Course title	Code	semester	T+U	credit	ECTS
Software Design and Architecture		3	3+0	3	6

Prerequisite Courses	None
Language of the Course	English
Course Level	Undergraduate
Type of Course	Compulsory
Course Coordinator	
Instructors	
Course Assistants	
The aim of lesson	The aim of this course is to model, design and develop software projects with software engineering discipline. For this purpose, to teach the basic principles of software engineering, the steps of the software process, the standards of software design and standardized design patterns.
Course Content	This course covers basic design principles and strategies for software architecture and design. Architectural styles, quality attributes, representations and documents, reference architecture, impact-specific architecture in the architectural process and pattern-oriented design, component-based design, length-oriented design and interface design in the detail design process are discussed .
Course Learning Outcomes	The student who successfully completes this course; 1. Will be able to define the basic elements of Software Engineering. 2. Can understand the basics of Software Design and Architecture. 3. Understand, research and compare architectural design methods. 4. Develop a real life project.

Weeks	Topics
one	What is Software Architecture
2	Why is Software Architecture Important?
3	Scope of software architecture
4	Quality Requirements Part I
5	Quality Requirements Part II
6	Software Architecture in Agile Projects
7	Architecture and Requirements
8	designing the architecture
9	Software Architecture Documentation
10	Software Architecture Case Study I
11th	Software Architecture Case Study II
12	Architecture in the Cloud
13	New approaches in architecture
14	Alternative design approaches for developing specification and design tools and system tests.
15	Project Presentations

General Competencies

To be able to research and learn about any given software engineering technical concept in the most accurate way.

resources

Software Architecture, Kazman et al.

Evaluation System

The dates, days and hours of the Midterm Exam, Quiz, Final Exam and Evaluations will be announced later, according to the decision of the Faculty Administrative Board.

	WITH PROGRAM LEARNING OUTCOMES COURSE LEARNING OUTCOMES RELATIONSHIP TABLE										
	PO1	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**
INCREASE 1	5	5	5	5	4	4	4	5	5	4	4
INCREASE 2	5	4	4	4	4	3	3	3	5	4	5
INCREASE 3	5	5	3	4	5	3	3	3	5	3	5
LO4	5	5	3	4	3	3	3	3	5	4	5
LO: Learning Outcomes OP: Program Outcomes											
Contribution Level	**1 Very Low**		**2 Low**		**3 Medium**		**4 High**		**5 Very High**		

Relation of Program Outcomes and Related Course

	PO1	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**
Software Design and Architecture	5	4	5	5	3	3	3	4	5	4	5