

1	Course title	Dental Anatomy Practical
2	Course number	1302104
3	Credit hours (theory, practical)	(0 theory, 1 practical)
	Contact hours (theory, practical)	(0 theory, 32 practical (2hr/week))
4	Prerequisites/corequisites	Prerequisites: none/co-requisites: Dental Anatomy Theory
5	Program title	Doctor of Dental Surgery (DDS)
6	Program code	Not applicable
7	Awarding institution	The University of Jordan
8	Faculty	Faculty of Dentistry
9	Department	Department of Conservative Dentistry
10	Level of course	Bachelor- Undergraduate
11	Year of study and semester (s)	Year 2 semester 1 2019/2020
12	Final Qualification	DDS
13	Other department (s) involved in teaching the course	None
14	Language of Instruction	English
15	Date of production/revision	

**16. Course Coordinator:**

Dr. Firas Alsoleihat

Office hours: 9–10am (Sunday & Tuesday), 10–11am (Wednesday)

Email: [firas.alsoleihat@ju.edu.jo](mailto:firas.alsoleihat@ju.edu.jo)

Phone: +96265355000/ext. 23592

**17. Other instructors:**

None

**18. Course Description:**

This course delineates the fundamentals of functional tooth form through drawings and carvings. It clearly pinpoints the critical landmarks--particularly those of posterior teeth. Models of the eight typical tooth forms are used to demonstrate the differential anatomy of individual teeth. Detailed instructions are offered on drawing teeth to scale and on carving them in wax.

**1. 19. Course aims and outcomes:**

## A- Aims:

- Demonstration of drawings of the right maxillary and mandibular permanent teeth from the mesial, occlusal, distal, lingual and buccal views.
- The evaluation of contours of simulated dental restorations in relation to ideal arch form.
- Thorough discussion of the evaluation of temporomandibular joint and muscle disorders including anatomical illustrations of the nerves and muscles of the head and neck region.
- Dimensions of teeth from all aspects in relation to space and arch size.
- Detailed descriptions and illustrated morphologic features of usual teeth essential for learning biologic variation of tooth morphology.
- Demonstration of radiographs and pulp chamber and canal morphology in sectioned teeth provide an excellent reference for root canal therapy.
- Histological description with slide demonstrations that covers all micro-morphological landmarks.

## B- Intended Learning Outcomes (ILOs): Upon successful completion of this course students will be able to:

**A. Knowledge and Understanding (student should)**

A1) Be able to describe and draw root and crown contours in order to properly adapt instruments required to clean these surfaces.

A2) Be able to describe and differentiate histological tooth sections.

**B. Intellectual skills - with ability to**

B1) Identify and differentiate each type of tooth

B2) Employ definitive shifts in modern dental practice

**C. Subject specific skills – with ability to**

C1) Reproduce acceptable tooth contours as required when eventually finishing and polishing, or placing restorations.

C2) Communicate with the instructors, peers, and patients using understandable terminology and sketches when appropriate.

**D. Transferable skills – with ability to**

D1) Strike the balance between self-reliance and seeking help when necessary.

D2) Display an integrated approach to the deployment of communication skills.

**20. Topic Outline and Schedule:**

Topic	Week	Instructor	Achieved ILOs	Evaluation Methods	Reference
Introduction to Tooth Drawing and Carving	1	Dr.Firas	<ul style="list-style-type: none"> <li>• Demonstration of the ability to communicate with the instructors, peers, and patients using understandable terminology and sketches when</li> </ul>	<ul style="list-style-type: none"> <li>• Quizzes</li> <li>• Weekly achieved sketches and</li> </ul>	Wheeler's Dental Anatomy, Physiology, and Occlusion; by Major M Ash &

