

Course Title	Histology - Embryology II				
Course Code	DES140				
Course Type	Compulsory				
Level	Bachelor of Dentistry				
Year / Semester	1 <sup>st</sup> year / 2 <sup>nd</sup> semester				
Teacher's Name	TBA				
ECTS	6	Lectures / week	3 hrs / 13 weeks + exam week	Laboratories / week	3 hrs / 13 weeks
Course Purpose and Objectives	<p>The Purpose and the Objectives of this Course are:</p> <p>To provide students with the disciplines of human Histology and Embryology of the orofacial/skull complex. It will serve as a connective foundation upon which, courses as Anatomy-Histology-Embryology-Physiology and Biochemistry concerning the orofacial/skull complex Structure and Function in Dental sciences will be based.</p> <p>To acquire basic knowledge on the organization of the orofacial/skull complex, its Structure and Function, with emphasis on Histology and Embryology microstructure of the orofacial/skull complex and its related Birth Defects in pathology.</p> <p>To understand the principles of the orofacial/skull complex topics and the mechanisms of their Structure and Function from the molecular and cellular level to their tissue and organ level final development and its related Birth Defects in pathology.</p> <p>To learn the basic Histological and Embryological, clinical, and morphological elements of the structure of the Oral Cavity, Pharyngeal and Nasopharyngeal Soft and Hard tissue elements as well as their functional elements in normal and pathological tissues including disease and Birth Defects.</p> <p>To learn the basic Histological and Embryological, clinical, and morphological elements of the structure of deciduous and permanent teeth as well as their functional elements in normal and pathological tissues including disease and birth defects.</p>				
Learning Outcomes	<p>Upon successful completion of this course students should be able to demonstrate the understanding of the normal microstructure and evolution of the orofacial/skull complex and:</p> <ul style="list-style-type: none"> <li>• Explain the Histological and Embryological structures and</li> </ul>				

	<p>the organization of the orofacial/skull complex.</p> <ul style="list-style-type: none"> <li>• Recognize and describe the Histology of maxilla and mandible,</li> <li>• Recognize and describe the Histology of the Oral Cavity the Oropharynx and the Nasopharynx.as well as the Major and the Minor Salivary Glands.</li> <li>• Identify the morphological characteristics and the Histological differences between Deciduous and Permanent teeth and recognize all basic morphological characteristics of teeth according to their Histological Structure.</li> <li>• Describe detailed microstructural Histological differences between various regions of the orofacial/skull complex.</li> <li>• Describe the mechanisms of Taste and Olfaction, Mastication, Swallowing, and Speech according to their Histological Structure and Function.</li> <li>• Relate the microscopical structure of all normal soft and hard tissues of the stomatognathic region and the major and minor salivary glands with their function and relate at the initial stage their microscopic tissue characteristics with their changes at the clinical level related to pathology, to clinical disorders and Birth Defects.</li> <li>• Understand and describe the embryological development of the face, the head and neck and the stomatognathic region and the embryological development of the major and minor salivary glands and their pathology and birth defects.</li> <li>• Understand and describe the congenital anomalies and syndromes of the face, the head and neck, the temporomandibular joint, the stomatognathic region the alveoli and teeth.</li> <li>• Understand and describe the pathology and the congenital anomalies of the major and minor salivary glands.</li> <li>• Understand and describe the Syndromes affecting the face, the head and neck, the stomatognathic region, the temporomandibular joint, the alveoli and teeth and the major and minor salivary glands.</li> </ul>		
Prerequisites	None	Co-requisites	None
Course Content	<p>In that regard, students will familiarize themselves with the following Histological and Embryological Modules of the Orofacial Complex:</p> <ul style="list-style-type: none"> <li>• Explain the Histological and Embryological structures and microstructures and the organization and development of the orofacial/skull complex.</li> <li>• Recognize and describe the Histology and development of maxilla and mandible,</li> </ul>		

	<ul style="list-style-type: none"> <li>• Recognize and describe the Histology and development of the Oral Cavity, the Oropharynx, and the Nasopharynx, as well as the Major and the Minor Salivary Glands.</li> <li>• Identify the Histological differences between Deciduous and Permanent teeth and recognize all their basic morphological characteristics of teeth according to their Histological Structure and their modifications of shape, structure and function in pathology and birth defects.</li> <li>• Describe detailed Histological differences between the various regions of the orofacial/skull complex.</li> <li>• Describe the mechanisms of Taste, the Olfaction and Mastication,</li> <li>• Describe the detailed microstructure of the of the Dental Pulp and its development and birth defects.</li> <li>• Describe the mechanisms of Early Teeth Development and their related Birth Defects.</li> <li>• Describe the Histological microstructure of the Oral Mucosa and the Mucosa of the Nasopharynx.</li> <li>• Describe the mechanisms of Amelogenesis, Dentinogenesis and their related birth defects.</li> <li>• Describe the Histological microstructure of the Tongue the mechanisms of taste and olfaction; nociception; mechanosensation and its Development and Birth Defects</li> <li>• Describe the Histological microstructure and development of the Temporomandibular Joint and the Alveolar Bones and their related Birth Defects.</li> <li>• Describe the Histological microstructure and development of the Root, the Periodontal Ligament and the Pulp and their related Birth Defects.</li> <li>• Describe the Histological microstructure and development of the Periodontal Ligament and its surrounding Alveolar Bone, the Temporomandibular Joint and surrounding areas, and their related Birth Defects.</li> <li>• Describe the Histological microstructure and development of the Major and Minor Salivary Glands Development of the Salivary Glands and their related Birth Defects.</li> </ul>
Teaching Methodology	Face-to-face. Lectures, Microscopical Laboratories in Histology and Embryology, Computer Assisted Learning-CAL and 3D in Embryology Laboratories, Quizzes, Case Presentations, Group Presentations of Laboratory Reports and Assignments, Literature review sessions. Small Group Discussions, Virtual case scenarios,
Bibliography	<p><b>Histology:</b>  Berkovitz BKB, Holland GR, Moxham BJ. Oral Anatomy, Histology and Embryology. St. Louis: Elsevier, 2017.</p>

	<p>Junqueira's Basic Histology: Text &amp; Atlas; Antony L. Mescher, PhD, Mc Graw Hill Education LANGE, 14th Edition; 2015, New York, Chicago, San Francisco, Lisbon, London, Madrid, Mexico City, Milan, New Delhi, San Juan, Seoul, Singapore, Sydney, Toronto, International Edition; ISBN 978-0071842709</p> <p><b>Embryology:</b> Moore KL, Persaud TVN, Torchia MG. Before We Are Born. Essentials of Embryology and Birth Defects. Philadelphia: Elsevier Saunders, 2015.</p>								
Assessment	<table border="1"> <tr> <td>Final Examination</td> <td>60%</td> </tr> <tr> <td>Lab Report / Oral presentations</td> <td>30%</td> </tr> <tr> <td>Participation and attendance</td> <td>10%</td> </tr> <tr> <td>Total</td> <td>100%</td> </tr> </table>	Final Examination	60%	Lab Report / Oral presentations	30%	Participation and attendance	10%	Total	100%
Final Examination	60%								
Lab Report / Oral presentations	30%								
Participation and attendance	10%								
Total	100%								
Language	English								