



**Syllabus\* : Dental Anatomy and Occlusion Code (2219011221)**  
**First Semester 2024/2025**

| COURSE INFORMATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                               |
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| <b>Course Name:</b> Dental Anatomy and Occlusion<br><b>Semester:</b> First Semester<br><b>Department:</b> Department of Basic Dental Science<br><b>Faculty:</b> Dentistry                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>Course Code:</b> 2219011221<br><b>Section:</b> 1<br><b>Core Curriculum:</b> Doctor of Dental Surgery (DDS) |
| <b>Day(s) and Time(s):</b> Sun./ Tues. 10:30 – 11:30<br>Sun./ Tues. 11:30 – 12:30<br><b>Classroom:</b> Hall 220 Faculty of Dentistry Building                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>Credit Hours:</b> 3<br><b>Prerequisites:</b> None                                                          |
| COURSE DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                               |
| <p>This course, designed for the second-year dental students, aims to provide them with a comprehensive understanding of the fundamental concepts of dental anatomy and occlusion. The course delves into the details of the morphology of individual teeth, their function, and their relationship to each other and to the craniofacial structure. It also explores the principles of occlusion, including the static and dynamic relationships between the maxillary and mandibular teeth during function. There are two parts to the course: lectures and the related practical hand-on in laboratories. The goal of the practical sessions is to improve the participants' ability to carve various teeth out of wax blocks. It is anticipated that by practicing, students will be able to better memorize the specifics of tooth morphology and develop their manual abilities.</p> |                                                                                                               |
| DELIVERY METHODS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                               |
| <p>The course will be delivered via face-face teaching through a combination of active learning strategies. These will include:</p> <ul style="list-style-type: none"> <li>• PowerPoint lectures and active classroom-based discussion.</li> <li>• Relevant films and documentaries</li> <li>• Video lectures</li> <li>• E-learning resources: e-reading assignments and practice quizzes through Microsoft Teams</li> <li>• Practical demonstration</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                               |

- Practical tutorial

#### FACULTY INFORMATION

|                   |                                                                                                                                                                                     |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name              | Dr. Abdelrahman Mohamed Galal                                                                                                                                                       |
| Academic Title:   | Assistant Professor                                                                                                                                                                 |
| Office Location:  | C 468                                                                                                                                                                               |
| Telephone Number: |                                                                                                                                                                                     |
| Email Address:    | <u><a href="mailto:abdelrahmanmgalal@hu.edu.jo">abdelrahmanmgalal@hu.edu.jo</a></u>                                                                                                 |
| Office Hours:     | Sunday 1-2<br>Monday 12-2<br>Tuesday 9-10<br><i>Please send an e-mail (<a href="mailto:abdelrahmanmgalal@hu.edu.jo">abdelrahmanmgalal@hu.edu.jo</a>) to meet at any other time.</i> |
| lecturers         | Dr. Prof. Reda Gaber <a href="mailto:reda@hu.edu.jo">reda@hu.edu.jo</a>                                                                                                             |
|                   | Dr. Abdelrahman M. Galal<br><a href="mailto:abdelrahmanmgalal@hu.edu.jo">abdelrahmanmgalal@hu.edu.jo</a>                                                                            |

#### REFERENCES AND LEARNING RESOURCES

- Stanley J. Nelson. Wheeler's Dental Anatomy, Physiology and Occlusion. 11<sup>th</sup> edition. Elsevier Health Sciences, 2019. ISBN: 9780323638784. eBook ISBN: 9780323638791
- Rickne C. Scheid, Gabriela Weiss. Woelfel's Dental Anatomy, Enhanced edition. 9<sup>th</sup> edition. Jones & Bartlett Learning, 2020. ISBN: 978-1284218244.
- Dental atlas (<https://www.dental-atlas.com/>)
- Dental-Lite (mobile app)  
<https://play.google.com/store/apps/details?id=com.iSOFORM.DentalLite&hl=en&pli=1>
- Dental anatomy (mobile app)  
<https://play.google.com/store/apps/details?id=com.apps4dentist.dentalanatomy>

## STUDENT LEARNING OUTCOMES MATRIX\*

| Core Curriculum Learning Outcomes | Program Learning Outcomes                                       | Course Objectives                                                                                                    | Course Student Learning Outcomes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Assessment Method                                                                                                                                                       |
|-----------------------------------|-----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A. Medical and dental knowledge.  | A.1. Demonstrate medical and dental knowledge of basic sciences | Micro- and macro-anatomy of teeth, tooth aspects, line and point angles, division into thirds and functions of teeth | <ol style="list-style-type: none"> <li>1. Identify the tissues forming the tooth structure and their functions.</li> <li>.2. Identify the anatomical and clinical crown and root.</li> <li>3. Recognize the line angles and point angles of teeth.</li> <li>.4. Describe the division of crown and root into thirds</li> <li>5. List the function of teeth.</li> <li>6. Explain the importance of the myriad items of periodontium in supporting teeth</li> </ol>                                                                                                     | <ul style="list-style-type: none"> <li>• Exams</li> <li>• Quizzes</li> <li>• Case scenarios</li> </ul>                                                                  |
|                                   |                                                                 | The anatomical landmarks of the teeth.                                                                               | <ol style="list-style-type: none"> <li>1. Recognize the morphological elevations of the variable types of teeth.</li> <li>2. Recognize the morphological depressions of the variable types of teeth.</li> <li>3. Locate precisely each anatomical landmark on the various tooth surfaces.</li> </ol>                                                                                                                                                                                                                                                                  | <ul style="list-style-type: none"> <li>• Exams</li> <li>• Quizzes</li> <li>• Practical exam</li> <li>• Practical requirement</li> </ul>                                 |
|                                   |                                                                 | Description of morphological features of permanent teeth.                                                            | <ol style="list-style-type: none"> <li>1. Describe the morphological feature of permanent incisors.</li> <li>2. Describe the morphological feature of permanent canines.</li> <li>3. Describe the morphological feature of maxillary premolars.</li> <li>4. Describe the morphological feature of mandibular premolars.</li> <li>5. Describe the morphological feature of permanent maxillary molars.</li> <li>6. Describe the morphological feature of permanent mandibular molars.</li> <li>7. Describe the anatomy of pulp cavities of permanent teeth.</li> </ol> | <ul style="list-style-type: none"> <li>• Exams</li> <li>• Quizzes</li> <li>• Homework assignments</li> <li>• Practical exam</li> <li>• Practical requirement</li> </ul> |
|                                   |                                                                 | Description of morphological features of deciduous teeth.                                                            | <ol style="list-style-type: none"> <li>1. Identify the characteristic morphologic features of deciduous teeth.</li> <li>2. Describe the morphological features of deciduous anterior teeth.</li> <li>3. Describe the morphological features of deciduous posterior teeth.</li> <li>4. Describe the anatomy of pulp cavities of deciduous teeth.</li> </ol>                                                                                                                                                                                                            | <ul style="list-style-type: none"> <li>• Exams</li> <li>• Quizzes</li> <li>• Case scenarios</li> </ul>                                                                  |

