

**School of Engineering and Natural Sciences / Electrical and Electronics Engineering (English)**

**2024 - 2025 Academic Year**

**TECHNOLOGY, SOCIETY and ETHICS**

**Syllabus**

<b>Course Description</b>					
<b>Name</b>	<b>Code</b>	<b>Semester</b>	<b>T+A Hour</b>	<b>Credit</b>	<b>ECTS</b>
TECHNOLOGY, SOCIETY and ETHICS	EEE4210767	Spring Semester	2+0	2	2
<b>Prerequisites Courses</b>					
<b>Recommended Elective Courses</b>					
<b>Language of Instruction</b>	English				
<b>Course Level</b>	First Cycle (Bachelor's Degree)				
<b>Course Type</b>	Required				
<b>Course Coordinator</b>	Prof.Dr. Talip ALP				
<b>Name of Lecturer(s)</b>	Res.Assist. Birgün ÖZÇOLAK ASLAN				
<b>Assistant(s)</b>					
<b>Aim</b>					
<b>Course Content</b>	This course contains; Professional Ethics, Science Before Science: Mesopotamia and Egypt,Scientific Method & Lifelong Learning, The Land of the Greeks,Research Concept, The Debates in Plagiarism & Sustainable Development, The Roads to Baghdad,Safety, Risk and Design, Engineering Standards and 'Abbasid Baghdad: The House of Wisdom,Research Models and Social Responsibility, 'Spiritual Physick',Cross-cultural Engineering Ethics, From Baghdad to Central Asia,Data Collection & Ethical Leadership, The Cure of Ignorance,Intellectual Property & Innovation, Fatimid Cairo: The Science of Light,Professional Responsibility, Ayyubid and Mamluk Cairo: Healing,Ingenious Mechanical Devices & Sustainable Engineering,Workplace Cultures, Responsibilities And Rights, Islamic Technology,Cross-cultural Collaboration in Engineering, Al-Andalus,Engineering and Environmental Ethics in Modern Context & Lifelong Learning,Student Presentations.				
<b>Course Learning Outcomes</b>			<b>Teaching Methods</b>	<b>Assessment Methods</b>	
The student learn the development process of science and technology throughout history.			14, 9	A, E	
The student understandsthe impact of political will, social philosophy, financial support, encouragement and stability on the development of science and technology with concrete examples.			14, 16, 9	A, E	
The student see that the welfare and independence of society can only be sustainable thanks to modern science and superior technology.			14, 9	A, E	
The student is able to establish connections between contemporary science and technology, superior professional equipment and a successful economy in global competition.			14, 9	A, E	
5. Recognize scientific research techniques			10, 13, 16, 19, 9	A	
6. Evaluates the ethical rules in the publication process of scientific articles			10, 13, 16, 19, 9	A	
7. Plans the research project preparation process			10, 13, 16, 19, 9	A	
8. Applies ethical rules in scientific research and project preparation processes.			10, 13, 16, 19, 9	A	
9. Summarizes intellectual property rights			10, 13, 16, 19, 9	A	
<b>Teaching Methods</b>	10: Discussion Method, 13: Case Study Method, 14: Self Study Method, 16: Question - Answer Technique, 19: Brainstorming Technique, 9: Lecture Method				
<b>Assessment Methods</b>	A: Traditional Written Exam, E: Homework				
<b>Lecture Schedule</b>					
<b>Sequenc e</b>	<b>Topics</b>	<b>Preliminary Preparation</b>			
1	Professional Ethics, Science Before Science: Mesopotamia and Egypt				
2	Scientific Method & Lifelong Learning, The Land of the Greeks				
3	Research Concept, The Debates in Plagiarism & Sustainable Development, The Roads to Baghdad				
4	Safety, Risk and Design, Engineering Standards and 'Abbasid Baghdad: The House of Wisdom				
5	Research Models and Social Responsibility, 'Spiritual Physick'				
6	Cross-cultural Engineering Ethics, From Baghdad to Central Asia				
7	Data Collection & Ethical Leadership, The Cure of Ignorance				
8	Intellectual Property & Innovation, Fatimid Cairo: The Science of Light				
9	Professional Responsibility, Ayyubid and Mamluk Cairo: Healing				
10	Ingenious Mechanical Devices & Sustainable Engineering				
11	Workplace Cultures, Responsibilities And Rights, Islamic Technology				
12	Cross-cultural Collaboration in Engineering, Al-Andalus				
13	Engineering and Environmental Ethics in Modern Context & Lifelong Learning				
14	Student Presentations				
<b>Evaluation Methods</b>			<b>Weight(%)</b>		
Midterm Exam			30		
General Exam			70		

<b>Resources</b>
John Freely , "Light from the East : How the Science of Medieval Islam Helped to Shape the Western World" Zhu, Qin. Ethics in engineering. New York, NY: McGraw Hill. Edited by Mike W. Martin & Roland Schinzinger, 2023. Whitbeck, Caroline. Ethics in engineering practice and research. Cambridge University Press, 2011.