Course Syllabus (tentative)
CS 48004: Agile Software Development
Fall 2021

Course	Lecture Hours	**Mondays 15:40 – 18:30** (online using Zoom)
	Lab Hours	TBD (online using zoom)
Instructor	Emre Kaplan, Ph.D. *E-mail:* emre.kaplan@sabanciuniv.edu *Office: TBD* *Office Hours: Office hour slot reservation on demand via email.*	
TAs	*TBD*	

DESCRIPTION

The course introduces software development processes, clean code principles and the agile methods. General principles of agile software development, best practices will be discussed. SCRUM will be main method to be executed.

TENTATIVE PROGRAM

week 1	Course Intro, Software Development Processes and Software Quality
week 2	The Agile Manifesto, Principles and Practices
week 3	Agile Requirements Analysis and User Stories
week 4	Agile Release and Iteration Planning, Cost Estimation, Risk Management
week 5	Communication, Roles and Responsibilities
week 6	Scrum, Team Development and Roles, Scrum Ceremonies and Artifacts
week 7	Clean Code principles: Names, Functions, Formatting, Error Handling, Unit Tests
week 8	Clean Code principles: Refactoring, Smells and Heuristics, Patterns and Software Evolution
week 9	Progress Demo
week 10	Extreme Programming (XP)
week 11	Pair Programming and Test-Driven Development
week 12	Lean Software Development
week 13	Risks and Pitfalls, Adopting and Scaling Agile
week 14	Project Demo and Presentations

GRADING POLICY

Type	Contribution (%)
Quiz/Homework	10
Midterm	40
Term Project	50
Total	**100**

The final project demos must be made before the last day of classes.

Letter grade is determined based on a curve.

Receiving a project score less than 30/100 automatically results in a failing grade.

The date and time of the midterm exam will be announced by later.

Be aware that, since the term project is an integral part of the course, getting good grades in the exams and quizzes is not sufficient to pass the course! To be assessed as successful, students must significantly contribute to their project group's success.

COURSE PROJECT

Each project will be carried out in a group of 4-5 students. Several suggested project topics may be announced in the class. Students are welcome to propose their own project topics, each of which will be carefully examined, and honored if found to be challenging and appropriate for the course. The projects will be carries out using Scrum.

TURN-IN and LATENESS POLICY

Assignments (e.g., project phases) may be turned in up to 24 hours late with 15% penalty, or 24 to 48 hours late with 35% penalty. No assignments will be accepted more than 48 hours late for any reason!

COLLABORATION POLICY

Project groups may discuss ideas about their projects with other groups, but they should not share any project artifacts with others (e.g., requirement documents, design documents, source code, etc.) Each group is responsible in making sure that their artifacts are well protected from others.

MAKE-UP POLICY

It's simple. Do NOT miss an exam!

If you do miss an exam, no makeup exams will be granted unless you have a documented emergency situation and notify the instructor within 48 hours after the exam date.

TEXTBOOK

J. Shore and S. Warden, "The Art of Agile Development", O'Reilly, 2008.

RECOMMENDED BOOKS

- *C. Larman, "Agile & Iterative Development: A Manager's Guide", Addison Wesley, 2003.*
- *K. Schwaber, "Agile Project Management with Scrum", Microsoft Press, 2004.*
- *K. Beck, "Extreme Programming Explained: Embrace the Change", Addison Wesley, 2004.*
- *M. Poppendieck and T. Poppendieck, "Lean Software Development: An Agile Toolkit", Addison Wesley, 2003.*
- *Clean Code: A Handbook of Agile Software Craftsmanship by Robert C. Martin*