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|--|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
|  |                                                                                       | Discussing the chronology of both deciduous and permanent dentition                                                | <ol style="list-style-type: none"> <li>1. Identify the general rules of eruption of deciduous and permanent dentitions.</li> <li>2. Recognize the chronology of deciduous dentition.</li> <li>3. Recognize the chronology of permanent dentition.</li> </ol>                                                                                                                                                                                                                            | <ul style="list-style-type: none"> <li>• Exams</li> <li>• Quizzes</li> <li>• Case scenarios</li> </ul>                           |
|  |                                                                                       | Explaining the physiologic tooth form and its relation to periodontium integrity.                                  | <ol style="list-style-type: none"> <li>1. Recognize the direct factors of teeth arrangement and its relation in preserving the periodontium.</li> <li>2. Recognize the indirect factors of teeth form and their relation in preserving the periodontium.</li> </ol>                                                                                                                                                                                                                     | <ul style="list-style-type: none"> <li>• Exams</li> <li>• Quizzes</li> </ul>                                                     |
|  |                                                                                       | Describing the basic principles of occlusion and their application in different clinical disciplines of dentistry. | <ol style="list-style-type: none"> <li>1. Define the terms related to dental occlusion.</li> <li>2. Describe the compensating occlusal curves.</li> <li>3. Explain the design of dental arch.</li> <li>4. Recognize the interocclusal relationship between permanent anterior teeth.</li> <li>5. Recognize the interocclusal relationship between permanent posterior teeth.</li> <li>6. Describe the mechanism of various jaw movements.</li> </ol>                                    | <ul style="list-style-type: none"> <li>• Exams</li> <li>• Quizzes</li> <li>• Practical exam</li> </ul>                           |
|  | A.7. Apply basic principles and concepts related to basic sciences in dental practice | Description of morphological features of permanent teeth.                                                          | <ol style="list-style-type: none"> <li>1. Integrate knowledge of anatomy, histology, and physiology to understand the development and structure of permanent teeth.</li> <li>2. Identify the common variations and anomalies in the morphology of permanent teeth.</li> <li>3. Assess the impact of these variations on dental health and treatment planning.</li> <li>4. Apply morphological knowledge to accurately diagnose dental conditions related to tooth structure.</li> </ol> | <ul style="list-style-type: none"> <li>• Exams</li> <li>• Quizzes</li> <li>• Case scenarios</li> <li>• Practical exam</li> </ul> |
|  |                                                                                       | Description of morphological features of deciduous teeth.                                                          | <ol style="list-style-type: none"> <li>1. Explain how the morphological features of deciduous teeth influence their function and role in the oral cavity.</li> <li>2. Discuss the implications of deciduous tooth morphology in pediatric dental procedures such as restorations, extractions, and space maintenance.</li> <li>3. Use morphological knowledge to analyze and interpret data related to deciduous tooth structure.</li> </ol>                                            | <ul style="list-style-type: none"> <li>• Exams</li> <li>• Quizzes</li> <li>• Case scenarios</li> <li>• Practical exam</li> </ul> |
|  |                                                                                       | Discussing the chronology of both deciduous and permanent dentition                                                | <ol style="list-style-type: none"> <li>1. Analyze the relationship between the timing of tooth eruption and the establishment of normal occlusion, as</li> </ol>                                                                                                                                                                                                                                                                                                                        | <ul style="list-style-type: none"> <li>• Exams</li> <li>• Quizzes</li> <li>• Case scenarios</li> </ul>                           |

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|  |  |                                                                                                                           | <p>well as the potential for malocclusion if deviations occur.</p> <p>2. Apply knowledge of the chronology of dentition to assess and plan treatment in relation to occlusion, considering the role of each tooth in the development of the dental arches.</p> <p>3. Integrate the principles of dental anatomy and occlusion when evaluating tooth eruption patterns and their effects on overall oral function and aesthetics.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <ul style="list-style-type: none"> <li>• Practical exam</li> </ul>                                                               |
|  |  | <p>Explaining the physiologic tooth form and its relation to periodontium integrity.</p>                                  | <p>1. Describe the physiologic tooth form, including crown and root morphology, and its adaptation to functional demands such as mastication, speech, and aesthetics.</p> <p>2. Explain the relationship between the physiologic contours of the tooth (e.g., cusps, grooves, and contact areas) and the protection of the periodontium.</p> <p>3. Evaluate how deviations in tooth form, such as over-contoured or under-contoured restorations, can affect periodontal health by impacting plaque accumulation, tissue irritation, and occlusal forces.</p> <p>4. Analyze the role of tooth morphology in the maintenance of gingival health, focusing on how correct anatomic features support optimal periodontal architecture and integrity.</p> <p>5. Apply knowledge of the physiologic tooth form to assess clinical cases, ensuring the integration of tooth anatomy principles in maintaining periodontal health during restorative or orthodontic procedures.</p> | <ul style="list-style-type: none"> <li>• Exams</li> <li>• Quizzes</li> <li>• Case scenarios</li> <li>• Practical exam</li> </ul> |
|  |  | <p>Describing the basic principles of occlusion and their application in different clinical disciplines of dentistry.</p> | <p>1. Explain the occlusal relationships of deciduous and permanent teeth, including the role of primary teeth in guiding the eruption and alignment of permanent teeth.</p> <p>2. Analyze how occlusal forces are distributed across the dental arches and their impact on the teeth, supporting structures, and the temporomandibular joint (TMJ) in both primary and permanent dentition.</p> <p>3. Differentiate between normal and pathological occlusal relationships in deciduous and permanent dentition, identifying common issues such as malocclusion, premature loss of</p>                                                                                                                                                                                                                                                                                                                                                                                      | <ul style="list-style-type: none"> <li>• Exams</li> <li>• Quizzes</li> <li>• Case scenarios</li> <li>• Practical exam</li> </ul> |

