
	UNIVERSITY OF EAST SARAJEVO Faculty of Mechanical Engineering					
	Study program: Mechanical Engineering					
	1 ST LEVEL OF STUDIES	2 ST YEAR				
Course title	MACHINE ELEMENTS 2					
Department	Department of Mechanical constructions and Engineering Design					
Code	Course status	Semester	ECTS			
MAΦ-1-1- MC-06-1-020-4-6-3-2-0	Mandatory	IV	6			
Professor	PhD Biljana Marković, full 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
3	1	1	3*15*S ₀	1*15*S ₀	1*15*S ₀	1.4
Total total teaching hours in semester 3*15 + 1*15 + 1*15 = 75 hours			Total student's workload (in hours in semester) 3*15*S ₀ + 1*15*S ₀ + 1*15*S ₀ = 105 hours			
Total course workload: 75 + 105 = 180 hours in semester						
Student learning objectives	1. Introduction to the general principles of function and calculation of machine parts for rotational movement; 2. Introduction to the basic principles in the functioning and calculation of machine elements for power transmission; 3. Introduction to the use of computers in the construction and calculation of machine elements for rotational motion and power transmission; Software packages for selection, construction and calculation of machine elements;					
Conditionality	Machine elements 1					
Teaching methods	Lectures, exercises, graphic exercises, computer exercises, colloquiums					
Content of the course by weeks	1. Basics of power transmission; Function, role, types; 2. Couplings, purpose and types, shapes, construction, calculation; 3. Bearings in general: function, purpose, use; 4. Sliding bearings, basic characteristics, friction, lubrication, bearing capacity, sealing, construction and calculation; 5. Rolling bearings, characteristics, types, marking, tolerances, selection, static and dynamic bearing capacity, service life, equivalent load, calculation, installation; 6. Elements for transmission of motion and power, function, division, types, principles, transmission relations, degree of utilization; 7. Gears, function, types, basic characteristics; standard profiles, gear tooling profiles; Gear geometry, 8. Kinematics of gear pairs, basic coupling rule, tangent, degree of coupling; Tool profile shifting, reminder, tolerance, fabrication control, measurement over teeth; 9. Cylindrical gear pairs, characteristics, function, use, construction, forces on gears; 10. Cylindrical gear pairs, calculation criteria, safety levels; 11. Bevel gear pairs, characteristics, function, use, construction, forces on gears, calculation criteria, degrees of safety; 12. Worm gear pairs, characteristics, function, use, construction, forces on gears, calculation criteria, degrees of safety; 13. Belt transmission, basic characteristics, selection, function, contouring, calculation; 14. Frictional transmission, basic characteristics, selection, function, contouring, calculation; 15. Chain transmission, basic characteristics, selection, function, contouring, calculation;					
Required literature						
Authors	Name of the publication, publisher			Year	Pages	
V. Miltenović, M Tica, B. Marković	"Konstrukcioni elementi u mašingradnji 2", Faculty of Mechanical Engineering East Sarajevo			2020.	-	
B. Marković	Script in English					
Additional literature						
Authors	Name of the publication, publisher			Year	Pages	
					-	
Obligations, forms of knowledge check	Type of student evaluation			Points	Percentage	
	attendance at lectures / exercises			5+5	10 %	

and assessment	Colloquium I and II + Written exam	20+20	40%
	Graphic works	20	20%
	final exam (oral / written)	30	30%
	Total	100	100 %
Web page	http://www.maf.ues.rs.ba/PDF_za_sajt/ZAJEDNICKI_I_II_2017/Masinski%20elementi%202.pdf (in Serbian language)		
Date of certification			