Course Title	Biomaterials and Technology in Dentistry					
Course Code	DES160					
Course Type	Compulsory					
Level	Bachelor of Dentistry					
Year / Semester	1 <sup>st</sup> year / 2 <sup>nd</sup> semester					
Teacher's Name	ТВА					
ECTS	3	Lectures / w	eek	2hrs / 13 weeks + exam week	Laboratories / week	2hrs / 13 weeks
Course Purpose and Objectives	To learn scientific principles of the study of dental biomaterials including relationships among compositions, physical properties, and clinical properties for dental biomaterial systems. Familiarization with the structure and properties of the majority of dental biomaterials, evaluation of similar materials according to their use, and ability to justify a differing behavior during their use.					
Learning Outcomes	<ul> <li>Recognize the physical, mechanical, chemical properties of materials in general and of the dental materials specifically.</li> <li>Discuss the categories of dental materials and their respective use.</li> <li>Compare and evaluate the behavior of materials according to their composition and their techniques of use.</li> <li>Discuss the classification and evolution of dental biomaterials.</li> <li>Classify the biological properties of Dental Biomaterials</li> <li>Select and apply dental materials in its aspects both preclinical, clinical or laboratory.</li> </ul>					
Prerequisites	None		Co-re	quisites	None	
Course Content	In that regard, students will familiarize themselves with the following Modules: • Mechanical Properties, Physical Properties, • Structure of Ceramics, Structure of Polymers, • Amalgam, Endodontic Materials, Reparative and regenerative					

Teaching	<ul> <li>materials,</li> <li>Impression Materials, Cements,</li> <li>Lab Materials (gypsum, PMMA, etc) / introduction to Cad Cam,</li> <li>Metals and Alloys/ (casting/cadcam/laser sintering),</li> <li>Dental Ceramics, Resin Composites, Enamel and Dentin bonding,</li> <li>Luting Agents/ Bonding different materials</li> <li>Clinical examples of all the above in Endodontics, Fixed Prosthodontics, Removable Prosthodontics, Oral Surgery, Periodontology, Orthodontics and Pediatric Dentistry.</li> </ul>				
Bibliography	"Introduction to Dental Materials" 4th Edition by Richard Van Noort (BSc DPhil DSc FAD FRSA)				
Assessment	Final Examination60%Lab Report / Oral presentations30%Participation and attendance10%Total100%				
Language	English				