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|--------------------------------------------|-----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                            |                                                                                                     |                                                                     | <p>primary teeth, and their effects on occlusion development.</p> <p>4. Apply the principles of occlusion in various clinical disciplines, such as prosthodontics (e.g., designing restorations with proper occlusal contacts), orthodontics (e.g., managing malocclusions in both primary and permanent teeth), pediatric dentistry (e.g., maintaining proper occlusion in children), and periodontics (e.g., minimizing occlusal trauma).</p> <p>5. Evaluate clinical cases involving both deciduous and permanent teeth across different dental specialties, ensuring occlusal harmony and proper occlusal development in treatment planning to achieve long-term functional and aesthetic outcomes.</p> |                                                                                                                                                                         |
| D. Interpersonal and communication skills. | D.3. Use technology effectively and ethically to support patient care and clinical decision making. | Description of morphological features of permanent teeth.           | <p>1. Describe the key morphological features of permanent teeth, including crown and root anatomy, cusp patterns, grooves, ridges, and contact points, using digital dental resources and imaging technology.</p> <p>2. Evaluate the impact of using advanced technological methods in analyzing tooth morphology on improving patient care outcomes, including the accuracy of restorations, occlusal adjustments, and treatment efficiency.</p>                                                                                                                                                                                                                                                          | <ul style="list-style-type: none"> <li>• Quizzes</li> <li>• “On-line” reading assignments.</li> <li>• Homework assignments</li> <li>• Practical requirements</li> </ul> |
|                                            |                                                                                                     | Description of morphological features of deciduous teeth.           | <p>D.2.1. Organize a self-evaluation to identify your own educational needs.</p> <p>D.2.2. Apply a variety of sources to get knowledge and information.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <ul style="list-style-type: none"> <li>• Quizzes</li> <li>• “On-line” reading assignments.</li> <li>• Homework assignments</li> <li>• Practical requirements</li> </ul> |
|                                            |                                                                                                     | Discussing the chronology of both deciduous and permanent dentition | <p>1. Analyze the eruption patterns of deciduous and permanent teeth with the aid of technology (e.g., intraoral scanners and digital radiographs) to detect deviations or anomalies in real-time.</p> <p>2. Evaluate the role of technology in improving accuracy and efficiency when assessing the chronology of dentition, demonstrating how it contributes to better clinical outcomes and patient care.</p>                                                                                                                                                                                                                                                                                            | <ul style="list-style-type: none"> <li>• Quizzes</li> <li>• “On-line” reading assignments.</li> <li>• Homework assignments</li> <li>• Practical requirements</li> </ul> |

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|                                                     |                                                                                                                                   | Describing the basic principles of occlusion and their application in different clinical disciplines of dentistry. | <ol style="list-style-type: none"> <li>1. Apply occlusal principles using technology across various clinical disciplines.</li> <li>2. Evaluate the effectiveness of technological tools in improving diagnosis, treatment planning, and outcomes for occlusal issues in both deciduous and permanent teeth.</li> </ol>                                                                                                                                                                                                                                                                         | <ul style="list-style-type: none"> <li>• Quizzes</li> <li>• “On-line’ reading assignments.</li> </ul>                                                 |
| E. Practice-based learning and scientific research. | E.1. Follow the strategies to support self-directed life-long learning, research, and innovation in the field of dental sciences. | Explaining the physiologic tooth form and its relation to periodontium integrity.                                  | <ol style="list-style-type: none"> <li>1. Apply self-directed learning strategies to stay updated on innovations and emerging research related to tooth morphology and its implications for periodontal therapy, utilizing scientific literature, online databases, and continuing education platforms.</li> <li>2. Analyze the impact of variations in tooth form (e.g., contour, contact points, and occlusal surfaces) on the health of the periodontium, fostering a deeper understanding of the anatomical-functional connection through research and evidence-based learning.</li> </ol> | <ul style="list-style-type: none"> <li>• “On-line’ reading assignments.</li> </ul>                                                                    |
|                                                     |                                                                                                                                   | Describing the basic principles of occlusion and their application in different clinical disciplines of dentistry. | <ol style="list-style-type: none"> <li>1. Analyze how occlusal adjustments can improve patient outcomes in different clinical scenarios.</li> <li>2. Apply principles of growth and development to assess occlusal changes over a patient’s lifespan.</li> <li>3. Investigate new technologies and methodologies for occlusal assessment and therapy, such as digital occlusal analysis and 3D imaging.</li> </ol>                                                                                                                                                                             | <ul style="list-style-type: none"> <li>• “On-line’ reading assignments.</li> </ul>                                                                    |
|                                                     | E.5. Apply skills of reasoning and problem-solving in the context of dental study                                                 | Description of morphological features of permanent teeth.                                                          | <ol style="list-style-type: none"> <li>1. Construct models of different teeth using wax blocks.</li> <li>2. Sketch the permanent teeth from various aspects.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                        | <ul style="list-style-type: none"> <li>• Homework assignments</li> <li>• Practical exam</li> <li>• Practical requirements</li> </ul>                  |
|                                                     |                                                                                                                                   | Discussing the chronology of both deciduous and permanent dentition                                                | 1. Estimate the age of individual through radiographic examination of teeth conditions as well as chronological features.                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <ul style="list-style-type: none"> <li>• Exams</li> <li>• Homework assignments</li> <li>• Practical exam</li> <li>• Practical requirements</li> </ul> |
|                                                     |                                                                                                                                   | Describing the basic principles of occlusion and their application in different clinical disciplines of dentistry. | 1. Construct wax build up models for teeth of some teeth representing both the anterior and posterior teeth.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <ul style="list-style-type: none"> <li>• Practical exam</li> <li>• Practical requirements</li> </ul>                                                  |

## ACADEMIC SUPPORT

It is The Hashemite University policy to provide educational opportunities that ensure fair, appropriate, and reasonable accommodation to students who have disabilities that may affect their ability to participate in course activities or meet course requirements. Students with disabilities are encouraged to contact their instructor to ensure that their individual needs are met. The University through its Special Need section will exert all efforts to accommodate for individual's needs.

**Special Needs Section: Dr. Reda Gaber**

**Dr. Abdelrahman Mohamed Galal**

**Tel:**

**Location: C 450**

**C 468**

**Email: [reda@hu.edu.jo](mailto:reda@hu.edu.jo)**

**[abdelrahmanmgalal@hu.edu.jo](mailto:abdelrahmanmgalal@hu.edu.jo)**

## COURSE REGULATIONS

### ***Participation***

Class participation and attendance are crucial elements of every student's learning experience at The Hashemite University, and the student is expected to attend all classes. A student should not miss more than 15% of the classes during a semester. *Those exceeding this limit of 15% will receive a failing grade regardless of their performance.* It is a student's responsibility to monitor the frequency of their own absences. **Attendance record begins on the first day of class irrespective of the period allotted to drop/add and late registration. It is a student's responsibility to sign-in; failure to do so will result in non-attendance being recorded.**

In exceptional cases, the student, with the instructor's prior permission, could be exempted from attending a class provided that the number of such occasions does not exceed the limit allowed by the University. The instructor will determine the acceptability of an absence for being absent. A student who misses more than 25% of classes and has a valid excuse for being absent will be allowed to withdraw from the course.

