
	UNIVERSITY OF EAST SARAJEVO Faculty of Mechanical Engineering					
	Study program: Mechanical Engineering					
	1 ST LEVEL OF STUDIES		3 th YEAR			
Course title	Metal cutting					
Department	Department of production engineering					
Code		Course status		Semester		ECTS
MAΦ-1-1-MC-06-2-033-6-4-3-1-1		Mandatory		V		5
Professor	PhD Aleksandar Kosarac, associate professor					
Teaching assistant	MSc Jelica Anic, 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
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 + 0115 + 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	Acquiring basic knowledge in the field of metal cutting technology used in the construction of products and the selection of the most favorable manufacturing methods. The acquired knowledge should enable the constructors of machines and other devices to correctly design products, and the technologists to correctly design the manufacturing process and select the most favorable cutting regime.					
Conditionality	No conditioning					
Teaching methods	Lectures, classroom exercises, laboratory exercises, consultations.					
Content of the course by weeks	<div>1. Metal cutting principles, the importance of metal cutting in modern production.</div> <div>2. Machine tool for metal cutting, cutting motions in metal cutting</div> <div>3. Chip formation, chip reduction ratio, forces in metal cutting, orthogonal metal cutting, heat generation in metal cutting, metal cutting fluids</div> <div>4. Tool wear, surface quality, the precision of the metal cutting process</div> <div>5. Theory of metal cutting</div> <div>6. The most common operations, cutting tool classification and geometry, cutting speed, cutting forces, metal cutting electric motor calculation</div> <div>7. Metal cutting parameters, machining time calculation</div> <div>8. Classification of machine tools</div> <div>9. Machine tool structure</div> <div>10. The motions of machine tools</div> <div>11. NC machine tools, classic lathes, CNC lathe machines</div> <div>12. Classic drilling machines, CNC drilling machines, classic milling machines, sawing machines</div> <div>13. CNC milling machines, classic grinding machines, CNC grinding machines</div> <div>14. Broaching machine: vertical broaching machine, horizontal broaching machine</div> <div>15. Flexible Manufacturing Systems, the concept of Computer Integrated Manufacturing</div>					
Required literature						
Authors	Name of the publication, publisher			Year	Pages	
Д. Миликић	Технологија обраде резањем - општа и примењена теорија, ФТН, Нови Сад			1999.	-	
Ковач, П., Миликић, Д., Гостимировић, М., Секулић, М., Савковић, Б.	Збирка задатака из технологије обраде резањем, Факултет техничких наука Нови Сад			2011.		
Additional literature						
Authors	Name of the publication, publisher			Year	Pages	
Ковач, П., Миликић, Д.	Резање метала, Факултет техничких наука Нови Сад			1998.		
Лазих, М.	Технологија обраде метала резањем, Машински факултет Крагујевац			2002.		
Obligations, forms of knowledge check and assessment	Type of student evaluation				Points	Percentage
	Pre-exam obligations					
	Attendance at lectures / exercises				5	5%
	Homework				15	15%
	Colloquium I, II				40	40%

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