

1	Course title	Dental Anatomy Practical
2	Course number	1302204
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 Restorative Dentistry
10	Level of course	Bachelor- Undergraduate
11	Year of study and semester (s)	Year 2 semester 1 2022/2023
12	Final Qualification	DDS
13	Other department (s) involved in teaching the course	Department of dental surgery
14	Language of Instruction	English
15	Date of production/revision	04/09/2022

**16. Course Coordinator:**

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**17. Other instructors:**

Prof Firas Solaihat

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**18. Course Description:**

This course delineates the fundamentals of functional tooth forms through drawings and carvings. It pinpoints the anatomical landmarks of anterior and posterior teeth and the relation between the morphological features and physiology. 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.

**19. Course aims and learning 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.
- 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.

**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 and surfaces.
- A2) Be able to use instruments to shape the crown contours and surfaces

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

- B1) Identify and differentiate each type of tooth
- B2) Use correct name for each tooth using the different notation systems.

**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:**

<b>Week</b>	<b>Topic</b>	<b>Mandatory prelab Online activities</b>	<b>Face-face Activities</b>	<b>Home-tasks</b>	<b>Assessments</b>
1	Introduction to dental anatomy lab	<p>Watch a drawing video for maxillary central incisor</p> <p>Carry put practice on E-learning interactive module (H5P) for teeth annotation</p>	<p>General introduction to the lab rules, dress code, logbook procedures, quizzes, teeth banking, safety and armamentarium.</p> <p>Students will be shown what they need throughout the lab and should become acquainted with risk assessment, grading criteria and will be talked through the instruments for wax-down and wax-up and dental casts.</p>	Drawing of maxillary right central Incisor	-
2, 3	Carving of the Permanent Maxillary Central Incisor	All students must finish the task on e-learning interactive modules (H5P) for week 2 and the tasks on Microsoft teams	<p>Students will practice the carving of maxillary central incisor and get feedback on their work in the lab from instructors and will be offered one-to-one help when needed.</p> <p>Students will bring natural teeth for incisors for general comparison and identification and chart them.</p>	<p>Drawing of maxillary left central incisor</p> <p>Carving of maxillary central incisor</p>	<p>Quiz (teeth annotation)</p> <p>Logbook check</p>
4, 5	Carving of the Permanent Maxillary Canine	All students must finish the task on e-learning interactive modules (H5P) for week 4 and the tasks on Microsoft teams	<p>Students will practice the carving of maxillary canine and get feedback on their work in the lab from instructors and will be offered one-to-one help when needed.</p> <p>Students will bring natural teeth for incisors for general comparison and identification and chart them</p>	<p>Drawing of maxillary canine</p> <p>Carving of maxillary canine</p>	Logbook check
6,7	Carving of the Maxillary First Premolar	All students must finish the task on e-learning interactive modules (H5P) for	Students will practice the carving of maxillary first premolar and get feedback on their work in the lab from instructors and will be offered one-to-one help when needed.	<p>Drawing of maxillary first premolar</p> <p>Carving of</p>	<p>Logbook check</p> <p>Lab work marking</p>