			<p>appropriate.</p> <ul style="list-style-type: none"> <li>• Familiarity with the various dental notation/numbering systems ( Zsigmondy-Palmar, FDI, Universal, Haderup)</li> <li>• Understanding basic terminology used in dental morphology.</li> <li>• Demonstration of the basics of drawing teeth to scale and on carving them in wax.</li> <li>• Demonstration of the basics</li> </ul>	<ul style="list-style-type: none"> <li>• Final exam</li> </ul>	<p>Stanley J Nelson, 9th edition, W. B. Saunders, 2009.</p>
Drawing of the Permanent Maxillary Central Incisor	2	Dr.Firas	<ul style="list-style-type: none"> <li>• Ability to draw the permanent maxillary central incisor from its five aspects (mesial, distal, labial, lingual and incisal).</li> <li>• Identification of all morphological landmarks apparent on each aspect.</li> </ul>	<ul style="list-style-type: none"> <li>• Quizzes</li> <li>• Weekly achieved sketches</li> <li>• Final exam</li> </ul>	<p>Wheeler's Dental Anatomy, Physiology, and Occlusion; by Major M Ash &amp; Stanley J Nelson, 9th edition, W. B. Saunders, 2009.</p>
Carving of the Permanent Maxillary Central Incisor	3	Dr.Firas	<ul style="list-style-type: none"> <li>• Ability to identify all the different landmarks in a permanent maxillary central incisor.</li> <li>• Ability to identify the right from the left permanent maxillary central incisor.</li> <li>• Ability to recreate the morphology of the permanent maxillary central incisor.</li> <li>• Ability to work comfortably with carving instruments and materials.</li> </ul>	<ul style="list-style-type: none"> <li>• Weekly achieved carvings</li> <li>• Final exam</li> </ul>	<p>Wheeler's Dental Anatomy, Physiology, and Occlusion; by Major M Ash &amp; Stanley J Nelson, 9th edition, W. B. Saunders, 2009.</p>
Drawing of the Permanent Maxillary Canine	4	Dr.Firas	<ul style="list-style-type: none"> <li>• Ability to draw the permanent maxillary canine from its five aspects (mesial, distal, labial, lingual and incisal).</li> <li>• Identification of all</li> </ul>	<ul style="list-style-type: none"> <li>• Quizzes</li> <li>• Weekly achieved sketches</li> <li>• Final</li> </ul>	<p>Wheeler's Dental Anatomy, Physiology, and Occlusion; by Major M Ash &amp;</p>

			morphological landmarks apparent on each aspect.	exam	Stanley J Nelson, 9th edition, W. B. Saunders, 2009.
Carving of the Permanent Maxillary Canine	5	Dr.Firas	<ul style="list-style-type: none"> <li>• Ability to identify all the different landmarks in a permanent maxillary canine.</li> <li>• Ability to identify the right from the left permanent maxillary canine.</li> <li>• Ability to recreate the morphology of the permanent maxillary canine.</li> <li>• Ability to work comfortably with carving instruments and materials.</li> </ul>	<ul style="list-style-type: none"> <li>• Weekly achieved carvings</li> <li>• Final exam</li> </ul>	Wheeler's Dental Anatomy, Physiology, and Occlusion; by Major M Ash & Stanley J Nelson, 9th edition, W. B. Saunders, 2009.
Drawing of the Maxillary and Mandibular First Premolars	6	Dr.Firas	<ul style="list-style-type: none"> <li>• Ability to draw the permanent maxillary and mandibular first premolars from their five aspects (mesial, distal, buccal, lingual and occlusal).</li> <li>• Identification of all morphological landmarks apparent on each aspect.</li> </ul>	<ul style="list-style-type: none"> <li>• Quizzes</li> <li>• Weekly achieved sketches</li> <li>• Final exam</li> </ul>	Wheeler's Dental Anatomy, Physiology, and Occlusion; by Major M Ash & Stanley J Nelson, 9th edition, W. B. Saunders, 2009.
Carving of the Maxillary First Premolar	7	Dr.Firas	<ul style="list-style-type: none"> <li>• Ability to identify all the different landmarks in a permanent maxillary first premolar.</li> <li>• Ability to identify the right from the left permanent maxillary first premolar.</li> <li>• Ability to recreate the morphology of the permanent maxillary first premolar.</li> <li>• Ability to work comfortably with carving instruments</li> </ul>	<ul style="list-style-type: none"> <li>• Weekly achieved carvings</li> <li>• Final exam</li> </ul>	Wheeler's Dental Anatomy, Physiology, and Occlusion; by Major M Ash & Stanley J Nelson, 9th edition, W. B. Saunders, 2009.

