ECTS COURSE INFORMATION FORM

Faculty	**Faculty of Engineering**	
Program	**B.Sc. in Civil Engineering**	**Elective**
	B.Sc. in Computer Engineering	**Required**
	B.Sc. in Electrical-Electronics Engineering	**Elective**
	B.Sc. in Industrial Engineering	**Elective**
	B.Sc. in Mechanical Engineering	**Elective**

Course Code	COMP 491			
Course Title in English	Senior Design Project I			
Course Title in Turkish	Tasarım Projesi I			
Language of Instruction	English			
Type of Course	Flipped Classroom			
Level of Course	Undergraduate			
Course Category (by % of Content)	Basic Science	Basic Engineering	Engineering Design	General Education
	0	0	100	0
Semester Offered	Fall			
Contact Hours per Week	Lecture: -	Recitation: 6 hours	Lab: -	Other: -
Estimated Student Workload	154 hours			
Number of Credits	6 ECTS			
Grading Mode	Standard Letter Grade			
Pre-requisites				
Expected Prior Knowledge	To be a senior student			
Co-requisites	None			
Registration Restrictions	Only Undergraduate Students			
Overall Educational Objective	To design a system, components or a process to meet desired needs by learning to identify a problem, and develop a solution to this problem by using appropriate methods, modern engineering tools and skills for engineering practice.			
Course Description	This non-lecture course provides a comprehensive design process. The following tasks are carried out by student taking this course: Problem identification, project group formation, project planning: cost, effort, duration and resource estimation, Gantt chart, feasibility study, risk analysis, literature survey, comparison of solution methods and selecting a solution, analysis, design, development and test of project. Preparing the project report and giving presentation at the end of the semester.			
Course Description in Turkish	Bu ders kapsamlı bir tasarım dersi olup, ders konuları anlatılmaz. Dersi alan öğrencilerin aşağıdaki etkinliklerde bulunmaları beklenir: Problem tanımı, proje grubunun oluşturulması, proje planlama: projenin süresinin, bedelinin, gereken çabanın ve kaynakların kestirimi, Gantt diyagramı, olabilirlik çalışması, literatür tarama, çözüm yöntemlerinin belirlenmesi, karşılaştırılması ve bir yöntemin seçilmesi, çözüm yönteminin analiz edilmesi, tasarımı, gerçeklenmesi ve test edilmesi, proje raporunun teslimi ve projenin sunumu.			
Course Learning Outcomes and Competences	Upon successful completion of the course, the learner is expected to: 1. identify, formulate, and solve engineering problems; 2. design a system, component, or process to meet desired needs; 3. communicate effectively verbally with a range of audiences; 4. communicate effectively by preparing a well-organized project report; 5. recognize professional and ethical responsibilities by considering the impact of engineering solutions in global, economic, environmental, and societal contexts; 6. function effectively on a team; 7. analyze and interpret data, and use engineering judgment to draw conclusions; 8. acquire and apply new knowledge as needed, using appropriate learning strategies.			

Relationship of the Course with the Student Outcomes	Level	Learning Outcome(s)	Assessed by
Student Outcomes	N=None S=Supportive H=High		Exam, Project, HW, Experiment, Presentation, etc.
(1) an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics	S	1	Project
(2) an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors	H	2	Project
(3) an ability to communicate effectively with a range of audiences	H	3,4	Project presentations and reports
(4) an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts	S	5	Project
(5) an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives	S	6	Project
(6) an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions	H	7	Project
(7) an ability to acquire and apply new knowledge as needed, using appropriate learning strategies	H	8	Project

Prepared by and Date	Prof. Dr. Muhittin Gökmen / June 2019	
Semester	Fall 2019-2020	
Name of Instructor	Prof. Dr. Muhittin Gökmen	
Course Contents	Week	Topic
	1.	Problem Identification
	2.	Group Formation
	3.	Project planning
	4.	Literature survey
	5.	Literature survey
	6.	Analysis
	7.	Design
	8.	Progress report and presentation
	9.	Development
	10.	Development
	11.	Development
	12.	Test
	13.	Report
	14.	Presentation
	15.	Final Exam/Project/Presentation
	16.	Final Exam/Project/Presentation
Required/Recommended Readings	-	
Teaching Methods	No-Lecturing. Weekly meeting with advisor. Project will be carried out by students.	
Homework and Projects	Project	
Laboratory Work	Project work at Laboratory	
Computer Use	For Programming	

Other Activities	
Assessment Methods	Project Proposal:4 % Progress Report: 5 % Progress Presentation: 5 % Final Project Report: 40 % Project Presentation:40 % Team work / Meeting Minutes: 6 %
Course Administration	Instructor's office and phone number, office hours, email address: To be announced -Office: 5th Floor, #18 -Phone number: 0 212 395 36 26 - Email address: gokmenm@mef.edu.tr **Rules for attendance:** Minimum of 70% attendance required. **Missing a quiz:** Provided that proper documents of excuse are presented, each missed quiz by the student will be given a grade which is equal to 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

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)		
Weekly meeting with advisor	14	3	1	3	98	A*(B+C+D)
Proposal	1	10	0		10	
Progress report and presentation	1	13	1		14	A*(B+C+D)
Final report	1	15	0		15	A*(B+C+D)
Final presentation	1	10	1		11	A*(B+C+D)
Meeting minutes	6		1		6	
Total Workload					154	
Total Workload/25					6.16	
ECTS					**6**	