
		UNIVERSITY OF EAST SARAJEVO					
		Faculty of Technology Zvornik					
		<i>Study programme: Chemical Engineering and Technology</i>					
		Cycle I		Year II			
Course title		Fundamentals of electrical engineering					
Department							
Course code		Course status		Semester		ECTS	
04-1-017-3		Compulsory		III		5	
Teacher		Srđan Lale, PhD, associate professor					
Teaching assistant		Srđan Vuković, MSc, senior assistant					
Number of classes/ teaching workload (per week)			Individual student workload (in hours per semester)			Student workload coefficient S_0	
Lectures	Auditory exercises	Laboratory exercises	Lectures	Auditory exercises	Laboratory exercises	S_0	
2	2	0	30	30	0	1.50	
2*15+2*15+0*15=60 hours			(2*15*1.50+2*15*1.50+0*15*1.50)=90 hours				
Total course workload 60+90=150 hours per semester							
Learning outcomes		<p>After finishing the course, the student will be able to:</p> <ol style="list-style-type: none"> 1. demonstrate the necessary knowledge for solving linear electric circuits of stationary electric current using various methods and theorems. 2. demonstrate the necessary knowledge related to solving simple periodic current circuits 3. demonstrate the necessary knowledge related to three-phase current, calculation of transformers and the operation of machines of stationary and periodic electric current. 4. demonstrate and utilize knowledge and skills in the operation of basic electronic components. 5. apply the acquired knowledge in engineering practice. 					
Prerequisites							
Teaching methods		Lectures, auditory exercises, seminar paper.					
Syllabus outline per week		<ol style="list-style-type: none"> 1. Methods of solving linear electric circuits of stationary electric current. 2. Method of contour currents. 3. Node potential method. 4. The superposition theorem. Reciprocity theorem. 5. Ideal current generator. Ideal voltage generator. Theorem of compensation. 6. Thévenin's theorem. Norton's theorem. 7. Transitional regimes. First order systems. 8. Second order systems. 9. Mid-term test (Colloquium) 10. Solving simple periodic current circuits. 11. Three-phase current. 12. Transformers. Stationary electric current machines (generators and engines). 13. Simple periodic current machines. 14. Semiconductor diode. Bipolar and MOS transistor. 15. Mid-term test (Colloquium). <p>Mid-term tests are taken after the 8th week and the 15th week. Semester verification is required after the 15th week.</p>					
Obligatory reading							
Author		Title, publisher			Year	Pages	
D. Kandić		Electrical engineering			2002	1-383	
Additional reading							
Author		Title, publisher			Year	Pages	
D. Škatarić, N. Ratković, T. Stojić, P. Lukić		Workbook for electrical engineering			1999		

Obligations, assessment methods and grading system	Type of student evaluation	Grade points	Percentage	
	Pre-exam obligations			
	Attendance	6	6 %	
	Mid-term test I	25	25 %	
	Mid-term test II	25	25 %	
	Seminar paper	14	14 %	
	Final examination			
	Final examination (oral)	30	30 %	
Total	100	100 %		
Webpage	www.tfzv.ues.rs.ba			
Date				