### ***Plagiarism***

Plagiarism is considered a serious academic offence and can result in your work losing marks or being failed. HU expects its students to adopt and abide by the highest standards of conduct in their interaction with their professors, peers, and the wider University community. As such, a student is expected not to engage in behaviours that compromise his/her own integrity as well as that of the Hashemite University.

Plagiarism includes the following examples, and it applies to all student assignments or submitted work:

- **Use of the work, ideas, images, or words of someone else without his/her permission or reference to them.**

- Use of someone else's wording, name, phrase, sentence, paragraph, or essay without using quotation marks.
- Misrepresentation of the sources that were used.

**The instructor has the right to fail the coursework or deduct marks where plagiarism is detected.**

### ***Late or Missed Assignments***

In all cases of assessment, students who fails to attend an exam, class project or deliver a presentation on the scheduled date without prior permission, and/or are unable to provide a medical note, will automatically receive a fail grade for this part of the assessment.

- Submitting a term paper on time is a key part of the assessment process. Students who fail to submit their work by the deadline specified will automatically receive a 10% penalty. Assignments handed in more than 24 hours late will receive a further 10% penalty. Each subsequent 24 hours will result in a further 10% penalty.
- In cases where a student misses an assessment on account of a medical reason or with prior permission; in line with the University regulations an incomplete grade for the specific assessment will be awarded and an alternative assessment or extension can be arranged.

### ***Student Complaints Policy***

Students at The Hashemite University have the right to pursue complaints related to faculty, staff, and other students. The nature of the complaints may be either academic or non-academic. For more information about the policy and processes related to this policy, you may refer to the students' handbook.

## COURSE ASSESSMENT

### **Course Calendar and Assessment**

Students will be graded through the following means of assessment and their final grade will be calculated from the forms of assessment listed below with their grade weighting considered. The criteria for grading are listed at the end of the syllabus.

| Assessment            | Grade Weighting | Deadline Assessment                  |
|-----------------------|-----------------|--------------------------------------|
| Midterm Exam          | 30%             | Week 8 / one hour                    |
| Practical requirement | 10%             | Throughout the course                |
| Final Practical Exam  | 20%             | Week 15-16 / determine by university |
| Final Exam            | 40%             | Week 15-16 / determine by university |

### **Description of Exams**

Test questions will predominately come from material presented in the lectures. Semester exams will be conducted during the regularly scheduled lecture period. The exam will consist of a combination of multiple choice, short answer, match, true and false and/or descriptive questions.

**Homework:** Will be given for each chapter, while the chapter in progress you are supposed to work on them continuously and submit in next lecture when I finish the chapter.

You are also expected to work on in-chapter examples, self-tests and a representative number of ends of chapter problems. The answers of self-tests and end of chapter exercises are given at the end of the book.

**Quizzes:** Unannounced quizzes will be given during or/and at the end of each chapter based upon the previous lectures. It will ensure that you come prepared for the class.

**Practical requirements:** the students are asked to draw some teeth that are studied in the lectures. The drawings will be done in a logbook for each student. Also, the students are asked to deliver teeth carved in wax blocks as well as wax build-up models for teeth that were studied in the lectures and were demonstrated in the laboratory.

**Practical final exam:** the students will be asked to make a drawing for a certain tooth and carve another tooth using wax blocks from the teeth they have studied. Also, the students will be asked to construct a tooth build-up model by wax.

No make-up exams, homework or quizzes will be given. Only documented absences will be considered as per HU guidelines.

Grades are not negotiable and are awarded according to the following criteria\*:

| <b>Letter Grade</b> | <b>Description</b> | <b>Grade Points</b> |
|---------------------|--------------------|---------------------|
| A+                  | Excellent          | 4.00                |
| A                   |                    | 3.75                |
| A-                  |                    | 3.50                |
| B+                  | Very Good          | 3.25                |
| B                   |                    | 3.00                |
| B-                  |                    | 2.75                |
| C+                  | Good               | 2.50                |
| C                   |                    | 2.25                |
| C-                  |                    | 2.00                |
| D+                  | Pass               | 1.75                |
| D                   | Pass               | 1.50                |
| F                   | Fail               | 0.00                |
| I                   | Incomplete         | -                   |

**WEEKLY LECTURE SCHEDULE AND CONTENT DISTRIBUTION**

| <b>Week</b>                            | <b>Lecture</b>                                                                                         | <b>Lecturer</b>                                    | <b>Lecture hours</b> |
|----------------------------------------|--------------------------------------------------------------------------------------------------------|----------------------------------------------------|----------------------|
| <b>1</b><br><b>6, 8/10/2024</b>        | <b>Micro- and macro-anatomy of teeth, tooth aspects, line and point angles, and functions of teeth</b> | <b>Dr. Reda Gaber<br/>Dr. Abdelrahman M. Galal</b> | <b>2</b>             |
| <b>2</b><br><b>13,15/10/2024</b>       | <b>Anatomical landmarks</b>                                                                            | <b>Dr. Reda Gaber<br/>Dr. Abdelrahman M. Galal</b> | <b>2</b>             |
| <b>3</b><br><b>20,22/10/2024</b>       | <b>Description of permanent incisors</b>                                                               | <b>Dr. Reda Gaber<br/>Dr. Abdelrahman M. Galal</b> | <b>2</b>             |
| <b>4</b><br><b>27,29/10/2024</b>       | <b>Description of permanent canines</b>                                                                | <b>Dr. Reda Gaber<br/>Dr. Abdelrahman M. Galal</b> | <b>2</b>             |
| <b>5</b><br><b>3, 5/11/2024</b>        | <b>Description of maxillary premolars</b>                                                              | <b>Dr. Reda Gaber<br/>Dr. Abdelrahman M. Galal</b> | <b>2</b>             |
| <b>6</b><br><b>10,12/11/2024</b>       | <b>Description of mandibular premolars</b>                                                             | <b>Dr. Reda Gaber<br/>Dr. Abdelrahman M. Galal</b> | <b>2</b>             |
| <b>7</b><br><b>17,19/11/2024</b>       | <b>Description of permanent maxillary molars</b>                                                       | <b>Dr. Reda Gaber<br/>Dr. Abdelrahman M. Galal</b> | <b>2</b>             |
| <b>8</b><br><b>(24, 26/11)</b>         | <b>Midterm exam</b>                                                                                    |                                                    |                      |
| <b>9</b><br><b>1, 3/12/2024</b>        | <b>Description of permanent mandibular molars</b>                                                      | <b>Dr. Reda Gaber<br/>Dr. Abdelrahman M. Galal</b> | <b>2</b>             |
| <b>10</b><br><b>8, 10/12/2024</b>      | <b>Description of deciduous teeth</b>                                                                  | <b>Dr. Reda Gaber<br/>Dr. Abdelrahman M. Galal</b> | <b>2</b>             |
| <b>11</b><br><b>15,17/12/2024</b>      | <b>Chronology, and physiologic tooth form</b>                                                          | <b>Dr. Reda Gaber<br/>Dr. Abdelrahman M. Galal</b> | <b>2</b>             |
| <b>12</b><br><b>22,24/12/2024</b>      | <b>Introduction to occlusion</b>                                                                       | <b>Dr. Reda Gaber<br/>Dr. Abdelrahman M. Galal</b> | <b>2</b>             |
| <b>13</b><br><b>29,<br/>31/12/2024</b> | <b>Occlusion of deciduous teeth and permanent anterior teeth</b>                                       | <b>Dr. Reda Gaber<br/>Dr. Abdelrahman M. Galal</b> | <b>2</b>             |
| <b>14</b><br><b>5, 7/1/2025</b>        | <b>Occlusion of permanent posterior teeth and jaw movements</b>                                        | <b>Dr. Reda Gaber<br/>Dr. Abdelrahman M. Galal</b> | <b>2</b>             |
| <b>15</b><br><b>12, 14/1/2025</b>      | <b>University Final Exams</b>                                                                          |                                                    |                      |
| <b>16</b><br><b>19, 21/1/2025</b>      |                                                                                                        |                                                    |                      |

