



Меѓународен Универзитет Визион - International Vision University
 Universiteti Ndërkombëtar Vizion - Uluslararası Vizyon Üniversitesi

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SYLLABUS

COURSE NAME	COURSE CODE	SEMESTER	COURSE LOAD	ECTS
DIGITAL TECHNIQUE	4003	1	240	8

Prerequisite(s)	None
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Course Language	Turkish
Course Type	Required
Course Level	First Cycle
Course Lecturer	
Course Assistants	
Classroom	
Extra Curricular Office Hours and Location	Meeting: Consultancy:

Course Objectives	The objective of this course is to teach the basic concepts and fundamental laws of Digital Technique, linear circuit solutions, electrical work and power, electricity, heat conversion, electrochemical phenomena, magnetic fields and laws, electrostatic field, capacitors, electromagnetic induction, A.A. resistance, a phase circuits and power, production of three-phase A.A., star-delta connection.
Course Learning Outcomes	The students who succeeded in this course: <ul style="list-style-type: none"> • Will be able to learn the basic concepts, fundamental laws of Digital Technique and linear circuit analysis. • Will be able to understand the Electrical work and power, electric heat conversion of electrochemical phenomena, magnetic fields and laws, electrostatic field, capacitors and to apply the electromagnetic induction. • Will be able to explain the resistance A.A., a phase circuits and power, production of three-phase A.A., star-delta connection. • Will be able to analyze circuits and its account correctly. • Will be able to have a proper use of resistor, capacitor and measuring instruments.
Course Contents	The course contents are: Classification the electrical circuit elements and characteristics of the circuit, concept of appropriate circuit analysis and the situation obtaining in the equation, complete solution of constant coefficient of linear circuits, circuit elements and circuit types, Ohm's and Kirchhoff's laws, resistance transformations, alternative circuits, resistors and measurements.

WEEKLY SUBJECTS AND RELATED PREPARATION STUDIES

Week	Subjects	Related Preparation
1	Molecules, atomic structure. Bohr's model, the concept of free electrons	Related Chapters of Course Sources
2	Direct current circuits, methods of direct current circuits	Related Chapters of Course Sources
3	Environmental Flows Method –D.C. Circuits	Related Chapters of Course Sources
4	Joints method – D.C. Circuits	Related Chapters of Course Sources
5	Resistance, connections, the triangle - star transformation	Related Chapters of Course Sources
6	Capacitors, connections	Related Chapters of Course Sources
7	Mid-term Exam	Related Chapters of Course Sources
8	Transformers, structure and use	Related Chapters of Course Sources
9	Electrical works and power	Related Chapters of Course Sources
10	Magnetic fields and laws, electrostatic field	Related Chapters of Course Sources
11	Electromagnet induction, mono and three-phase generator, structure and principles of electricity generators	Related Chapters of Course Sources
12	Problem solving - analysis of electrical circuits	Related Chapters of Course Sources
13	Alternative circuits and components, impedance	Related Chapters of Course Sources
14	Computer electrical power protection concepts and the basic hardware structure	Related Chapters of Course Sources
15	Final Exam	Related Chapters of Course Sources

ECTS / WORKLOAD TABLE

Presentation / Seminar			
Hours for off-the-classroom study (Pre-study, practice)	14	3	42
Midterm Exam	1	12	12
Final examination	1	14	14
Total Work Load			
ECTS		8	

GENERAL PRINCIPLE RELATED WITH COURSE

Dear students,

In order to be included, learn and achieve full success that you deserve in the courses you need to come well prepared by reading the basic and secondary textbooks. We are expecting from you carefully to obey to the course hours, not to interrupt the lessons unless is very indispensable, to be an active participant on the courses, easily to communicate with the other professor and classmates, and to be interactive by participating to the class discussions. In case of unethical behavior both in courses or on exams, will be acting in framework of the relevant regulations. The attendance of the students will be checked in the beginning, in the middle or at the end of the lessons. Throughout the semester the students who attend to all lectures will be given 15 activity-attendance points in addition to their exam grades.

SOURCES**COMPULSORY LITERATURE**

No	Name of the book	Author's Name, Publishing House, Publication Year
1	Doğru ve alternative akım devreleri ve çözümleri	A.H.Saçkan, Birsen Yayınevi, İstanbul 1992
2	Збирка задатака из основе електротехнике	Јасна Менарт, Завод за уџбенике-Београд, 1990
3	Basic Electrotechnik	B.L.Goodlet, E. Arnold, 1962

ADDITIONAL LITERATURE

No	Name of the book	Author's Name, Publishing House, Publication Year
1	Elektrotechnik	John Henderson, Longman, London 2000
2		
3		

EVALUATION SYSTEM

Underlying the Assessment Studies	NUMBER	PERCENTAGE OF GRADE
Attendance/Participation	15	%10
Project / Event	1	%20
Mid-Term Exam	1	%35
Final Exam	1	%35
TOTAL	17	%100

ETHICAL CODE OF THE UNIVERSITY

In case of the students are cheating or attempt to cheat on exams, and in the case of not to reference the sources used in seminar studies, assignments, projects and presentations, in accordance to the legislations of the Ministry of Education and Science of Republic of Macedonia and International Vision University, will be applied the relevant disciplinary rules. International Vision University students are expected never to attempt to this kind of behavior.