	UNEVERSITY OF EAST SARAJEVO Faculty of Mechanical Engineering	
	Study program: *Mechanical Engineering*	
	1ST LEVEL OF STUDIES	2ST YEAR

Course title	**MACHINE ELEMENTS 2**		
Department	Department of Mechanical constructions and Engineering Design		

Code		**Course status**	**Semester**	**ECTS**
МАФ-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 S_o**
L	**E**	**LE**	**L**	**E**	**LE**	**S_o**
3	1	1	$3*15*S_o$	$1*15*S_o$	$1*15*S_o$	1.4

Total total teaching hours in semester $3*15 + 1*15 + 1*15 = 75$ hours	Total student's workload (in hours in semester) $3*15*S_o + 1*15*S_o + 1*15*S_o = 105$ 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 mašinogradnji 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			