	UNEVERSITY OF EAST SARAJEVO Faculty of Mechanical Engineering	
	Study program: Mechanical Engineering	
	1ST LEVEL OF STUDIES	3ST YEAR
Course title	MATERIAL HANDLING EQUIPMENT	
Department	Department of Mechanical constructions and Engineering Design	

Code	Course status	Semester	ECTS
МАФ-1-1-MC-06-2-056-5-5-3-2-0	Mandatory	VI	6

Professor	PhD Biljana Marković, full professor
Teaching assistant	Spasoje Trifković

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	2	0	$3*15*S_o$	$2*15*S_o$	$0*15*S_o$	1.4

Total total teaching hours in semester $3*15 + 2*15 + 0*15 = 75$ hours	Total student's workload (in hours in semester) $3*15*S_o + 2*15*S_o + 0*15*S_o = 105$ hours
Total course workload: $75 + 105 = 180$ hours in semester	

Student learning objectives	The basic goal of this subject is to introduce students into the fundamentals of intralogistics (material handling equipment in intralogistics) and to enable achieving practical skills in engineering education and professional work such as are analysis of duty cycle of material handling equipment, selection, sizing and calculation of material handling equipment as elements of material handling and conveying machines.
Conditionality	No conditioning
Teaching methods	Lectures, exercises, graphic exercises, colloquiums
Content of the course by weeks	1. Introduction into intralogistics and material handling equipment, significance of this field, historical development, classification; 2. Basic characteristics and application of non-continuous transport devices (cranes); 3. Types of driving mechanisms (selection, sizing, calculation); 4. Handling devices, operating principles, calculation and construction; 5. Carrying flexible elements, ways of tying, calculation and selection of ropes and chains; 6. Types, calculation and constructive characteristics of pulleys, pulley blocks and drums; 7. Devices for stopping the drive and calculation of the brakes; 8. Mechanisms for lifting and moving loads, theoretical basis of calculations, slipping and resistance; 9. Reach change mechanisms, model display and calculation basics. Stability against overturning.; 10. Belt conveyors. Constructions, calculation and selection of basic elements; 11. Plate conveyors. Plate shapes, traction elements, drive and tensioning device; 12. Rake and overhead conveyors; 13. Types, construction and calculation of floor conveyors elements; 14. Construction and calculation of conveyor system without traction element; 15. Auxiliary devices of conveyor systems;

Required literature			
Authors	**Name of the publication, publisher**	**Year**	**Pages**
Sava Dedijer	Transportni uređaji, Građeveviska knjiga, Beograd	1987.	-
Milomir Gašić	Transportni uređaji-neprekidni transport, Fakultet za mašinstvo i građevinarstvo, Kraljevo	2010.	-
Milomir Gašić, Mile Savković	Neprekidni transport-rešeni zadaci, Mašinski fakultet, Kraljevo	2008.	-

Additional literature			
Authors	**Name of the publication, publisher**	**Year**	**Pages**
Lawrence K. Shapiro, P.E. Jay P. Shapiro, P.E.	Cranes and Derricks, ISBN: 978-0-07-162558-6	2011.	-
Patrick M. McGuire, P.E.	Conveyors, Application, Selection, and Integration, CRC Press	2009.	-

	Type of student evaluation	Points	Percentage
Obligations, forms of knowledge check and assessment			
	attendance at lectures / exercises	5+5	10%
	Colloquium I and II	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/MKRP2017/Transportna%20sredstva.pdf (in Serbian language)		
Date of certification			