**WEEKLY LABORATORY SCHEDULE AND CONTENT DISTRIBUTION**

| <b>Week</b>                   | <b>Practical session</b>                                                                                                                                                                                                                                                  | <b>Supervisors</b>                                       | <b>Lab hours</b> |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|------------------|
| <b>1</b><br><b>10/10/2024</b> | <ul style="list-style-type: none"> <li>•Introduction and practical session rules and principles</li> <li>•Tooth numbering systems, tooth surfaces, and anatomical landmarks</li> </ul>                                                                                    | <b>Dr. Reda Gaber</b><br><b>Dr. Abdelrahman M. Galal</b> | <b>2</b>         |
| <b>2</b><br><b>17/10/2024</b> | <ul style="list-style-type: none"> <li>• Demonstration of carving permanent maxillary central incisor (1<sup>st</sup> step)</li> <li>• Demonstration of drawing permanent maxillary central incisor</li> </ul>                                                            | <b>Dr. Reda Gaber</b><br><b>Dr. Abdelrahman M. Galal</b> | <b>2</b>         |
| <b>3</b><br><b>24/10/2024</b> | <ul style="list-style-type: none"> <li>• Demonstration of carving permanent maxillary central incisor (2<sup>nd</sup> step &amp; finishing)</li> <li>• Student requirements: carving upper central incisors + upper incisors drawing.</li> </ul>                          | <b>Dr. Reda Gaber</b><br><b>Dr. Abdelrahman M. Galal</b> | <b>2</b>         |
| <b>4</b><br><b>31/10/2024</b> | <ul style="list-style-type: none"> <li>• Demonstration of drawing permanent maxillary canine.</li> <li>• Demonstration of carving permanent maxillary canine (1<sup>st</sup> step).</li> <li>• Student requirements: drawing of permanent mandibular incisors.</li> </ul> | <b>Dr. Reda Gaber</b><br><b>Dr. Abdelrahman M. Galal</b> | <b>2</b>         |
| <b>5</b><br><b>7/11/2024</b>  | <ul style="list-style-type: none"> <li>• Demonstration of carving permanent maxillary canine (2<sup>nd</sup> step &amp; finishing)</li> <li>• Student requirement: carving permanent maxillary canine + drawing of permanent maxillary and mandibular canines.</li> </ul> | <b>Dr. Reda Gaber</b><br><b>Dr. Abdelrahman M. Galal</b> | <b>2</b>         |

|                          |                                                                                                                                                                                                                                                                                                                                                                    |                                                                  |          |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|----------|
| <p>6<br/>14/11/2024</p>  | <ul style="list-style-type: none"> <li>• <b>Demonstration of drawing maxillary first premolar.</b></li> <li>• <b>Demonstration of building up of anterior teeth (Permanent mandibular lateral incisor)</b></li> <li>• <b>Student requirements: building up of mandibular lateral incisor.</b></li> </ul>                                                           | <p><b>Dr. Reda Gaber</b><br/><b>Dr. Abdelrahman M. Galal</b></p> | <p>2</p> |
| <p>7<br/>21/11/2024</p>  | <ul style="list-style-type: none"> <li>• <b>Demonstration of building up of premolars (Mandibular second premolar).</b></li> <li>• <b>Student requirement: building up permanent mandibular second premolar + drawing of maxillary first and second premolars.</b></li> </ul>                                                                                      | <p><b>Dr. Reda Gaber</b><br/><b>Dr. Abdelrahman M. Galal</b></p> | <p>2</p> |
| <p>8<br/>28/11/2024</p>  | <p><b>Midterm exam</b></p>                                                                                                                                                                                                                                                                                                                                         |                                                                  |          |
| <p>9<br/>5/12/2024</p>   | <ul style="list-style-type: none"> <li>• <b>Demonstration of carving permanent maxillary first molar (1<sup>st</sup> step).</b></li> <li>• <b>Demonstration of drawing permanent maxillary first molar.</b></li> <li>• <b>Student requirement: drawing of mandibular first and second premolars.</b></li> </ul>                                                    | <p><b>Dr. Reda Gaber</b><br/><b>Dr. Abdelrahman M. Galal</b></p> | <p>2</p> |
| <p>10<br/>12/12/2024</p> | <ul style="list-style-type: none"> <li>• <b>Demonstration of carving permanent maxillary first molar (2<sup>nd</sup> step &amp; finishing).</b></li> <li>• <i>Post-session: uploading video of drawing maxillary second molar.</i></li> <li>• <b>Requirement: carving permanent maxillary first molar + drawing of permanent maxillary first molar.</b></li> </ul> | <p><b>Dr. Reda Gaber</b><br/><b>Dr. Abdelrahman M. Galal</b></p> | <p>2</p> |

|                  |                                                                                                                                                                                                                                                         |                                                          |   |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|---|
| 11<br>19/12/2024 | <ul style="list-style-type: none"> <li>• <b>Demonstration of building up of molar (Mandibular first molar).</b></li> <li>• <b>Student requirements: building up of mandibular first molar + drawing of permanent maxillary second molar.</b></li> </ul> | <b>Dr. Reda Gaber</b><br><b>Dr. Abdelrahman M. Galal</b> | 2 |
| 12<br>26/12/2024 | <ul style="list-style-type: none"> <li>• <b>Natural teeth identification</b></li> <li>• <b>Student requirement: drawing of permanent mandibular first molar.</b></li> </ul>                                                                             | <b>Dr. Reda Gaber</b><br><b>Dr. Abdelrahman M. Galal</b> | 2 |
| 13<br>2/1/2025   | <ul style="list-style-type: none"> <li>• <b>Revision</b></li> <li>• <b>Student requirement: drawing of permanent mandibular second molar.</b></li> </ul>                                                                                                | <b>Dr. Reda Gaber</b><br><b>Dr. Abdelrahman M. Galal</b> | 2 |
| 14<br>9/1/2025   | <b>Final practical exam</b>                                                                                                                                                                                                                             | <b>Dr. Reda Gaber</b><br><b>Dr. Abdelrahman M. Galal</b> | 2 |
| 15<br>16/1/2025  | <b>University Final Exams</b>                                                                                                                                                                                                                           |                                                          |   |
| 16<br>23/1/2025  |                                                                                                                                                                                                                                                         |                                                          |   |

