

Course Title	Oral and Maxillofacial Radiology and Imaging I				
Course Code	DES272				
Course Type	Compulsory				
Level	Bachelor of Dentistry				
Year / Semester	2 nd year / 4 th semester				
Teacher's Name	TBA				
ECTS	3	Lectures / week	2 hrs / 13 weeks + exam week	Laboratories / week	2hrs / 13 weeks
Course Purpose and Objectives	<p>To familiarize the course participants with the nature and production of X-rays as well as the functions of the dental x-ray machine.</p> <p>To explain and analyze the diagnostic properties of the dental x-rays and the formation of a diagnostic image.</p> <p>To discuss the biologic effects of radiation and learn mandatory protective measures for the patient as well as the operator.</p> <p>To learn all steps from proper x-ray selection to x-ray machine to x-ray taking as well as the parameters of a diagnostic dental radiograph.</p>				
Learning Outcomes	<p>Upon successful completion of this course students should be able to:</p> <ul style="list-style-type: none"> • Discuss the principles of x-ray production and the quality features of the x-ray beam. • Describe the diagnostic properties of x-rays and their biologic effects. • Demonstrate proficiency in operating the dental X-ray machine and make different types of intra-oral radiographs based on diagnostic needs. • Recognize radiographic errors and correction strategies. 				
Prerequisites	None	Co-requisites	None		
Course Content	<p>In that regard, students will familiarize themselves with the following Modules:</p> <ul style="list-style-type: none"> • Introduction to Dental Radiology - History of X-rays and types of radiations. • The X-ray machine. The production of X-rays. Interactions of x-rays with matter. • Properties of X-rays. Factors affecting the intensity of the X-rays beam. 				

	<ul style="list-style-type: none"> • Geometric properties of X-rays. Radiologic image characteristics, density, brightness, and contrast. • X-rays image detectors and image recording media. • Intra-oral radiologic examinations. • Radiation biology radiation safety and protection. • Intra-oral radiographic anatomy of maxilla and mandible. • Panoramic radiology technique and errors. • Panoramic radiographic anatomy. • Other extra-oral radiologic examinations. • Review for final examination. • Acquaintance with the digital image detectors. • Intra-oral radiologic technique. • Digital detector processing. • Dental radiographic anatomy. • Panoramic radiology positioning errors and correction. 								
Teaching Methodology	<p>Face-to-face. Lectures.</p> <p>“Hands on” laboratory exercises, x-ray taking practice in Clinic</p>								
Bibliography	<p>Mallya SM, Lam EWN. White and Pharoah’s Oral Radiology: Principles and Interpretation. St. Louis: Elsevier, 2018.</p> <p>Whaites E, Drage N. Essentials of Dental Radiography and Radiology, Churchill Livingstone, 5th Ed. 2013</p>								
Assessment	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">Final Examination</td> <td style="width: 40%; text-align: center;">60%</td> </tr> <tr> <td>Laboratory / Clinical Work / Oral presentations</td> <td style="text-align: center;">30%</td> </tr> <tr> <td>Participation and attendance</td> <td style="text-align: center;">10%</td> </tr> <tr> <td>Total</td> <td style="text-align: center;">100%</td> </tr> </table>	Final Examination	60%	Laboratory / Clinical Work / Oral presentations	30%	Participation and attendance	10%	Total	100%
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