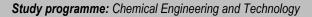
NIC E

UNIVERSITY OF EAST SARAJEVO

Faculty of Technology Zvornk



Cycle I Year II



Course title Fundamentals of electrical engineering

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Course status	Semester	ECTS
Compulsory	III	5

Teacher Srđan Lale, PhD, associate professor

Teaching assistant

Srđan Vuković, MSc, senior assistant

Number of claweek)	asses/ teaching	workload (per	Individ	ual st	udent workload semester)	(in hours per	Student workload coefficient S _o
Lectures	Auditory exercises	Laboratory exercises	Lecture	es	Auditory exercises	Laboratory exercises	S _o
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

After finishing the course, the student will be able to:

- demonstrate the necessary knowledge for solving linear electric circuits of stationary electric current using various methods and theorems.
 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.

- 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.

Syllabus outline per week

- 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).

Mid-term tests are taken after the 8th week and the 15th week. Semester verification is required after the 15th week.

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	

	Type of student evaluation	Grade points	Percentage
Obligations, assessment methods and grading system	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		•	_