

COURSE DESCRIPTION FORM	
Course Code and Name	BM362 ENGINEERING PROJECT (TECH. ELECT.)
Course Semester	6
Catalogue Data of the Course <i>(Course Content)</i>	Engineering disciplines and working areas of engineers, engineering ethics, engineering economics, introduction to engineering design: working principles of design teams, definition of the design problem: requirements analysis, solution development, solution evaluation and decision process, design, production test planning, performance evaluation, design report and presentation of design, TÜBİTAK supports and projects, EU Projects, project application preparation, patents and utility models, intellectual property and industrial rights, common project development culture, innovation and technology development, project planning, writing, reporting and presentation
Course Textbooks	P. Kosky, R. Balmer, W. Keat, G. Wise; <i>Exploring Engineering: An Introduction to Engineering and Design</i> ; 4th Ed. Elsevier, 2016.
Supplementary Textbooks	H. Jack; <i>Engineering Design, Planning and Management</i> , 2013 Elsevier R.M. Ford, C.S. Coulston, <i>Design for Electrical and Computer Engineers</i> , 2008, McGraw Hill,
Credit (ECTS)	6
Prerequisites for the Course <i>(Attendance Requirements)</i>	There is no prerequisite or co-requisite for this course.
Course Type	Elective
Language of Instruction	Turkish
Course Objectives	To introduce basic engineering design concepts and design project preparation processes with an interdisciplinary understanding and to teach project writing techniques in the field of technology development.
Course Learning Outcomes	1. Defines a design problem based on a need and produces options for solving this problem from an interdisciplinary perspective. 2. Determines the most appropriate solution by evaluating the options produced and makes time, budget and human resources planning to realize the determined solution. 3. Defines applications in business life such as project management, risk management and change management. 4. Writes a design project report and defends his designs in front of the public.
Instruction Method <i>(Face-to-face, Distance education etc.)</i>	The mode of delivery of this course is face to face.
Weekly Schedule of the Course	Week 1: Engineering Design Processes Week 2: Engineering Design Projects Week 3: Requirements Determination Week 4: Concept Generation Week 5: Functional Decomposition Week 6: Behavior Models Week 7: Testing Week 8: Reliability estimation Week 9: Teamwork Week 10: Project Management Week 11: Intellectual Property and Legal Issues Week 12: Project Presentation Techniques Week 13: Project Work Week 14: Project Work
Teaching Activities <i>(The time spent for the activities listed here will determine the amount of credit required)</i>	Weekly theoretical course hours: 3 Internet search and library work Designing and implementing materials Making a report Preparing and making presentations Midterm and revision for midterm Final exam and revision for final exam

Assessment Criteria		Number(s)	Weight (%)			
	Midterm exam	1	20			
	Assignment	1	10			
	Application					
	Project	1	30			
	Practice					
	Quiz					
	Final exam	1	40			
Total	4	100				

Workload of the Course	Activity	Number of Weeks	Duration (Weekly Hour)	End of Semester Total Workload	
	Weekly theoretical course hours	14	3	42	
	Weekly practical course hours				
	Reading activities				
	Internet search and library work	12	1	12	
	Designing and implementing materials	9	4	36	
	Making a report	9	2	18	
	Preparing and making presentations	3	2	6	
	Midterm and revision for midterm	2	6	12	
	Final exam and revision for final exam	4	6	24	
	Total workload			150	
	Total workload/ 25			6	
	Course Credit (ECTS)			6	

Contribution Level between Course Outcomes and Program Outcomes	No	Program Outcomes	1	2	3	4	5
	1	Knowledge of mathematics, science, basic engineering, computing, and computer engineering; ability to use this knowledge in solving complex engineering problems.				X	
	2	Ability to define, formulate and analyze complex engineering problems using basic science, mathematics and engineering knowledge and considering the UN Sustainable Development Goals relevant to the problems addressed.				X	
	3	Ability to design creative solutions to complex engineering problems; ability to design complex systems, processes, devices, software, algorithms or products to meet current and future requirements, considering realistic constraints and conditions.				X	
	4	Ability to select, use and develop appropriate techniques, resources and modern engineering and informatics tools, including estimation and modeling, for the analysis and solution of complex engineering problems while being aware of their limitations.				X	
	5	Ability to use research methods to examine complex engineering problems or research topics in computer engineering, including reviewing the literature, designing experiments, conducting experiments, collecting data, analyzing and interpreting results.				X	
	6	Knowledge of the effects of engineering practices and the standards used in these				X	

		practices on society, health and safety, economy, sustainability and environment within the scope of the UN Sustainable Development Goals; awareness of the consequences of engineering solutions in the fields of information security and law.					
	7	Acting in accordance with engineering professional principles and knowledge on ethical responsibility; awareness of acting impartially, without discrimination on any issue, and being inclusive of diversity.					X
	8	Ability to work effectively individually and as a team member or leader in intradisciplinary and multidisciplinary teams (face-to-face, remote, or hybrid).					X
	9	Ability to conduct effective verbal and written communication on technical issues in Turkish or English, prepare reports, make effective presentations and prepare software documentation, considering the various differences of the target audience (such as education, language, profession).					X
	10	Knowledge of business practices such as project, risk and change management and economic feasibility analysis; awareness of entrepreneurship and innovation.					X
	11	Lifelong learning skill that includes the ability to learn independently and continuously, to adapt to new and developing scientific practices and technologies, and to think inquisitively about technological changes.					X
Lecturer(s) and Contact Information	Assist. Prof. Dr. M. Sedef DEMİRCİ sedefgunduz@gazi.edu.tr						