

**School of Engineering and Natural Sciences / Computer Engineering (English)**

**2022 - 2023 Academic Year**

**ENGINEERING PROJECT I**

**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>
ENGINEERING PROJECT I	COE4110764	Fall Semester	1+2	2	6
<b>Prerequisites Courses</b>	MATEMATİK II; FİZİK I; FİZİK I LAB; FİZİK II; FİZİK II LAB; AKADEMİK İLETİŞİM BECERİLERİ I; AKADEMİK İLETİŞİM BECERİLERİ II				
<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. Mehmet Kemal ÖZDEMİR				
<b>Name of Lecturer(s)</b>	Prof.Dr. Mehmet Kemal ÖZDEMİR				
<b>Assistant(s)</b>					
<b>Aim</b>	The Capstone Project gives Engineering students the opportunity to put their education into a practical working system that demonstrates how theory is applied. Engineering students, working in small teams, design, build, and present a challenging engineering design project. Challenging projects are proposed and supported by IMU faculty research groups or by industry. Projects typically involve design and implementation of both hardware and software systems. The projects span a variety of topics in the field of engineering, including for example communication systems, energy generation and conversion systems, electrochemical and biological sensors, image processing systems, control systems and circuits.				
<b>Course Content</b>	This course contains; Choosing a topic for the capstone project.,System Design,Project Plan,Design in a computer environment,Performing Simulations,Semester reporting and presentation..				
<b>Course Learning Outcomes</b>			<b>Teaching Methods</b>	<b>Assessment Methods</b>	
Thorough understanding of complete requirements for a given project			1, 16, 22, 3, 5, 8, 9	B, D	
Learning of all steps from the design and implementation of a project.			1, 16, 22, 3, 5, 8, 9	B, D	
Throughout the project life-cycle, keeping the awareness about ethical issues.			1, 16, 22, 3, 5, 8, 9	B, D	
Developing oral and written communication skills.			1, 16, 22, 3, 5, 8, 9	B, D	
Understanding the importance of lifelong learning			1, 16, 22, 3, 5, 8, 9	B, D	
The usage of modern tools and techniques for a given project.			1, 16, 22, 3, 5, 8, 9	B, D	
The ability to show perseverance during difficult moment of project execution.			1, 16, 22, 3, 5, 8, 9	B, D	
<b>Teaching Methods</b>	1: Lecture, 16: Project Based Learning, 22: -, 3: Discussion, 5: Demonstration, 8: Teamwork, 9: Simulation				
<b>Assessment Methods</b>	B: Oral Exam, D: Project / Design				
<b>Lecture Schedule</b>					
<b>Sequence</b>	<b>Topics</b>	<b>Preliminary Preparation</b>			
1	Choosing a topic for the capstone project.	Meeting with academic faculty or industry.			
2	System Design	Identification of the main parts of the project.			
3	Project Plan	How to use Microsoft Project Manager			
4	Design in a computer environment	Learning the required computer applications.			
5	Performing Simulations	Merging different parts of the project.			
6	Semester reporting and presentation.	Technical writing and presentation skills to be acquired.			
<b>Evaluation Methods</b>		<b>Weight(%)</b>			
Midterm Exam		30			
General Exam		70			

<b>Resources</b>
M. Markel, Writing in the Technical Fields, IEEE Press, 1994.Code of Ethics of Engineers, Accreditation Board for Engineering & Technology (ABET), 1997.