

Course Title	Operative Dentistry III				
Course Code	DES345				
Course Type	Compulsory				
Level	Bachelor of Dentistry				
Year / Semester	3 rd year / 6 th semester				
Teacher's Name	TBA				
ECTS	5	Lectures / week	1hrs / 13 weeks + exam week	Laboratories / week	4hrs / 13 weeks
Course Purpose and Objectives	<p>This course is a continuance of the Operative Dentistry II course. It includes a lecture and laboratory component. The theoretical component is designed to give the students foundation knowledge of the principles, terminology, instruments, materials and techniques utilized in the practice of Operative Dentistry. The principles of tooth preparations and the basics of single tooth restorations in direct restorative materials such as amalgam and composite resin, to restore pathologically damaged tooth structure due to dental caries, fracture or trauma, will be presented.</p> <p>All aspects of Operative Dentistry interventions will be applied on the basis of a clear understanding of the aetiology and preventive aspects of caries and caries management by risk assessment.</p> <p>In the practical component, the students will have demonstrations and perform a series of exercises in the Simulation Laboratory, utilizing current instrumentation and materials. They will perform different tooth preparations on artificial teeth on phantom heads, appropriate for the restorative material to be used, with the goal of the best possible longevity and the maximum possible tooth structure conservation. They will also acquire knowledge on the appropriate restorative material manipulation and placement techniques. Proper rubber dam isolation techniques will be demonstrated and applied.</p> <p>Students will continue working in the Haptic Simulation Laboratory to develop specific psychomotor and cognitive skills through the use of virtual reality-based training that will enhance and augment their training in the Operative Dentistry course. Technical skills are developed through learning preparations with a high-speed</p>				

	handpiece, low speed handpiece, and dental hand instruments in a virtual reality, advanced simulation environment. This course prepares the students for performing Operative Dentistry procedures in a supervised clinical setting.		
Learning Outcomes	<ul style="list-style-type: none"> • Appropriately manipulate and place, in artificial tooth cavities, restorative materials such as amalgam, composite resin and glass ionomer cements in order to properly restore anatomical form, function and aesthetics. • Describe and properly use different types of matrix systems. • Identify and explain the use of materials for pulpal protection. Describe the use of various bases and liners. • Describe the mechanism of etching and bonding of different types of contemporary adhesive agents. • Demonstrate the proper technique for finishing and polishing amalgam and composite resin restorations. 		
Prerequisites	Dental Morphology Operative Dentistry I Operative Dentistry II	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 the methods and chemistry of polymerization. • Polymerization and light curing devices. Ocular protection. • Isolation and rubber dam in Dentistry. • Pit and fissure sealants. • Conservative composite resin restorations (preventive resin restorations). • Root caries. • Glass ionomer restorations. • Extensive amalgam restorations. • Retention pins. • Direct post and cores. • Color in Dentistry. • Shade matching in restorative Dentistry. 		
Teaching Methodology	Face-to-face		
Bibliography	Sturdevant's Art and Science of Operative Dentistry; Andre V. Ritter, Lee W. Boushell, Ricardo Walter; 7 th Edition;2018;Elsevier Inc. St. Louis, Missouri, 63043, USA. ISBN: 978-0-323-47833-5.		

	<p>Craig's Restorative Dental Materials; Ronald L. Sakaguchi, Jack L. Ferracane, John M. Powers; 14th Edition; 2018; Elsevier Inc. St. Louis, Missouri, 63043, USA. ISBN: 978-0-323-47821-2.</p> <p>Summitt's Fundamentals of Operative Dentistry: A Contemporary Approach; Thomas J Hilton, Jack L. Ferracane, James Broome; 4th Edition; 2013; Quintessence Publishing Co Inc, Hanover Park, IL, 60133, USA. ISBN: 978-086715-528-0.</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%
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Language	English								