



HASAN KALYONCU UNIVERSITY
Faculty of Engineering
Course Description Form

COURSE: ENGINEERING ETHICS				
CODE: FE201	SEMESTER: fall			
LANGUAGE: ENGLISH	TYPE: COMPULSORY			
PRE-REQUISITES: - CO-REQUISITES: -	THEORY	PRACTICAL	CREDIT	ECTS
WEEKLY HOURS: 2	2	0	2	2

CONTENT OF THE COURSE:

Engineering ethics is the field of system of moral principles that apply to the practice of engineering. The field examines and sets the obligations by engineers to society, to their clients, and to the profession. As a scholarly discipline, it is closely related to subjects such as the philosophy of science, the philosophy of engineering, and the ethics of technology.

OBJECTIVE OF THE COURSE:

To explain and understand the moral principles that apply to the practice of engineering.

WEEKLY SCHEDULE

Week	Topics
1	Introduction to the Course: Purpose, Objectives, Scope, Methods, Discussion
2	Introduction to Ethics I
3	Introduction to Ethics II; Initial Discussion of B. F. Goodrich Case
4	Introduction to Philosophy of Engineering I Introduction to Philosophy of Engineering II
5	Introduction to Engineering Ethics: Codes of Ethics, Whistle Blowing, Case Study Methodology
6	First Principles of Engineering Ethics Case Studies: Chernobyl, Three Mile Island
7	Case Studies: B. F. Goodrich A7D Air Force Brakes
8	Midterm
9	Solving Ethical Problems: Discussion of Heroes, Journeys, and Virtue in Mythology
10	Individual, Professional, and Institutional Values
11	Leadership in Engineering and Industry
12	Student Presentation
13	Student Presentation
14	Student Presentation

TEXTBOOK: Lecture Notes, Case study notes

EVALUATION SYSTEM:

IN-TERM STUDIES	QUANTITY	PERCENTAGE (%)
Midterm Exam	1	40

Homework		
Laboratory works		
Quiz		
Final Exam	1	60
TOTAL	2	100
CONTRIBUTION OF INTERM STUDIES TO OVERALL GRADE	1	40
CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE	1	60
TOTAL	2	100

COURSE CATEGORY:	PERCENTAGE (%)
Mathematics and Basic Sciences	
Engineering	50
Engineering Design	50
Social Sciences	

TABLE OF ECTS / WORKLOAD:			
Activities	QUANTITY	Duration (Hour)	Total Workload
Course Duration	13	2	26
Hours for off-the-classroom study (Pre-study, practice)	14	2	28
Laboratory works	-	-	-
Mid-term	1	2	2
Final examination	1	2	2
Homework		-	-
Quiz	-	-	-
Total Work Load			58
Total Work Load / 30			1,9
ECTS Credit of the Course			2

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
LO1						3		3	3		3
LO2						3		3	3		3
LO3						3		3	3		3
LO4						3		3	3		3
	PO: Program Outcomes LO: Learning Outcomes Values: 0: None 1: Low 2: Medium 3: High										

INSTRUCTOR(S):	Assoc.Prof.Dr.Şafak Hengirmen Tercan
FORM PREPARATION DATE:	22.05.2019

LEARNING OUTCOMES OF THE COURSE:	PROGRAM OUTCOMES:
<p>LEARNING OUTCOMES OF THE COURSE: LO1: to understand the codes of engineering ethics LO2: to understand the rules and responsibility of an engineer LO3: to understand the problem solving approach. LO4: to detect the case studies and identify the immoral behaviours.</p>	<p>PO1: Adequate knowledge in mathematics, science and engineering subjects pertaining to the relevant discipline; ability to use theoretical and applied knowledge in these areas in complex engineering problems. PO2: Ability to identify, formulate, and solve complex engineering problems; ability to select and apply proper analysis and modeling methods for this purpose. PO3: Ability to design a complex system, process, device or product under realistic constraints and conditions, in such a way as to meet the desired result; ability to apply modern design methods for this purpose. PO4: Ability to devise, select, and use modern techniques and tools needed for analyzing and solving complex problems encountered in engineering practice; ability to employ information technologies effectively. PO5: Ability to design and conduct experiments, gather data, analyze and interpret results for investigating complex engineering problems or discipline specific research questions. PO6: Ability to work efficiently in intra-disciplinary and multi-disciplinary teams; ability to work individually. PO7: Ability to communicate effectively in Turkish, both orally and in writing; knowledge of a minimum of one foreign language; ability to write effective reports and comprehend written reports, prepare design and production reports, make effective presentations, and give and receive clear and intelligible instructions. PO8: Recognition of the need for lifelong learning; ability to access information, to follow developments in science and technology, and to continue to educate him/herself. PO9: Consciousness to behave according to ethical principles and professional and ethical responsibility; knowledge on standards used in engineering practice. PO10: Knowledge about business life practices such as project management, risk management, and change management; awareness in entrepreneurship, innovation; knowledge about sustainable development. PO11: Knowledge about the global and social effects of engineering practices on health, environment, and safety, and contemporary issues of the century reflected into the field of engineering; awareness of the legal consequences of engineering solutions.</p>