



MARMARA UNIVERSITY - FACULTY OF ENGINEERING

2017-2018 Fall

CSE4197 Engineering Project I

COURSE DESCRIPTION FORM

Offering Department	Department of Computer Engineering		Undergraduate must course (7th semester)					
Course Code	CSE4197							
Course Name	Engineering Project I							
Language of Instruction	English							
ECTS	4							
Contact Hours	Theoretical (T): 0	Practice (U): 2	Laboratory(L):					
Pre-requisites								
Instructor	Name	Academic department staff						
	E-mail							
Course Materials	Mandatory	No textbook required.						
	Recommended							
Course Objectives	This class aims at 1- supporting the senior students to think of taking initiative and being productive, 2- having them coordinate and utilize as a whole their potential and all knowledge they acquired throughout their professional education and 3- getting them to explore and execute a research subject recognized within the area of computer science under the supervision of their academic advisors.							
Course Content	This class encompasses to have the senior students of the department set out an individual project under the supervision of their academic advisors and process and solve a well defined engineering problem by applying all knowledge and skills they acquired from the classes they took in our department throughout their professional education.							
Learning Outcomes	LO1	To define the contemporary issues reflected to the area of computer engineering and list the basic standards defining computer engineering.						
	LO2	To define professional and ethical responsibilities related to computer engineering and the solutions produced.						
	LO3	To describe universal and social effects and legal results of computer engineering solutions on health, environmental and safety issues and to be informed on the sustainable development.						
	LO4	As a team member within the same discipline, to perform the risk analysis, design and implement a prototype for a complex system or product utilizing computer engineering background.						
	LO5	To prepare the necessary documentation for the requirement analysis, the design and each progress phase on a complex system or product.						
	LO6	To present the requirement analysis, the design and each progress phase on a complex system or product.						
	LO7	To be informed on the research, development, innovation and entrepreneurship support programs						
Program Outcomes		LO1	LO2	LO3	LO4	LO5	LO6	LO7
PO3	Ability to design a complex system, process, device or product under realistic constraints and conditions, in such a way so as to meet the desired result (a); ability to apply modern design methods for this purpose (b).				a, b			
PO4	Ability to devise (a), select, and use (b) modern techniques and tools needed for engineering practice (1); ability to employ information technologies effectively (2).				1a, 1b			
PO6	Ability to work efficiently in intra-disciplinary (a) and multi-disciplinary teams (b); ability to work individually (c).				a			
PO7	Ability to communicate effectively in Turkish, both orally and in writing (a); ability to write effective reports, to understand written reports and to prepare design/production reports in a foreign language (b); ability to do effective presentations; ability to take and give clear instructions (c).					b	c	
PO8	Recognition of the need for lifelong learning (a); ability to access information, to follow developments in science and technology, and to continue to educate	a, b						

		him/herself (b).								
PO9		Awareness of professional and ethical responsibility (a); have knowledge about the standards used in engineering applications (b).		b	a, b					
PO10		Information about business life practices such as project management, risk management, and change management (a); awareness of entrepreneurship, innovation (b), and sustainable development (c).				c	a			b
PO11		Knowledge about contemporary issues and the global and societal effects of engineering practices on health, environment, and safety (a); awareness of the legal consequences of engineering solutions (b).		a		a, b				
Subjects (Knowledge, Skills and Behaviours), Contributions of Subjects to Learning Outcomes, Assessment Methods	No	Week	Subjects	LO1	LO2	LO3	LO4	LO5	LO6	LO7
	K1	1-12	Research, requirement analysis, design and development for engineering projects				P	P	P	
	K2	2	<u>SEMĪNAR</u> : Format of CSE4197 and ethics		A					
	K3	3	Preparation of requirement analysis document	R	R	R	R	R	R	
	K4	4	<u>SEMĪNAR</u> : Big Data and its analysis	A		A				
	K5	5	<u>SEMĪNAR</u> : IT Accessibility		A	A				
	K6	6	<u>SEMĪNAR</u> : IT law		A	A				
	K7	8	<u>SEMĪNAR</u> : Sustainability in SW Engineering		A	A				
	K8	9	<u>SEMĪNAR</u> : IT for sustainable development		A	A				
	K9	10	<u>SEMĪNAR</u> : Innovation, novelty and entrepreneurship		A	A				A
	K10	12	<u>SEMĪNAR</u> : Standards for Computer Engineering and SW Engineering	A						
	K11	13	Presentation of the project	S		S	S	S	S	S
	K12	14	Delivery of analysis and design document	R	R	R	R	R	R	R
Assessment Methods and Weights	No	Type	Weight	Implementation Rule			Make-up Rule			
	P	Project	20%	Project groups meet the advisor regularly during the design and implementation of the project. Project schedule is strictly observed. Work done appears in the project report and presentation.			-			
R	Report	40% (20%+20%)	Two reports are prepared by the project group throughout the project development. These are 1) the detailed project document and analysis and design document. The detailed project document undergoes an evaluation and is graded by an independent committee excluding the advisor.			-				

				The analysis and design document, on the other hand, is evaluated and graded by the advisor at the end of the first semester.	
S	Presentation	25%		In accordance with the reports prepared during the semester, the project group presents their project in a hall at the 13 th week of the semester in front of the audience composed of a group of predetermined committee members and their classmates. At the end of the aural presentation possible questions of the committee and audience are answered. The committee grades the presentation and group observing the evaluation criteria.	-
A	Attendance	15%		Observing the learning outcomes of the class a series of invited speakers hold seminars. Some seminars are followed by quizzes to assess the level of the students' information. The attendance to the seminars is mandatory.	-
TOTAL		100%			

Determining Letter Grades

- In order to determine the letter grade, a curve or catalog based method will be followed based on the total average scores of the students.
- The submission of the project reports are mandatory. Any group failing to submit any of the project documents or to present the project fails the class.

Assessment	Project	Report	Presentation	Attendance	TOTAL
Weight	%20	%40	%25	%15	100

Teaching Method, Student Work Load

Time Applied by the Instructor			
No	Method	Explanation	Hours
1	Lectures	Lectures are given in class using the board or via presentations. Example questions are solved to enhance the concepts.	8x2=16 Hour
2	Problem Session/ Practice	Problems related to the course topics are solved on the board.	
3	Laboratory	Experiments are done in the laboratory or theoretical concepts covered during the lectures are practiced using computer exercises.	
4	Interactive Courses	Questions are asked to students during lectures and they are encouraged to guess the answers (peer learning is also in this category)	
5	Field Work	Students attend activities outside the campus.	
6	Midterm	Midterm exam is given during the midterm week.	
7	Final	Final exam is given during the final exam week.	
Estimated Time to be Allocated by a Student			
8	Project	The students carry out research about the problem given in the project, design and implement their solution and prepare a report.	14x4=56 Hour
9	Homeworks	The students solve the problems given as homework.	2x10=20 Hour
10	Pre-class learning of Course Material	The students study and learn the new subjects from course materials.	10 Hour
11	Review of Course Material	Students review the course subjects from course materials to prepare for the exams and homeworks.	
12	Office Hour	Students ask questions to the instructor or the assistant during office hours.	
TOTAL			102 Hour

Academic Honesty

Violations of scholastic honesty include, but are not limited to cheating, plagiarizing, fabricating information or citations, facilitating acts of dishonesty by others, having unauthorized possession of examinations, submitting work of another person or work previously used without informing the instructor, or tampering with the academic work of other students.

In case academic dishonesty is observed, the first authority is the instructor of the course. The instructor may decide to give the student zero for the homework(s)/lab(s)/exam(s), give the letter grade FF, or may take disciplinary action.