## ASSESSMENT RUBRICS

### 1. Rubric for Assessing Tooth Drawings in Dental Anatomy and Occlusion (10 Marks).

| Drawing of .....   |                                | Mark      |
|--------------------|--------------------------------|-----------|
| Size               |                                | 1         |
| Type of tooth      |                                | 2         |
| Tooth Aspect       | Facial                         | 1         |
|                    | Lingual/ Palatal               | 2         |
|                    | Mesial                         | 1         |
|                    | Distal                         | 1         |
|                    | Functional (-Incisal Occlusal) | 2         |
| <b>Total marks</b> |                                | <b>10</b> |

| Rubric for Assessing Tooth Drawings in Dental Anatomy and Occlusion |                                                                                                    |                                                            |                                                                         |                                                                     |       |
|---------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|------------------------------------------------------------|-------------------------------------------------------------------------|---------------------------------------------------------------------|-------|
| Assessment Criteria                                                 |                                                                                                    |                                                            |                                                                         |                                                                     |       |
| Criteria                                                            | Quality                                                                                            |                                                            |                                                                         |                                                                     | Score |
|                                                                     | Excellent (4 points)                                                                               | Good (3 points)                                            | Satisfactory (2 points)                                                 | Needs Improvement (1 points)                                        |       |
| <b>Size (Proportionality)</b>                                       | Accurate proportions, including crown and root dimensions relative to real-life measurements.      | Mostly accurate, with minor deviations in proportions.     | Noticeable errors in proportions but still recognizable.                | Highly inaccurate, resulting in unrealistic proportions.            | /1    |
| <b>Type of Tooth</b>                                                | Correct identification and representation of tooth type with clear anatomical features.            | Mostly correct, with minor errors in the tooth's features. | Tooth type somewhat unclear or features significantly incorrect.        | Incorrectly identified, lacking features typical of the tooth type. | /2    |
| <b>Facial Aspect</b>                                                | Accurately portrays curvature, ridges, and surface details for the facial (buccal/labial) surface. | Mostly accurate with minor errors in detail or shape.      | Some errors in curvature or incorrect landmark position.                | Significant anatomical features are missing or incorrect.           | /1    |
| <b>Lingual Aspect</b>                                               | Clearly illustrates surface anatomy, ridges, and grooves for the lingual/palatal aspect.           | Mostly accurate with minor missing details.                | Lacks detail or shows inaccuracies in surface anatomy.                  | Incorrect or missing key anatomical features.                       | /2    |
| <b>Mesial Aspect</b>                                                | Accurately illustrates correct anatomical features, including contact points and curvature.        | Mostly accurate with slight deviations in structure.       | Basic features present but lacks detail or has noticeable inaccuracies. | Poorly represented or missing important anatomical features.        | /1    |
| <b>Distal Aspect</b>                                                | Accurately illustrates correct anatomical features,                                                | Mostly accurate with slight deviations in structure.       | Basic features present but lacks detail or                              | Poorly represented or missing important                             | /1    |


|                                              |                                                                                      |                                                                   |                                                                |                                                                            |    |
|----------------------------------------------|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|----------------------------------------------------------------|----------------------------------------------------------------------------|----|
|                                              | including contact points and curvature.                                              |                                                                   | has noticeable inaccuracies.                                   | anatomical features.                                                       |    |
| <b>Functional (Incisal /Occlusal Aspect)</b> | Accurately drawn incisal/ occlusal surface, with all key elevations and depressions. | Most incisal/ occlusal details are correct, with minor omissions. | Basic features present but lacks detail or shows inaccuracies. | Missing key incisal/ occlusal details, surface appears simplified or flat. | /2 |

**Total Score:** \_\_\_\_ / 10

**Grading Scale:**

- **9 - 10:** Excellent
- **7 - 8:** Good
- **5 - 6:** Satisfactory
- **Below 5:** Needs Improvement


2. Rubric for Assessing Tooth Carving in Dental Anatomy and Occlusion (10 Marks for each tooth).



الموافق: / /

Dental Anatomy Lab

اليوم:



رقم الشعبة:

| Laboratory continuous assessment sheet            |                   |  |  |
|---------------------------------------------------|-------------------|--|--|
| <u>Carving of maxillary right central incisor</u> | Supervisor name : |  |  |
| (Requirements) (Marks 10%)                        | Student name:     |  |  |
| Right (1)                                         |                   |  |  |
| Size (1)                                          |                   |  |  |
| Fossa ( size /depth / location ) (1)              |                   |  |  |
| Cingulum ( size / depth / location ) (1)          |                   |  |  |
| Marginal ridges (M/D) (1)                         |                   |  |  |
| Convexity of labial surface (1)                   |                   |  |  |
| Incisal angels (M/D) (1)                          |                   |  |  |
| Lingual taper (1)                                 |                   |  |  |
| Base and cervical line (1)                        |                   |  |  |
| Smoothing (1)                                     |                   |  |  |
| Total (10)                                        |                   |  |  |



الموافق : \ \

**Dental Anatomy Lab**



اليوم :

رقم الشعبة :

| Laboratory continuous assessment sheet   |             |                   |  |
|------------------------------------------|-------------|-------------------|--|
| <b>Carving of maxillary right Canine</b> |             | Supervisor name : |  |
| (Requirements)                           | (Marks 10%) | Student name:     |  |
| Right                                    | (1)         |                   |  |
| Size                                     | (1)         |                   |  |
| Fossa<br>( size /depth / location )      | (1)         |                   |  |
| Cingulum<br>( size / depth / location )  | (1)         |                   |  |
| Marginal ridges<br>(M/D)                 | (1)         |                   |  |
| (Lingual +labial) ridges                 | (1)         |                   |  |
| Cusp slopes + Cusp tip                   | (1)         |                   |  |
| Base and cervical line                   | (1)         |                   |  |
| Lingual taper                            | (1)         |                   |  |
| Smoothing                                | (1)         |                   |  |
| <b>Total</b>                             | <b>(10)</b> |                   |  |



