



ESOGÜ Electrical-Electronics Engineering Department

COURSE CODE: 15122XXXX **COURSE TITLE:** Occupational Health and Safety in Electrical Engineering

Semester	Weekly Hours		COURSE				
	Theoretical	Practical	Credits	ECTS	Type	Language	
5	1	0	1	2	Compulsory (X) Elective ()	Turkish () English (X)	
Write the credit (for non-credit courses weekly hours) below (If necessary distribute the credits.).							
Math and Basic Science		Electrical Engineering [mark (Ö) if there is high design content]		General Education		Humanities	
()							
Assessment		THEORETICAL-PRACTICAL COURSES			LABORATORY COURSES		
		Type	Number	%	Activity Type	Number	%
Midterm		Midterm	1	40	Quiz		
		Quiz			Lab performance		
		Homework			Report		
		Project			Oral exam		
		Other (Laboratory)			Other (.....)		
Final			1	60			
Makeup exam (Oral/Written)							
Prerequisites							
Brief content of the course		Occupational safety in electrical workplaces, definition of electrical quantities, cause of electrical accidents, electrical safety risk analysis and precautions for workplaces, effect of electrical current on human body, electric shock emergency, occupational safety laws in electrical work.					
Objectives of the course		Teach the risk analysis, safety rules and precautions for occupational safety in electrical workplaces and occupational safety laws for electrical operations and facilities.					
Contribution of the course towards professional education		Knowing the possible electrical risks in different workplaces and taking precautions against the accidents protect human and improve the efficiency of labor					
Outcomes of the course		1. To know possible electrical risks in different works places and take precautions for occupational health and safety. 2. Design of an experiment to take measurements (fault current, static electric, ground resistance, electromagnetic field level), analyzing the results and interpretation. 3. To know the occupational health and safety laws for electrical work.					
Textbook of the course		Benjamin O. Alli “Fundamental principles of Occupational Health and Safety”, ILO, 2008					
Other reference books							
Required material for the course							

WEEKLY PLAN OF THE COURSE	
Week	Topics
1	Occupational safety in electrical works
2	Definition of electrical quantities (voltage, current, resistance, static electric, etc.)
3	Electrical accidents
4	Electrical facility and installation
5	Fundamentals of electrical safety(isolation, low voltage usage)
6	Fundamentals of electrical safety(grounding, avoidance of static electric)
7	Electrical safety in low and high voltage operations
8	Midterm Exam
9	Midterm Exam
10	Electrical safety in facilities (electric generation and distribution facilities)
11	Electrical safety in facilities (construction sites and workplace with flammable or explosive atmosphere)
12	Effect of electrical current on human body
13	Electric shock emergency
14	Occupational health and safety laws for electrical works
15,16	Term Exam week

NO	OUTCOMES OF THE PROGRAMME	4	3	2	1
1	Adequate knowledge of mathematics, science and Electrical and Electronics Engineering; ability to practice theoretical and practical knowledge of these areas into modeling and solving problems of Electrical and Electronic Engineering				X
2	Ability to identify, formulate and solve complex engineering problems in Electrical and Electronics Engineering and related fields, having skills to select and apply appropriate analysis and modelling methods for this purpose.				X
3	Having skills to design a complex system, process, equipment or product that should work under realistic conditions and constraints and satisfy specific requirements; ability to apply modern design methods for this purpose.				X
4	Having skills to develop, select and apply modern techniques and tools needed for applications in Electrical and Electronics Engineering, skills to use information technology effectively.				X
5	Skills to design and conduct tests, collect data, analyze and interpret the results for investigation of problems in Electrical and Electronics Engineering				X
6	Ability to function effectively as an individual and as a member of teams within the discipline and in multidiscipline areas.				X
7	Communicating effectively in oral and written form both in Turkish and English. Effective report writing and understanding written reports, preparing design and manufacturing reports, making effective presentations, skills to give and receive clear and concise instructions.				X
8	Awareness of the necessity of lifelong learning, access to information, monitoring developments in science and technology and the ability to self-renewing		X		
9	Understanding of professional and ethical responsibility	X			X
10	Information on project management, change management and risk management practices in business, awareness on entrepreneurship, innovation and sustainable development.		X		
11	Information about universal and social effects of engineering applications on health, safety and environment; awareness of the legal consequences of engineering solutions.	X			X

Scale for assessing the contribution of the course to the program outcomes:

4: High

3: Medium

2: Low

1:None

Name of Instructor(s): Prof. Dr. Gökhan ÇINAR

Signature(s):

Date: