



## ECTS COURSE INFORMATION FORM

<b>Faculty</b>	<b>Faculty of Engineering</b>	
<b>Program</b>	<b>B.Sc. in Civil Engineering</b>	<b>Elective</b>
	<b>B.Sc. in Computer Engineering</b>	<b>Required</b>
	<b>B.Sc. in Electrical-Electronics Engineering</b>	<b>Elective</b>
	<b>B.Sc. in Industrial Engineering</b>	<b>Elective</b>
	<b>B.Sc. in Mechanical Engineering</b>	<b>Elective</b>

<b>Course Code</b>	COMP 302			
<b>Course Title in English</b>	Software Engineering			
<b>Course Title in Turkish</b>	Yazılım mühendisliği			
<b>Language of Instruction</b>	English			
<b>Type of Course</b>	Flipped Classroom			
<b>Level of Course</b>	Undergraduate			
<b>Course Category (by % of Content)</b>	Basic Science	Basic Engineering	Engineering Design	General Education
	0	10	80	10
<b>Semester Offered</b>	Fall			
<b>Contact Hours per Week</b>	Lecture: 3 hours	Recitation: -	Lab: -	Other: -
<b>Estimated Student Workload</b>	140 hours			
<b>Number of Credits</b>	6 ECTS			
<b>Grading Mode</b>	Standard Letter Grade			
<b>Pre-requisites</b>	COMP 201			
<b>Expected Prior Knowledge</b>	Data Structures and Algorithms			
<b>Co-requisites</b>	None			
<b>Registration Restrictions</b>	Only Undergraduate Students			
<b>Overall Educational Objective</b>	To get acquainted with the concepts of Software Engineering and Management of Software Projects.			
<b>Course Description</b>	This course provides a comprehensive introduction to some fundamental aspects of Software Engineering. The intensive content of the course presents a broad view of common Software Engineering topics such as process models, project management, software analysis and design, software testing and maintenance.			
<b>Course Description in Turkish</b>	Bu ders, Yazılım Mühendisliği ve Yazılım Projelerinin Yönetimi ile ilgili kavramlarını tanıtmayı hedeflemektedir. Dersin geliştirme süreç modelleri, yazılım çözümlemesi ve tasarımı, yazılım sınaması gibi genel yazılım mühendisliği konularını kapsayan içeriği, yazılım mühendisliği alanında genel bilgi sahibi olunmasını sağlamayı amaçlamaktadır.			
<b>Course Learning Outcomes and Competences</b>	Upon successful completion of the course, the learner is expected to: 1. describe the software processes; 2. recognize software project management concepts; 3. design of complex software systems; 4. demonstrate broad knowledge on popular methods in software engineering. 5. present the software development work in front of the audience. 6. recognize ethical and professional responsibilities in engineering situations 7. communicate effectively with team members.			

<b>Relationship of the Course with the Student Outcomes</b>		Level	Learning Outcome(s)	Assessed by
<b>Student Outcomes</b>		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		H	1,2	Exam
(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	3,4	Exam, Term Project
(3) an ability to communicate effectively with a range of audiences		S	5	Presentations
(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	6	Exam
(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	7	Term Project
(6) an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions				
(7) an ability to acquire and apply new knowledge as needed, using appropriate learning strategies				
<b>Prepared by and Date</b>	Assoc. Prof. Dr. Ilker Bekmezci / December 2019			
<b>Semester</b>	Spring 2019-2020			
<b>Name of Instructor</b>	Assoc. Prof. Dr. Ilker Bekmezci			
<b>Course Contents</b>	Week	Topic		
	1.	Introduction		
	2.	Software Processes and Process Models		
	3.	Agile Software Development		
	4.	Software Project Planning		
	5.	Student Project Presentations - Planning		
	6.	Requirements Engineering		
	7.	Requirements Engineering		
	8.	System Modeling and UML		
	9.	Student Project Presentations - Requirements		
	10.	Architectural Design		
	11.	Architectural Design		
	12.	Student Project Presentations - Design		
	13.	Implementation		
	14.	Software Testing		
	15.	Final Exam/Project/Presentation Period		
	16.	Final Exam/Project/Presentation Period		
<b>Required/Recommended Readings</b>	<ul style="list-style-type: none"> <li>• Software Engineering: A Practitioner's Approach Roger S. Pressman, McGraw- Hill, 2005.</li> <li>• Software Engineering, Ian Sommerville, Addison-Wesley, 2010.</li> <li>• Object-Oriented Software Engineering Using UML, Patterns and Java Bernd Bruegge, Alan H. Dutoit, 3rd ed., Prentice Hall, 2009</li> </ul>			
<b>Teaching Methods</b>	Lecturing and In-class exercises and a group project will be carried out by students			
<b>Homework and Projects</b>	Term project, assignments			
<b>Laboratory Work</b>	-			

<b>Computer Use</b>	For in-class exercises, term project and assignments
<b>Other Activities</b>	-
<b>Assessment Methods</b>	Assignment (2): %10 Term Project: %50 Midterm (2): % 40
<b>Course Administration</b>	Instructor's office and phone number, office hours, email address: -Office: A523 - Email address: bekmezci@mef.edu.tr <b>Rules for attendance:</b> <b>Missing a quiz:</b> 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. <b>Missing a midterm:</b> 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. <b>Missing a final:</b> Faculty regulations. <b>A reminder of proper classroom behavior, code of student conduct:</b> YÖK Regulations <b>Statement on plagiarism:</b> YÖK Regulations

ECTS Student Workload Estimation						
	No/Weeks per Semester (A)	Preparing for the Activity (B)	Spent in the Activity Itself (C)	Completing the Activity Requirements (D)		
Lecture/Flipped Classroom	14	1	3	1	70	A*(B+C+D)
Quizzes	0	0	0	0	0	
Midterm(s)	2	5	1	1	14	A*(B+C+D)
Assingment, Project, Presentation	4	10	1	2	52	A*(B+C+D)
Final Examination	0	0	0	0	0	A*(B+C+D)
Total Workload					140	
Total Workload/25					5,6	
ECTS					<b>6</b>	