

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

2022 - 2023 Academic Year

ENGINEERING PROJECT I

Syllabus

Course Description					
Name	Code	Semester	T+A Hour	Credit	ECTS
ENGINEERING PROJECT I	COE4210764	Spring Semester	1+2	2	6
Prerequisites Courses	MATEMATİK II; FİZİK I; FİZİK I LAB; FİZİK II; FİZİK II LAB; AKADEMİK İLETİŞİM BECERİLERİ I; AKADEMİK İLETİŞİM BECERİLERİ II				
Recommended Elective Courses					
Language of Instruction	English				
Course Level	First Cycle (Bachelor's Degree)				
Course Type	Required				
Course Coordinator	Prof.Dr. Mehmet Kemal ÖZDEMİR				
Name of Lecturer(s)	Prof.Dr. Mehmet Kemal ÖZDEMİR				
Assistant(s)					
Aim	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.				
Course Content	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..				
Course Learning Outcomes			Teaching Methods	Assessment Methods	
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	
Teaching Methods	1: Lecture, 16: Project Based Learning, 22: -, 3: Discussion, 5: Demonstration, 8: Teamwork, 9: Simulation				
Assessment Methods	B: Oral Exam, D: Project / Design				
Lecture Schedule					
Sequence	Topics	Preliminary Preparation			
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.			
Evaluation Methods		Weight(%)			
Midterm Exam		30			
General Exam		70			

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