

	UNIVERSITY OF EAST SARAJEVO Faculty of Mechanical Engineering					
	Study program: Mechanical Engineering					
	1 ST LEVEL OF STUDIES			3 rd YEAR		
Course title		CAD – 3D modeling				
Department		Department of Mechanical constructions and Engineering Design				
Code		Course status		Semester		ECTS
MAΦ-1-1-MC-06-2-034-6-5-2-0-2		Election		I		6
Professor		PhD Miroslav Milutinovic, assistant professor				
Teaching assistant		M. Sc. Aleksija Đurić - teaching assistant				
Number of hours (per week)			Individual student workload (in hours in semester)			Coefficient of student workload S₀
L	E	LE	L	E	LE	S₀
2	0	2	2*15*S ₀	0*15*S ₀	2*15*S ₀	1.4
Total total teaching hours in semester 2*15 + 0*15 + 2*15 = 60 hours			Total student's workload (in hours in semester) 2*15*S ₀ + 0*15*S ₀ + 2*15*S ₀ = 84 hours			
Total course workload: 75 + 105 = 180 hours in semester						
Student learning objectives		<ol style="list-style-type: none"> 1. Education students for 2. Independent working of geometric models of machine parts and assemblies, 3. Independent working of technical documentation, 4. Parametric variation of the model 				
Conditionality		No conditioning				
Teaching methods		Lectures, laboratory exercises				
Content of the course by weeks		<ol style="list-style-type: none"> 1. Introductory considerations, 2. Application of computers in the process of construction and development of new products, 3. Geometric modeling of machine parts, 4. Types of models. Advantages and disadvantages, 5. Euler-Pinocare operations. B-rep model validation 6. CSG model, 7. Modeling of prismatic shapes, 8. Modeling of cylindrical shapes, 9. Mathematical transformations of the model, 10. Parametric modeling, 11. Use of standard and standardized machine elements, 12. Making of subassemblies and assemblies, 13. Preparation of construction documentation. Projections, sections and views, 14. Simulation of working assembly, 15. A simple stress analysis 				
Required literature						
Authors		Name of the publication, publisher		Year	Pages	
M.M.M. SARCAR, at all.		Computer Aided Design and Manufacturing		2008		
M.Milutinovic		Authorized presentations				
Additional literature						
Authors		Name of the publication, publisher		Year	Pages	
					-	
Type of student evaluation				Points	Percentage	
Obligations, forms of knowledge check and assessment		attendance at lectures / exercises		5+5	10%	
		Colloquium I and II + Written exam		50	50%	
		final exam (oral / written)		40	40%	
		Total		100	100 %	
Web page						
Date of certification						