

**COURSE INFORMATION FORM**

Faculty	Faculty of Engineering		
Program	B.Sc. in Civil Engineering	Required	
	B.Sc. in Computer Engineering	Required	
	B.Sc. in Electrical-Electronics Engineering	Required	
	B.Sc. in Industrial Engineering	Required	
	B.Sc. in Mechanical Engineering	Required	
Semester	Fall 2017-2018		

Course Code	HUM 300			
Course Title in English	Engineering Ethics			
Course Title in Turkish	Mühendislik Etiği			
Language of Instruction	English			
Type of Course	Lecture			
Level of Course	Undergraduate			
Course Category (by % of Content)	Basic Science	Basic Engineering	Engineering Design	General Education
	-	-	-	100
Semester Offered	Fall			
Contact Hours per Week	Lecture: 2	Recitation: -	Lab: -	Other: -
Estimated Student Workload	117 hours per semester			
Number of Credits	5 ECTS			
Grading Mode	Standard Letter Grade			
Pre-requisites	-			
Expected Prior Knowledge	-			
Co-requisites	-			
Registration Restrictions	-			
Overall Educational Objective	To learn general issues and basic principles of ethics, ethical problems that professions at different sectors face; attitudes of the professions especially engineers to the problems and the consequences of the different solutions			
Course Description	This course provides a compressive knowledge about the philosophy of the ethics. Different Types of Ethics (Normative Theories of Ethics, Anthropocentrism, Relativism, Monism, Post Modernism, etc.) and. Code of Ethics. Analyzing Exterior Acts and Interior Intentions. Truth and Fair Approach of Person to Person and Person to Social. Engineering Ethics and Design Problems and Design Hierarchy in Process. Moral Responsibility-Trust Relationship Between Engineers And Society. Moral Responsibility. Ethical Problems In Engineering- of a Consulting Engineer, of a Software Engineer, of an Engineer in Industry and of an Engineer in Government.			
Course Description in Turkish	Derste, genel etik felsefesi , değişik etik tiplerini ve yapılan hareketle planlanan niyet arasındaki ilişkiyi, kişinin başkasına ve topluma karşı gerçekleri şeffaflıkla açıklaması ve adil davranması konuları incelenecektir. Mühendislik mesleğinin topluma karşı sorumlulukları toplumla mühendisliğin birbirine olan karşılıklı güveni, kamu ve özel sektörde çalışan mühendislerin karşılaştıkları etik sorunları, aldıkları etik olmayan teklifler ve bu sorun ve tekliflere karşı sosyal sorumlulukları, davranışı ve bu davranışların neden olabileceği olumlu ve olumsuz sonuçlar vaka takdimleri ile irdelenecektir.			
Course Learning Outcomes and Competences	Upon successful completion of the course, the learner is expected to: 1. identify the different types and significance of ethics and why all the professions and especially engineers and scientists should study ethics; 2. apply the code of ethics, and the significance of the compliance of the code of ethics as a moral responsibility and gaining the trust of the society;			

3. understand the preferences and the expectations of the customers, give professional advices and fulfill the expectations of the customers without violating the code of ethics;
4. get acquainted about the unethical applications and offers that engineers and scientists will meet and the consequences of the different approaches to the problems and offers;
5. understand the significance of ethical behaviors and help the dissemination of ethical concept.

Relationship of the Course with the Student Outcomes	Level	Learning Outcome(s)	Assessed by
Program Outcomes	N=None S=Supportive H=High		Exam, Project, HW, Experiment, Presentation, etc.
(a) an ability to apply knowledge of mathematics, science, and engineering			
(b) an ability to design and conduct experiments, as well as to analyze and interpret data			
(b)-1. an ability to design/develop an experiment by identifying required assumptions, constraints, data collection methods and models			
(b)-2. Implement experimental procedures to conduct an experiment and use engineering judgment to draw conclusions			
(c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability			
(d) an ability to function on multidisciplinary teams			
(d)-1. Function effectively on a intradisciplinary team			
(d)-2. Function effectively on a multidisciplinary team			
(e) an ability to identify, formulate, and solve engineering problems (f) an understanding of professional and ethical responsibility	H	1, 2, 3, 4, 5	Exams, Quizzes, HW, Class Discussions
(g) an ability to communicate effectively			
(g)-1. Communicate effectively with well-organized written documents			
(g)-2. Communicate effectively verbally with a range of audiences			
(h) the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context			
(i) a recognition of the need for, and an ability to engage in life-long learning			
(j) a knowledge of contemporary issues			
(k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice			
Prepared by and Date	Prof. Günay Kocasoy / July 2017		
Name of Instructor	Prof. Günay Kocasoy		

