



**ESOGU ELECTRICAL-ELECTRONICS ENGINEERING DEPARTMENT
COURSE INFORMATION FORM**

Course Title	Course Code
INTRODUCTION TO ELECTRICAL AND ELECTRONICS ENGINEERING	151221206

Semester in Program	Number of Course Hours per Week		ECTS Credit
	Theory	Practice	
1	1	2	2

Course ECTS Credit Distribution				
Basic Sciences	Engineering Sciences	Design	General Education	Social
0	2	0	0	0

Language of Instruction	Course Level	Course Type
English	Undergraduate	Compulsory

Prerequisite	None
Objectives of the Course	To create more interest into the profession, To introduce the basic concepts of Electrical and Electronics Engineering, To initiate hands-on experience.
Brief Course Content	Introduction to the University and Department, Concept of Engineering, Fundamentals of Electrical and Electronics Engineering (EEE), Historical Development of EEE, Main Research Areas in EEE, Some Important Concepts and Examples Related to EEE.

Learning Outcomes of the Course	Contributed POs	Teaching Methods *	Assessment Methods **
1 They will have basic knowledge about Engineering.	1c	1	A
2 They will better understand what an Electrical and Electronics Engineer does in the Professional life.	1c	1	A
3 They will be familiar with some basic hands-on experience.	1c, 7c, 7d	3, 12	E, G, I
4			
5			
6			
7			

*Teaching Methods 1:Lecture, 2:Discussion, 3:Experiment, 4:Simulation, 5:Question-Answer, 6:Tutorial, 7:Observation, 8:Case Study, 9:Technical Visit, 10:Problem Solving, 11:Individual Work, 12:Team/Group Work, 13:Brain Storm, 14:Project Design / Management, 15:Report Preparation and/or Presentation

**Assessment Methods A:Exam, B:Quiz, C:Oral Exam, D:Homework, E:Report, F:Article Examination, G:Presentation, I:Experimental Skill, J:Project Observation, K:Class Attendance; L:Jury Exam

Main Textbook	None
Supplementary Resources	None
Necessary Course Material	Hand tools and components in Electronics Laboratory

Course Weekly Schedule	
1	Introduction
2	Orientation Programme - <i>Introduction to the University and Department</i>
3	Concept of Engineering

4	Fundamentals of Electrical and Electronics Engineering
5	Voltage, Current, Power and Energy
6	Direct Current and Alternating Current
7	Electrical Power Generation
8	Mid-Term Exams
9	Basic Electrical Circuit Components
10	Resistors - <i>Color Coding, Power Rating, Ohm's Law</i>
11	Major Research Areas of the Electrical and Electronics Engineering
12	Case Study - <i>Unit Conversion</i>
13	Case Study - <i>Design Processes</i>
14	Case Study - <i>Project Management</i>
15	Case Study - <i>Electrical Safety</i>
16,17	Final Exams

Calculation of Course Workload			
Activities	Count	Time (Hour)	Total Workload (Hour)
Weekly classroom time	14	3	42
Weekly study time (review, reinforcing, preparation)			
Homework			
Taking a quiz			
Studying for a quiz			
Oral exam			
Studying for an oral exam			
Report writing (Preparation and presentation time included)			
Project (Preparation and presentation time included)	1	20	20
Presentation (Preparation time included)			
Mid-Term Exam	1	1	1
Studying for Mid-Term Exam	1	3	3
Final Exam	1	1	1
Studying for Final Exam	1	3	3
		Total workload	70
		Total workload / 30	2.33
		Course ECTS Credit	2

Assessment	
Activity Type	%
Mid-term	30
Project Observation	30
Final Exam	40
Total	100

COURSE CONTRIBUTION TO THE PROGRAM OUTCOMES

(5: Very high, 4: High, 3: Middle, 2: Low, 1: Very low)

NO	PROGRAM OUTCOMES	Contribution
1	a. Sufficient knowledge of mathematics	
	b. Sufficient knowledge of basic sciences	
	c. Sufficient basic engineering and Electrical-Electronics engineering knowledge	3
	d. Skill of applying all these knowledge and experience to complicated Electrical-Electronics engineering problems	
2	Skill of defining, identifying, formulating and solving the complicated problems in Electrical-Electronics engineering and related areas by applying appropriate analysis and modelling methods.	
3	Skill of designing a complicated process, system, equipment or product by applying modern design methods under realistic constraints and conditions.	
4	To analyze and solve the complicated engineering problems:	
	a. skill of developing, selecting and applying the required techniques and devices	
	b. skill of using information technologies effectively	
5	To study the complicated on the complicated Electrical-Electronics engineering problems and research subjects:	
	a. skill of experimental design	
	b. skill of performing the experiments, collecting the data and analyzing and interpreting the results	
6	a. Skill of performing individual studies	
	b. Skill of performing intra and interdisciplinary and multidisciplinary teamwork and studies	
7	a. Skill of effective oral and writing communication in Turkish	
	b. Skill of improving and using foreign language knowledge	
	c. Skill of effective reporting, understanding the reports and preparing the design and production reports	1
	d. Skill of effective presentation and giving and getting clear and understandable instructions.	1
8	Awareness of the necessity of life-long learning and skill of accessing to information and following the improvements in contemporary science and technology	
9	a. Awareness of necessity of behaving in accordance with the ethical principles and awareness of the importance of having professional ethical responsibilities	
	b. Knowledge about legal regulations and standards of engineering	
10	a. Knowledge about project management, risk management and change management	
	b. Awareness of the significance of entrepreneurship and innovation	
	c. Knowledge about sustainable development	
11	Knowledge about the effects of engineering applications and practices on the global and social health, ecology and safety, knowledge about the current problems in relation to the working areas of Electrical-Electronics engineering; and awareness of the legal issues resulting from engineering solutions	
12	Knowledge about modern problems in local and universal scale	

INSTRUCTORS

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