الموافق : ١ / ١

## Dental Anatomy Lab

اليوم :



رقم الشعبة :

| Laboratory continuous assessment sheet                   |             |                   |  |
|----------------------------------------------------------|-------------|-------------------|--|
| <b>Carving of maxillary right first molar</b>            |             | Supervisor name : |  |
| (Requirements)                                           | (Marks 10%) | Student name:     |  |
|                                                          |             |                   |  |
| Right                                                    | (1)         |                   |  |
| Size                                                     | (1)         |                   |  |
| Fossa<br>( MTF /DTF / distal / central )                 | (1)         |                   |  |
| Cusps<br>(MB / DB / ML / DL ) +<br>Tubercle of carabelli | (1)         |                   |  |
| Rhomboidal occlusal outline                              | (1)         |                   |  |
| Grooves<br>(central / distal / lingual / buccal)         | (1)         |                   |  |
| Marginal ridges + Oblique ridge                          | (1)         |                   |  |
| Crest of contour                                         | (1)         |                   |  |
| Cervical line                                            | (1)         |                   |  |
| Smoothing                                                | (1)         |                   |  |
| Total                                                    | (10)        |                   |  |

| Rubric for Teeth Carving Assessment Criteria  |                                                                                                                                                                                                                              |                                                                                                                                     |                                                                                                                                            |                                                                                                                                 |       |
|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|-------|
| Criteria                                      | Quality                                                                                                                                                                                                                      |                                                                                                                                     |                                                                                                                                            |                                                                                                                                 | Score |
|                                               | Excellent (4 points)                                                                                                                                                                                                         | Good (3 points)                                                                                                                     | Satisfactory (2 points)                                                                                                                    | Needs Improvement (1 points)                                                                                                    |       |
| <b>Size (Proportionality)</b>                 | Tooth is carved with accurate size and correct proportions of crown and root, matching the anatomical norms for the tooth type.                                                                                              | Mostly accurate size and proportions, with minor deviations.                                                                        | Noticeable errors in size, but still recognizable as the intended tooth.                                                                   | Significant size inaccuracies, distorting the tooth anatomy.                                                                    | /1    |
| <b>Side/ Outline</b>                          | The outline of the tooth is well-defined, with proper shape and contours specific to the tooth being carved (e.g., triangular for incisors, rhomboidal for molars) with the landmarks carved according to the selected side. | The shape is mostly accurate, with slight deviations in contour, symmetry or inconsistent landmarks according to the selected side. | The outline is present but lacks clear definition or has noticeable inaccuracies. Some anatomical landmarks not matching the selected side | Poorly defined or incorrect shape, lacking characteristic anatomical features. All landmarks not matching to the selected side. | /1    |
| <b>Fossae (Size, Depth, Location)</b>         | Fossae and pits are well-defined, with appropriate size, depth, and placement, accurate for the specific tooth type.                                                                                                         | Fossae and pits are mostly accurate but may show slight inaccuracies in depth or location.                                          | Fossae and pits are present but lack definition or have significant inaccuracies in size or location.                                      | Fossae and pits are poorly defined or incorrectly placed, with major errors in size and depth.                                  | /1    |
| <b>Cusps/Incisal Edges (Where Applicable)</b> | Cusps or incisal edges and angles are sharply defined, properly proportioned, and anatomically correct (e.g., distinct cusps for                                                                                             | Cusps or incisal edges and angles are mostly accurate but may lack sharpness or show slight size deviations.                        | Cusps or incisal edges and angles are present but lack clear definition or show significant inaccuracies.                                  | Cusps or incisal edges and angles are poorly defined, missing, or incorrectly shaped.                                           | /1    |

|                                                  |                                                                                                                                                                                     |                                                                                                 |                                                                                                                                |                                                                                   |    |
|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----|
|                                                  | molars, sharp incisal edges for incisors).                                                                                                                                          |                                                                                                 |                                                                                                                                |                                                                                   |    |
| <b>Ridges and Grooves</b>                        | Marginal ridges, developmental grooves, and other characteristic ridges are accurately carved, well-defined, and in the correct location.                                           | Ridges and grooves are mostly accurate, with slight errors in depth or location.                | Ridges and grooves and other characteristic ridges are present but lack clear definition or have noticeable inaccuracies.      | Ridges and grooves and other characteristic ridges are poorly carved or missing.  | /1 |
| <b>Contour (Facial, Lingual, Mesial, Distal)</b> | The contours of all tooth surfaces (facial, lingual, mesial, and distal) are smoothly carved and anatomically accurate, with natural convexity/concavity.                           | Contours are mostly accurate, with minor deviations in curvature or smoothness.                 | Contours are present but lack definition or show noticeable inaccuracies.                                                      | Contours are poorly defined or missing, creating an unnatural appearance.         | /1 |
| <b>Surface Anatomy (Supplementary Features)</b>  | Additional anatomical features, such as cingulum, tubercles, or the tubercle of Carabelli, are accurately carved and properly positioned, enhancing the tooth's natural appearance. | Surface anatomical features are mostly accurate, with slight errors in placement or prominence. | Anatomical features are present but lack clear definition or show significant inaccuracies.                                    | Features are poorly defined, missing, or incorrectly placed.                      | /1 |
| <b>Cervical Line/Base</b>                        | Cervical line is accurately curved with proper curvature at the mesial and distal sides, and with smooth transitions to the base.                                                   | Cervical line is mostly accurate but may show minor inconsistencies in curvature.               | Cervical line is present but lacks smooth transition or has notable inaccuracies or incorrect curvature mesially and distally. | Cervical line is poorly defined or misshapen, disrupting the base of the carving. | /1 |


|                                                     |                                                                                                                                                          |                                                                                                               |                                                                                               |                                                                                                                                     |    |
|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|----|
| <b>Smoothing and Presentation</b>                   | Surface is well-polished and smooth, with no rough edges, creating a professional and natural appearance.                                                | Surface is mostly smooth with minor rough spots or unfinished areas.                                          | Surface is somewhat rough or inconsistent in smoothness, but acceptable.                      | Surface is rough, uneven, and lacks a polished or finished appearance.                                                              | /1 |
| <b>Overall Presentation and Anatomical Accuracy</b> | The tooth is anatomically accurate, capturing all critical details and presenting a realistic and professional representation of the tooth being carved. | The carving is generally accurate, with minor anatomical errors but still a good representation of the tooth. | The carving has noticeable anatomical inaccuracies but is recognizable as the intended tooth. | The carving is poorly executed, with major anatomical inaccuracies or missing features, resulting in an unrealistic representation. | /1 |

**Total Score:** \_\_\_\_ / 10

**Grading Scale:**


- **9 - 10:** Excellent
- **7 - 8:** Good
- **5 - 6:** Satisfactory
- **Below 5:** Needs Improvement

