	UNEVERSITY OF EAST SARAJEVO	
	Faculty of Mechanical Engineering	
	Study program: ***Mechanical Engineering***	
	1ST LEVEL OF STUDIES	4th YEAR

Course title	**Flexible technology systems**
Department	Department of production engineering

Code	**Course status**	**Semester**	**ECTS**
МАФ-1-1-МC-06-1-046-8-5-2-0-2	Mandatory	VIII	5

Professor	PhD Aleksandar Kosarac, assistant professor
Teaching assistant	MSc Lana Sikuljak, senior 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**
2	0	2	$2*15*S_o$	$0*15*S_o$	$2*15*S_o$	1.4

Total total teaching hours in semester 2*15 + 0*15 + 2*15 = 60 hours	Total student's workload (in hours in semester) $2*15*S_o + 0*15*S_o + 2*15*S_o$ = 84 hours

Total course workload: 60 + 84 = 144 hours in semester

Student learning objectives	Acquiring knowledge about the principles of functioning, construction, production, management, and programming of automatic flexible technological structures of different levels of complexity.
Conditionality	No conditioning
Teaching methods	Lectures, laboratory exercises, presentations, homework, consultations.
Content of the course by weeks	1. Introduction to the course, course goals, course objectives, literature, student tasks 2. Fundamentals of flexible manufacturing systems, basic terminology 3. Technical foundation for design and implementation of flexible manufacturing structures 4. Numerically controlled machine tools as components of flexible manufacturing systems, historical development, and features of CNC machine tools. 5. Subsystems of the CNC machine tools, CNC machine tool programming 6. Material-handling system in flexible manufacturing system and its characteristics 7. Material-handling system programming 8. Inspection systems in FMS - tool inspection and workpiece inspection 9. Inspection systems in FMS programming 10. Monitoring and Diagnosis System in FMS 11. Material storage system in FMS 12. Tool storage system in FMS 13. FMS computer control system 14. FMS types 15. Computer-integrated manufacturing CIM

Required literature			
Authors	**Name of the publication, publisher**	**Year**	**Pages**
Гатало, Р., Зељковић, М.	Флексибилни технолошки системи, ауторизовани рукопис предавања, Машински факултет, Источно Сарајево	2011/12	-

Additional literature			
Authors	**Name of the publication, publisher**	**Year**	**Pages**
Рекецки, Ј., Гатало, Р., Зељковић, М., Боројев, Љ., Ходолич, Ј.	флексибилни технолошки системи за обраду ротационих израдака, књига I, ФТН – ИПМ, Нови Сад	1989.	
Гатало, Р., Рекецки, Ј., Зељковић, М., Боројев, Љ., Ходолич, Ј.	флексибилни технолошки системи за обраду ротационих израдака, књига II, ФТН – ИПМ, Нови Сад	1989.	
Ходолич, Ј., Боројев, Љ., Рекецки, Ј., Гатало, Р., Зељковић, М.	флексибилни технолошки системи за обраду ротационих израдака, књига III, ФТН – ИПМ, Нови Сад	1989.	

Obligations, forms of knowledge check and assessment	**Type of student evaluation**	**Points**	**Percentage**
	Pre-exam obligations		
	Attendance at lectures / exercises	10	10%
	Colloquiums, homework	50	50%

	Final exam			
		Final exam	40	40%
	Total		100	100 %
Web page				
Date of certification				