		<b>week 6 and the tasks on Microsoft teams</b>	<b>Students will bring natural teeth for incisors for general comparison and identification and chart them</b>	<b>maxillary first premolar</b>	
<b>8,9</b>	<b>Wax-up of the Mandibular First Premolar</b>	<b>All students must finish the task on e-learning interactive modules (H5P) for week 8 and the tasks on Microsoft teams</b>	<b>Students will practice the carving of mandibular first premolar and get feedback on their work in the lab from instructors and will be offered one-to-one help when needed.</b>  <b>Students will bring natural teeth for incisors for general comparison and identification and chart them</b>	<b>Drawing of mandibular first premolar</b>  <b>Carving of mandibular first premolar</b>	<b>Logbook check</b>  <b>Quiz (anatomical landmarks)</b>
<b>10,11</b>	<b>Carving of the Permanent Maxillary First Molar</b>	<b>All students must finish the task on e-learning interactive modules (H5P) for week 10 and the tasks on Microsoft teams</b>	<b>Students will practice the carving of maxillary first molar and get feedback on their work in the lab from instructors and will be offered one-to-one help when needed.</b>  <b>Students will bring natural teeth for incisors for general comparison and identification and chart them</b>	<b>Drawing of maxillary first molar</b>  <b>Carving of maxillary first molar</b>	<b>Logbook check</b>  <b>Lab-work marking</b>
<b>12,13</b>	<b>Wax-up of the Permanent Mandibular First Molar</b>	<b>All students must finish the task on e-learning interactive modules (H5P) for week 12 and the tasks on Microsoft teams</b>	<b>Students will practice the carving of mandibular first molar and get feedback on their work in the lab from instructors and will be offered one-to-one help when needed.</b>  <b>Students will bring natural teeth for incisors for general comparison and identification and chart them</b>	<b>Drawing of mandibular first molar</b>  <b>Carving of mandibular first molar</b>	<b>Logbook check</b>  <b>Lab-work marking</b>
<b>14</b>	<b>Natural Tooth Identification</b>	<b>A lab demo will be recorded to students.</b>	<b>-</b>	<b>Charting of banked teeth</b>	<b>MCQ Exam (tooth identification)</b>
<b>15, 16</b>	<b>Final Exam</b>		<b>Choice through draw for an anterior tooth for wax-down</b>		

			<b>Choice through draw for a posterior tooth for wax-up</b>		
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Related week	Achieved ILOs
1	<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 appropriate.</li> <li>• Familiarity with the various dental notation/numbering systems ( Zsigmondy-Palmar, FDI, Universal, Haderup)</li> <li>• Familiarity with the instrument armamentarium when working with wax blocks to wax-down or using casts to wax-up</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 to tooth anatomy</li> <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>
2,3	<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>
4,5	<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 morphological landmarks apparent on each aspect.</li> <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>
6-10	<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. 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 and materials.</li> <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> <li>• Ability to set teeth back in occlusal contacts</li> </ul>
11-14	<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> <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> <li>• Ability to draw the permanent mandibular first molar from its five aspects (mesial,</li> </ul>



	<p>distal, buccal, lingual and occlusal).</p> <ul style="list-style-type: none"> <li>• Identification of all morphological landmarks apparent on each aspect.</li> <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> <li>• Ability to set teeth back in occlusal contacts</li> </ul>
	Ability to identify and differentiate each type of tooth (including all primary and permanent teeth)

## 21. Teaching Methods and Assignments:

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

- Duration: 16 weeks blended course of (2hrs/week); one week face-to-face and one week using e-learning: 32 hours in total
- Practical session: 14 practical sessions, one final exam of two major tasks.

## 22. Evaluation Methods and Course Requirements:

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

- Summative assessments: 50 %(2 quizzes (20 marks), 3 lab assessments (15 marks), logbook assessment (5 marks))
- Tooth identification: 10% (computerized MCQ exam using pictures prepared by instructors)
- Final Exam: 40 % carving using wax-down technique for an anterior tooth (20 marks) and wax-up for a posterior tooth (20 marks)

## 23. Course Policies:

A- Attendance policies:

85% Laboratory practice attendance is obligatory. Students online preparation before the lab is mandatory and will be monitored each week. Students who fail to demonstrate progress and accomplish required tasks for each week will not be allowed to attend the face-to-face practical of that week.

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 for the practical from the dean of the school, in order to be given a second chance to complete tasks/ exams.

C- Health and safety procedures:

First aid kit and emergency contacts are available in the laboratory. Refer to lab manual for complete health and safety rules.

D- Honesty policy regarding cheating, plagiarism, misbehavior: (please refer to manual for general rules)

If a student breaches any of the above, 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:

Nissin upper and lower dental casts, lab coat, pencils, Lecron Carver, plaster knife, soap bars, alcohol lamp, inlay dental wax, articulating papers, P.K Thomas carvers no.: 1,2 and 3, amalgam carver, Beale wax carver, faculty prepared logbook.

## 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 And Morphology Manual.** Authors: Hilton Riquieri; Rodrigo Yamada Riquieri
- **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 is expected.

Name of Course Coordinator: Dr. Aseel Sharaireh Signature: ---



----- Date 04/09/2022

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

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

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

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