Course Title	Code	Semester	T+P	Credit	ECTS
Software	CSE 311	Fall	3+0	3	6

Prerequisites	CSE 102
Language of Instruction	English
Course Type (Required /Elective)	Required
Instructor	**Prof. Dr. Ahmet Bulut** ahmet.bulut@acibadem.edu.tr
Assistants	– ChatGPT –
Goals	This course covers the fundamental principles and concepts of software development, including software development (SD) processes, agile practices & scrum, test driven development, unit testing, integration testing, version control systems, continuous integration and continuous deployment.
Learning Outcomes	1. Learn design choices & philosophy behind widely popular SD practices. 2. Learn agile-SD methodology & best practices & the soft skill-set. 3. Apply the skill-set on a team project. 4. Write a term report detailing your experience and exposure.

Assessment Criteria	**Assessment Components**	**Weight**
	Midterm	25%
	Project (Participation, Presentations, SD Practices, Report)	35%
	Final	40%
	TOTAL	100%

WEEKLY TOPICS

Week	Lecture	Instructor Notes
1.	Introduction	*Exchange of Expectations !*
2.	Software Development Processes: Monolithic (Waterfall) vs. Agile	
3.	User Stories, Story Estimation, Task Board, Tracking Progress	
4.	**Project: Kickoff (Presentation #1)**	*No lecture afterwards.*
5.	Minimum Viable Product (MVP), Scrum	
6.	Autonomy, Teams, Communication	
7.	Version Control Systems (Git)	
8.	**Midterm**	*No lecture afterwards.*

9.	Version Control Systems (Git, GitHub)	
10.	**Project: Progress (Presentation #2)**	*No lecture afterwards.*
11.	Unit Testing, Test Driven Development (TDD), Various Types of Tests: Integration, Regression, Load, and Stress.	
12.	Continuous Integration (CI)	
13.	Continuous Delivery (CD)	
14.	**Project: Demo (Presentation #3)**	**Due: Hardcopy Report !**

REFERENCES	
Main Textbook	Scrum: The Art of Doing Twice the Work in Half the Time by Jeff Sutherland, J.J. Sutherland. Crown Business, 2014. Software Engineering at Google: Lessons Learned from Programming Over Time by Titus Winters, Tom Manshreck, Hyrum Wright. O'Reilly Media, 2020. Agile Software Development with Scrum by Ken Schwaber, Mike Beedle. Prentice Hall PTR, 2001.
Supplementary Reading	Getting Real: smarter, faster, easier way to build a successful web application https://basecamp.com/gettingreal Django Documentation: The web framework for perfectionists with deadlines https://docs.djangoproject.com/

ECTS / WORKING HOUR TABLE			
Activities	**Number of Weeks**	**Duration (Hour)**	**Working Hours**
Duration of the Course	14	3	42
Midterm	2	9	18
Project	1	120	120
		Total Hours	180
		Total Hours / 30	6
		ECTS Credit	6