ESOGÜ Electrical-Electronics Engineering Department

COURSE CODE: 151228548-151248548 **COURSE TITLE:** The Engineer & Society

Semester	Weekly Hours		COURSE			
	Theoretical	Practical	Credits	ECTS	Type	Language
8	2	0	2	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 (√) if there is high design content]	General Education	Humanities
	( )		2

Assessment	THEORETICAL-PRACTICAL COURSES			LABORATORY COURSES		
	Type	Number	%	Activity Type	Number	%
Midterm	Midterm	1	45	Quiz		
	Quiz			Lab performance		
	Homework			Report		
	Project			Oral exam		
	Other (……)			Other (……)		
Final		1	55			
Makeup exam (Oral/Written)						

Prerequisites	None
Brief content of the course	Ethical issues in the practice of engineering, safety and liability, professional responsibility to clients and employers, whistle-blowing, codes of ethics, career choice, legal obligations; Labor Law, case studies, environmental issues, global energy issue.
Objectives of the course	1) To develop moral reasoning skills 2) To learn to read and think critically 3) To explore the fundamental structure of human personhood, the philosophical grounding of moral action, and the development of moral character as the precondition of all integral performance in a profession, 4) To raise awareness on labor law. 5) To raise environmental awareness.
Contribution of the course towards professional education	1) Information about universal and societal effects of engineering applications on health, safety and environment; awareness of the legal consequences of engineering solutions. 2) Understanding of professional and ethical responsibility
Outcomes of the course	This course discusses the social responsibility of the engineer and raises the awareness of the current global issues.
Textbook of the course	C.B. Fleddermann, Engineering Ethics, 3rd Ed., New Jersey: Pearson Prentice Hall, 2008 Text of Labor Law Occupational Health and Work Safety Law
Other reference books	Unger, S. Controlling Technology: Ethics and the Responsible Engineer, 2nd Ed., Wiley, 1994 OSHA documentation
Required material for the course	

WEEKLY PLAN OF THE COURSE	
Week	**Topics**
1	History of Ethics, Engineering and ethics
2	Professionalism and code of ethics
3	Ethics theories,
4	Ethical problem solving techniques
5	Case studies
6	Ethical issues in engineering practice,
7	Whistle blowing
8	Midterm
9	Midterm
10	Risk, safety and accidents
11	Case studies
12	Labor Law
13	Work Safety
14	Environmental issues
15,16	Final

NO	OUTCOMES OF THE PROGRAMME	4	3	2	1
1	Adequate knowledge of mathematics, science and Electrical and Electronic Engineering; ability to practice theoretical and practical knowledge of these areas into modeling and solving complex problems of Electrical and Electronic Engineering				**X**
2	Ability to identify complex engineering problems in Electrical and Electronic Engineering and related fields, for this purpose having skills to formulate, select and apply appropriate methods.				**X**
3	Having skills to apply modern design methods to design a complex system, process, equipment or product that should work under realistic conditions and constraints and satisfy specific requirements concerning the Electrical and Electronic Engineering.				**X**
4	Having skills to develop, select and apply modern techniques and tools needed to analyze and solve complex applications in Electrical and Electronic Engineering, skills to use information technology effectively.				**X**
5	Skills to design and conduct tests, collect data, analyze results, and interpret data for the experimental investigation of complex problems in Electrical and Electronic 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**			
10	Information on project management, change management and risk management practices, awareness on entrepreneurship and innovation, knowledge on sustainable development.				**X**
11	Information about universal and societal effects of engineering applications on health, safety and environment; awareness of the legal consequences of engineering solutions.	**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): Hasan H Erkaya

Signature(s):

Date: Mar 11, 2016