			and materials.		
Carving of the Mandibular First Premolar	8	Dr.Firas	<ul style="list-style-type: none"> <li>• Ability to identify all the different landmarks in a permanent mandibular first premolar.</li> <li>• Ability to identify the right from the left permanent mandibular first premolar.</li> <li>• Ability to recreate the morphology of the permanent mandibular first premolar.</li> <li>• Ability to work comfortably with carving instruments and materials.</li> </ul>	<ul style="list-style-type: none"> <li>• Weekly achieved carvings</li> <li>• Final exam</li> </ul>	Wheeler's Dental Anatomy, Physiology, and Occlusion; by Major M Ash & Stanley J Nelson, 9th edition, W. B. Saunders, 2009.
Drawing of the Permanent Maxillary First Molar	9	Dr.Firas	<ul style="list-style-type: none"> <li>• Ability to draw the permanent maxillary first molar from its five aspects (mesial, distal, buccal, lingual and occlusal).</li> <li>• Identification of all morphological landmarks apparent on each aspect.</li> </ul>	<ul style="list-style-type: none"> <li>• Quizzes</li> <li>• Weekly achieved sketches</li> <li>• Final exam</li> </ul>	Wheeler's Dental Anatomy, Physiology, and Occlusion; by Major M Ash & Stanley J Nelson, 9th edition, W. B. Saunders, 2009.
Carving of the Permanent Maxillary First Molar	10	Dr.Firas	<ul style="list-style-type: none"> <li>• Ability to identify all the different landmarks in a permanent maxillary first molar.</li> <li>• Ability to identify the right from the left permanent maxillary first molar.</li> <li>• Ability to recreate the morphology of the permanent maxillary first molar.</li> <li>• Ability to work comfortably with carving instruments and materials.</li> </ul>	<ul style="list-style-type: none"> <li>• Weekly achieved carvings</li> <li>• Final exam</li> </ul>	Wheeler's Dental Anatomy, Physiology, and Occlusion; by Major M Ash & Stanley J Nelson, 9th edition, W. B. Saunders, 2009.
Drawing of the Permanent Mandibular First	11	Dr.Firas	<ul style="list-style-type: none"> <li>• Ability to draw the permanent mandibular first molar from its five aspects (mesial,</li> </ul>	<ul style="list-style-type: none"> <li>• Quizzes</li> <li>• Weekly achieved</li> </ul>	Wheeler's Dental Anatomy, Physiology, and

Molar			<p>distal, buccal, lingual and occlusal).</p> <ul style="list-style-type: none"> <li>• Identification of all morphological landmarks apparent on each aspect.</li> </ul>	<p>sketches</p> <ul style="list-style-type: none"> <li>• Final exam</li> </ul>	<p>Occlusion; by Major M Ash &amp; Stanley J Nelson, 9th edition, W. B. Saunders, 2009.</p>
Carving of the Permanent Mandibular First Molar	12	Dr.Firas	<ul style="list-style-type: none"> <li>• Ability to identify all the different landmarks in a permanent mandibular first molar.</li> <li>• Ability to identify the right from the left permanent mandibular first molar.</li> <li>• Ability to recreate the morphology of the permanent mandibular first molar.</li> <li>• Ability to work comfortably with carving instruments and materials.</li> </ul>	<ul style="list-style-type: none"> <li>• Weekly achieved carvings</li> <li>• Final exam</li> </ul>	<p>Wheeler's Dental Anatomy, Physiology, and Occlusion; by Major M Ash &amp; Stanley J Nelson, 9th edition, W. B. Saunders, 2009.</p>
Natural Tooth Identification I	13	Dr.Firas	<p>Ability to identify and differentiate each type of tooth (including all primary and permanent teeth)</p>	<ul style="list-style-type: none"> <li>• Quizzes</li> <li>• Final exam</li> </ul>	<p>Wheeler's Dental Anatomy, Physiology, and Occlusion; by Major M Ash &amp; Stanley J Nelson, 9th edition, W. B. Saunders, 2009.</p>
Natural Tooth Identification II	14	Dr.Firas	<ul style="list-style-type: none"> <li>• Ability to identify each type of tooth from its fragments, as much as possible.</li> <li>• Ability to identify non-metric crown and root traits that show inter-population variation</li> <li>• Ability to assess gender of the individual from</li> </ul>	<ul style="list-style-type: none"> <li>• Quizzes</li> <li>• Final exam</li> </ul>	<p>Wheeler's Dental Anatomy, Physiology, and Occlusion; by Major M Ash &amp; Stanley J Nelson, 9th edition, W. B. Saunders,</p>

			his/her loose or extracted teeth, as much as possible.		2009.
Dental Morphology Applications in Forensic Odontology	15	Dr.Firas	<ul style="list-style-type: none"> <li>Racial group prediction based on dental morphology</li> <li>Sex prediction based on dental morphology</li> <li>Bite marks applications in forensic odontology</li> </ul>	<ul style="list-style-type: none"> <li>Quizzes</li> <li>Final exam</li> </ul>	Wheeler's Dental Anatomy, Physiology, and Occlusion; by Major M Ash & Stanley J Nelson, 9th edition, W. B. Saunders, 2009.
Final Exam	16	Dr.Firas			

### 21. Teaching Methods and Assignments:

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

- Duration: 16 weeks (2hrs/week), 32 hours in total
- Practical session: 15 + one exam

### 22. Evaluation Methods and Course Requirements:

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

- Weekly achieved sketches and carvings: 40 points
- Quizzes: 20 points
- Final Exam: 40 points (Tooth identification: 10 points, Carving: 30 points)

### 23. Course Policies:

A- Attendance policies:

85% Laboratory practice attendance is obligatory. The handout and recommended atlas are not comprehensive and additional material will be covered.

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

The student needs to provide an evidence of the circumstances that forbid him/her from attendance or being on time, in order to be given a second chance

C- Health and safety procedures:

First aid kit and emergency contacts are available in the laboratory

D- Honesty policy regarding cheating, plagiarism, misbehavior:

If any of the above is breached by a student, he will be referred to a special judge committee to investigate and judge the case.

E- Grading policy:

Categories: Pass categories: (A, A-, B+, B, B-, C+, C, C-, D+, D, D-) and F (failure)

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

Teaching venues, data show appliances, computers lab in the faculty, UJ medical library, UJ main library, e-journal and e-book access.

## 24. Required equipment:

Lecron Carver, plaster knife, Drawing booklet, Lab coat

## 25. References:

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

- **Wheeler's Dental Anatomy, Physiology, and Occlusion;** by Major M Ash & Stanley J Nelson, 9<sup>th</sup> edition, W. B. Saunders, 2009.

B- Recommended books, materials, and media:

- **Dental Anatomy It's Relevance to Dentistry;** by Julian B Woelfel & Rickne C Scheid, 6<sup>th</sup> edition, Williams & Wilkins, 2001.
- **Wheeler's Atlas of Tooth Form;** by Major M Ash, W. B. Saunders, 1984.
- **Orban's Oral Histology and Embryology;** by Bhaskar S N, 11<sup>th</sup> edition, Mosby 1991.
- **Dental Morphology by Van Beek G,** 2nd edition 1983, Butterworth-Heinemann
- **Nature's Morphology: An Atlas of Tooth Shape and Form,** Shigeo Kataoka, Yoshimi Nishimura and Avishai Sadan, Quintessence Publishing (IL); 1 edition 2002
- **Dental Functional Morphology: How Teeth Work** (Cambridge Studies in Biological & Evolutionary Anthropology), Peter W Lucas, Cambridge University Press; 1 edition 2004

**26. Additional information:**

**Expected workload:** an average of studying time from 3 to 4 hours per week should be expected.

Name of Course Coordinator: Dr. Firas Alsoleihat Signature: ----- Date: 27/8/2019 Head of

curriculum committee/Department: ----- Signature: -----

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

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

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