3. Rubric for Assessing Wax Building up in Dental Anatomy and Occlusion (10 Marks for each tooth).



الموافق : ١ / ١

اليوم :



رقم الشعبة :

| Laboratory continuous assessment sheet |             |                   |  |
|----------------------------------------|-------------|-------------------|--|
| <u>Wax up of lower lateral incisor</u> |             | Supervisor name : |  |
| (Requirements)                         | (Marks 10%) | Student name:     |  |
| Contour                                | (2)         |                   |  |
| Margin                                 | (1)         |                   |  |
| Cingulum                               | (1)         |                   |  |
| Fossa                                  | (1)         |                   |  |
| Contact point                          | (2)         |                   |  |
| Marginal ridges (M+D)                  | (2)         |                   |  |
| Smooth                                 | (1)         |                   |  |
| <b>Total</b>                           | <b>(10)</b> |                   |  |



الموافق : \ \

### Dental Anatomy Lab

اليوم :



رقم الشعبة :

| Laboratory continuous assessment sheet |             |                   |  |
|----------------------------------------|-------------|-------------------|--|
| <b>Wax up of lower second premolar</b> |             | Supervisor name : |  |
| (Requirements)                         | (Marks 10%) | Student name:     |  |
| Contour                                | (2)         |                   |  |
| Margin                                 | (1)         |                   |  |
| Cusps (B\ ML\ DL )                     | (2)         |                   |  |
| Fossa (MTF /DTF /central)              | (1)         |                   |  |
| Contact point                          | (1)         |                   |  |
| Buccal ridge                           | (1)         |                   |  |
| Marginal ridges (M+D)                  | (1)         |                   |  |
| Smooth                                 | (1)         |                   |  |
| Total                                  | (10)        |                   |  |

**Dental Anatomy Lab**



الموافق : / /

اليوم :



رقم الشعبة :

| Laboratory continuous assessment sheet |                   |  |  |
|----------------------------------------|-------------------|--|--|
| Wax up of lower first molar            | Supervisor name : |  |  |
| (Requirements) (Marks 10%)             | Student name:     |  |  |
| Contour (2)                            |                   |  |  |
| Margin (1)                             |                   |  |  |
| Cusps (MB / DB / ML \ DL ) (1)         |                   |  |  |
| Distal cusp (size +location ) (1)      |                   |  |  |
| Fossa (MTF /DTF /central ) (2)         |                   |  |  |
| Contact point (1)                      |                   |  |  |
| Marginal ridges (M+D) (1)              |                   |  |  |
| Smooth (1)                             |                   |  |  |
| Total (10)                             |                   |  |  |

| Rubric for Teeth Waxing Up<br>Assessment Criteria |                                                                                                                                                                      |                                                                                                  |                                                                                                  |                                                                                            |       |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|-------|
| Criteria                                          | Quality                                                                                                                                                              |                                                                                                  |                                                                                                  |                                                                                            | Score |
|                                                   | Excellent<br>(4 points)                                                                                                                                              | Good<br>(3 points)                                                                               | Satisfactory<br>(2 points)                                                                       | Needs<br>Improvement<br>(1 points)                                                         |       |
| <b>Contour</b>                                    | Tooth contour is anatomically accurate, smooth, and follows natural curvature on all surfaces (buccal, lingual, mesial, and distal).                                 | Contour is mostly accurate, with minor deviations in smoothness or shape.                        | Contour is present but lacks definition or shows noticeable inaccuracies.                        | Poorly defined contour, distorting the tooth's anatomy.                                    | /2    |
| <b>Margins</b>                                    | Margins are well-defined, with smooth transitions between the wax-up and adjacent surfaces, accurately mimicking natural tooth margins.                              | Margins are mostly accurate, with slight irregularities in smoothness or blending.               | Margins are present but lack clear definition or show noticeable inaccuracies.                   | Margins are poorly defined, overhanging, uneven, or rough, disrupting the natural anatomy. | /1    |
| <b>Cusps/Incisal Edges</b>                        | Cusps or incisal edges are sharply defined, well-proportioned, and anatomically correct (e.g., distinct cusp patterns for molars, sharp incisal edges for incisors). | Cusps/incisal edges are mostly accurate but may lack sharpness or have minor deviations in size. | Cusps/incisal edges are present but lack clear definition or show significant inaccuracies.      | Cusps/incisal edges are poorly defined, missing, or incorrectly shaped.                    | /1    |
| <b>Fossae</b>                                     | Fossae are well-defined, appropriately sized, with smooth transitions and accurate depth, matching the anatomical                                                    | Fossae are mostly accurate, with slight errors in depth or smoothness.                           | Fossae is present but lacks clear definition or has significant inaccuracies and irregularities. | Fossa is poorly defined, too shallow, or deep, or missing, distorting the lingual surface. | /1    |

|                                         |                                                                                                                                       |                                                                                              |                                                                                            |                                                                         |    |
|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|----|
|                                         | structure of the tooth (e.g., central, mesial, distal fossae).                                                                        |                                                                                              |                                                                                            |                                                                         |    |
| <b>Contact Points</b>                   | Contact points are accurately positioned, clearly defined, and anatomically correct, facilitating proper contact with adjacent teeth. | Contact points are mostly accurate, with slight deviations in location or definition.        | Contact points are present but lacks definition or are incorrectly placed.                 | Contact points are poorly built, misplaced, or missing.                 | /2 |
| <b>Ridges (Marginal, Buccal/Labial)</b> | Marginal ridges and other characteristic ridges (e.g., buccal or labial) are well-defined and anatomically correct.                   | Ridges are mostly accurate but may show slight errors in prominence or smoothness.           | Ridges are present but lack clear definition or have noticeable inaccuracies.              | Ridges are poorly defined, uneven, or missing.                          | /1 |
| <b>Distal/Additional Features</b>       | Additional features, such as distal cusps or cingulum, are accurately sized, positioned, and detailed.                                | Additional features are mostly accurate but may show slight deviations in size or placement. | Additional features are present but lack clear definition or show noticeable inaccuracies. | Additional features are poorly defined, mislocated, or missing.         | /1 |
| <b>Smoothness</b>                       | The entire wax-up is polished and smooth, with no rough areas or sharp angles, resulting in a professional finish.                    | Surface is mostly smooth, with minor rough spots or areas that could be better polished.     | Surface is somewhat rough or inconsistent in smoothness but acceptable overall.            | Surface is rough, uneven, or unfinished, lacking smoothness and polish. | /1 |

**Total Score:** \_\_\_\_ / 10

**Grading Scale:**

- **9 - 10:** Excellent
- **7 - 8:** Good
- **5 - 6:** Satisfactory
- **Below 5:** Needs Improvement