

School of Engineering and Natural Sciences / Electrical and Electronics Engineering (English)

2024 - 2025 Academic Year

SOFTWARE ENGINEERING

Syllabus

Course Description					
Name	Code	Semester	T+A Hour	Credit	ECTS
SOFTWARE ENGINEERING	EEE4115373	Fall Semester	3+0	3	6
Prerequisites Courses	VERİ YAPILARI				
Recommended Elective Courses	Programming for Mobile Devices				
Language of Instruction	English				
Course Level	First Cycle (Bachelor's Degree)				
Course Type	Elective				
Course Coordinator	Assist.Prof. Ahmet KAPLAN				
Name of Lecturer(s)	Assist.Prof. Muhsin Zahid UĞUR				
Assistant(s)	Teaching assistant.				
Aim	This course introduces an engineering approach to building software systems. Students will work in teams towards building a software product while going through certain phases including a feasibility study, requirements analysis, object-oriented design, implementation, testing, and delivery to the client. The course will also provide advanced topics such as project management and risk analysis.				
Course Content	This course contains; The Product and Process,Project Planning and Organization,Software Engineering Practice & Project Proposal Presentation,Requirements Engineering,Analysis Methods,Elements of Software Design,Design Methods - 1,All the topics till Week 7. ,Design Methods - II,Testing Strategies,Testing Methods,Umbrella Activities - 1,Umbrella Activities - 2,Time Estimation for Software Projects,Project Final presentations.				
Course Learning Outcomes			Teaching Methods	Assessment Methods	
1. Work on a software engineering project with people with various roles.			9	A, F	
2. Create UML diagrams towards completing software engineering projects.			9	A, F	
3. Recognizes all the fundamental concepts of software engineering.			9	A, F	
4. Follow software engineering principles.			9	A, F	
Teaching Methods	9: Lecture Method				
Assessment Methods	A: Traditional Written Exam, F: Project Task				
Lecture Schedule					
Sequence	Topics	Preliminary Preparation			
1	The Product and Process	Textbook chapters 1-5			
2	Project Planning and Organization	Textbook chapters 31-34, 35			
3	Software Engineering Practice & Project Proposal Presentation	Textbook chapters 6,7			
4	Requirements Engineering	Textbook chapter 8			
5	Analysis Methods	Textbook chapters 9-11			
6	Elements of Software Design	Textbook chapter 12			
7	Design Methods - 1	Textbook chapters 13, 17, 18			
8	All the topics till Week 7.	All the topics till Week 7			
9	Design Methods - II	Textbook chapters 14,15			
10	Testing Strategies	Textbook chapters 20,22			
11	Testing Methods	Textbook chapters 23-26			
12	Umbrella Activities - 1	Textbook chapters 19-21			
13	Umbrella Activities - 2	Textbook chapters 29, 36			
14	Time Estimation for Software Projects	Textbook chapter 33			
15	Project Final presentations	Chapters of the textbook covered			
Evaluation Methods		Weight(%)			
Midterm Exam		30			
General Exam		70			

Resources
Software Engineering: A practitioner's Approach by Roger S. Pressman and Bruce Maxim, 8th edition, Mc Graw Hill, 2015.