Course Contents	Week	Topic										
	1.	Introduction to Philosophy of Ethics, Historical Development of Ethics										
	2.	Why to study Ethics and Different Types of Ethics (Normative Theories of Ethics, Anthropocentrism, Relativism, Monism, Post Modernism, etc.)										
	3.	Different Types of Ethics (Normative Theories of Ethics, Anthropocentrism, Relativism, Monism, Post Modernism, etc.) (<i>continued</i>)										
	4.	Code of Ethics										
	5.	Analyzing Exterior Acts and Interior Intentions-Case Studies										
	6.	Analyzing Exterior Acts and Interior Intentions-Case Studies (<i>continued</i>)										
	7.	Truth Person to Person; Person to Social										
	8.	Fairness Person to Person; Person to Social										
	9.	Moral Responsibility-Trust Relationship Between Engineers And Society										
	10.	Engineering Ethics in Design Process and Social Responsibility and Design Hierarchy										
	11.	Different Types of Ethical Problems and Solutions in Engineering – Case Studies										
	12.	Different Types of Ethical Problems and Solutions in Engineering – Case Studies										
	13.	Ethical Problems and Consequences of Solutions of the Consulting Engineers Ethical Problems and Consequences of Solutions of the Engineers in Industry										
	14.	Ethical Problems and Consequences of Solutions of the Engineers in Government Ethical Problems and Consequences of Solutions of the Software Engineers										
	15.	Final examination period										
	16.	Final examination period										
Required/Recommended Readings	Kroes, P. A., Meijers, A., <i>Ethical Issues in Engineering Design; Safety and Sustainability</i> , ISBN-13:9789090199078; ISSN: 1574-941X, vol.2. Anke van Gorp, Delft, 2005. Alger, P.L., Christensin, N.A., Olmsted, S.P., <i>Ethical Problems in Engineering</i> , Library of Congress Catalog Card Number: 65-21448, John Wiley and Sons, New York, 1965.											
Teaching Methods	Lectures and class discussions											
Homework and Projects	• Homework and Presentation of Homework											
Laboratory Work	-											
Computer Use	-											
Other Activities	-											
Assessment Methods	Types of assessment: <table border="1" style="width: 100%; margin-top: 10px;"> <thead> <tr> <th></th> <th style="text-align: right;">Ratio (%)</th> </tr> </thead> <tbody> <tr> <td>Midterm Exam</td> <td style="text-align: right;">32</td> </tr> <tr> <td>Quizzes</td> <td style="text-align: right;">28</td> </tr> <tr> <td>Final Exam</td> <td style="text-align: right;">40</td> </tr> <tr> <td>Total</td> <td style="text-align: right;">100</td> </tr> </tbody> </table>			Ratio (%)	Midterm Exam	32	Quizzes	28	Final Exam	40	Total	100
	Ratio (%)											
Midterm Exam	32											
Quizzes	28											
Final Exam	40											
Total	100											
Course Administration	Instructor's office and phone number: 5th Floor office hours: Thursday 12:30-14:30 email address: Missing a quiz: Provided that proper documents of excuse are presented, each missed quiz by the student will be given a grade by taking the average of all of the other quizzes. No make-up will be given. Missing a midterm: Provided that proper documents of excuse are presented, each missed midterm by the student will be given the grade of the final exam. No make-up will be given. Missing a final: Faculty regulations. A reminder of proper classroom behavior, code of student conduct: YÖK Regulations Statement on plagiarism: YÖK Regulations http://3fcampus.mef.edu.tr/uploads/cms/webadmin.mef.edu.tr/4833_2.pdf											

ECTS
Student
Workload
Estimation

Activity	No/Weeks	Hours			Calculation	Explanation
	No/Weeks per Semester (A)	Preparing for the Activity (B)	Spent in the Activity Itself (C)	Completing the Activity Requirements (D)		
Lecture/Flipped Classroom	14	1	3		56	$A * (B + C + D)$
Quizzes	4	1	0.5		6	$A * (B + C + D)$
Midterm(s)	1	20	2		22	$A * (B + C + D)$
Assingment, Project, Presentation	1	10	1		11	$A * (B + C + D)$
Final Examination	1	20	2		22	$A * (B + C + D)$
Total Workload					117	
Total Workload/25					4.68	
ECTS					5	

PROGRAM CRITERIA

1. Breadth in industrial engineering practice, analysis and design with 17 required course in industrial engineering, and depth in one or more fields with 4 industrial engineering electives.
2. Ability to design, develop, implement and improve integrated systems that include people, materials, information, equipment, and energy.
3. In-depth knowledge of appropriate analytical, experimental and computational methods for system integration.

Note: For program-specific courses ABET Program Criteria of the related engineering program will be put here as before.