> <li>Functional harmony</li> <li>Significance of centric occlusion</li> <li>Concept of lingualized occlusion</li> </ul>	Dr. Hattar	3,8	22	25
4	Principles of Programming Articulators. Occlusal Registration <ul style="list-style-type: none"> <li>Static occlusion</li> <li>Centric occlusion</li> <li>Centric relation</li> <li>Dynamic occlusion</li> <li>Group function</li> <li>Ideal occlusion</li> </ul>	Dr. Tarawneh	4	22	25
5	History, Examination, and Differential Diagnosis of TMD <ul style="list-style-type: none"> <li>Patient history</li> <li>Physical evaluation</li> <li>Behavioral or psychological assessment</li> <li>Radiographic examination</li> </ul>	Dr. Alhadidi	1,5,6,7	22	25
6	Signs and symptoms of Temporomandibular Disorders <ul style="list-style-type: none"> <li>Classifications</li> <li>Masticatory symptom</li> <li>Masticatory pain symptoms</li> <li>Criteria for identifying masticatory myalgia</li> </ul>	Prof. AlAhmad	1, 5, 6, 7	22	25

	<ul style="list-style-type: none"> <li>Criteria for identifying masticatory arthralgia</li> <li>Masticatory dysfunction symptoms</li> </ul>				
7	<p>Etiology of functional disturbances in the masticatory system</p> <ul style="list-style-type: none"> <li>General principles of etiology</li> <li>Role of emotional tension</li> <li>Role of Occlusal disharmony</li> <li>Role of posture</li> </ul>	Dr. Hattar	1,5,6,7	22	25
8	<p>Management of TMD (1) Treatment of Masticatory muscle Disorders. (2) Treatment of Temporomandibular joint Disorders.</p> <ul style="list-style-type: none"> <li>Masticatory muscle splinting</li> <li>Masticatory muscle spasm</li> <li>Masticatory muscle inflammation</li> <li>Disc-interference disorders</li> <li>Disc-condyle complex damage</li> </ul>	Dr. Ryalat	1,5,6,7	22	25
9	Occlusal Appliance Therapy.	Dr. Hattar	10	22	25
10	Anterior Guidance	Dr. Hattar	9	22	25
11	<p>General considerations in the treatment of TMD</p> <ul style="list-style-type: none"> <li>Palliative therapy (medical therapy)</li> <li>Natural resolution</li> <li>Cause-related therapy</li> <li>Surgical treatment therapy</li> </ul>	Prof. Baqain	1.5.6.7	22	25
12	<p>Complete Occlusal Rehabilitation</p> <ul style="list-style-type: none"> <li>School of thoughts in occlusion <ul style="list-style-type: none"> <li>-Gnathological concept.</li> <li>-Pankey-Muller Concept.</li> <li>-Patient driven concept.</li> </ul> </li> </ul>	Dr. Tarawneh	3, 8, 9	22	25
13	<p>Parafunctional Habits. Management of Occlusal Wear Problems</p> <ul style="list-style-type: none"> <li>Bruxism</li> <li>Clenching</li> <li>Tissue loss caused by abrasion</li> <li>Tissue loss caused by erosion</li> <li>Abnormal eating habits (Bulimia)</li> <li>Other parafunctions causing tooth surface loss and leading to Occlusal problems</li> </ul>	Prof. Khraisat	1, 5	22	25
14	<p>Restorative Consideration in Occlusal Therapy</p> <p>Planning the restorations for</p> <ul style="list-style-type: none"> <li>- provision of a harmonious Occlusal scheme</li> <li>- Restoration of normal function</li> <li>- Maintenance of stable terminal</li> </ul>	Prof. Khraisat	3, 9, 12	22	25

	relations - Avoidance of any Occlusal discrepancy that may introduce an additional load on the neuromuscular and supporting structures.				
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## 21. Teaching Methods and Assignments:

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

- **Seminar Sessions**

Seminars will be led 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:

### **Evaluation:**

- **Evaluation:**

*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 to the university regulations.

### **C- Health and safety procedures:**

### **D- Honesty policy regarding cheating, plagiarism, misbehavior:**

We follow the rules and regulations set by the University of Jordan.

### **E- Grading policy:**

*Student overall grade will be comprised of:*

**F- Available university services that support achievement in the course:**

**24. Required equipment:**

Students are required to have:

- 1) Laptop**

**25. References:**

**A. Required book (s), assigned reading and audio-visuals:**

- a) **Okeson D, Jeffrey P** « *The Management of Temporomandibular Disorders and Occlusion* » 5th Edition, Mosby 2003.  
 b) **Dawson Peter E** « *Evaluation, Diagnosis, and Treatment of Occlusal Problems* » 2<sup>nd</sup> Edition, Mosby 1989.  
 c) **Ash M, Nelson S** « *Wheeler's Dental Anatomy, Physiology and Occlusion* » 8th Edition, Elsevier 2003.

**B- Key Scientific articles and the most updated literature articles are given for each seminar (The topics covered in the seminars constitutes the main exam material)**

**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: -----

Copy to:

Head of Department  
 Assistant Dean for Quality Assurance  
 Course File