

**SABANCI UNIVERSITY**  
**CS 308 - Software Engineering**  
**Spring 2022-2023**

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**Lectures**

- Tuesday 11:40-12:30
- Wednesday 16:40-18:30

**Lab**

- Thursday 13:40-16:30

**Instructors**

Anil Koyuncu

- FENS G013
- E-mail: anil.koyuncu at sabanciuniv.edu

Office Hours

- Thursday 16:40-17:30
- Online by appointment

**Context**

Fundamentals of software engineering using a group project as the basic vehicle. Topics covered include the software crisis, managing complexity, requirements specification, architectural and detailed design, testing and analysis, software process, and tools and environments.

**Objectives**

- To introduce the basics of the software engineering process life cycle, including requirements gathering, specification, and testing.
- To introduce the principles of object-oriented (OO) analysis and design and software architecture through OO principles and design/architectural patterns.
- To introduce the basics of UML (Unified Modeling Language), a way of expressing requirements and design in software engineering.
- To practice the application of object-oriented software development principles through a team project.
- To develop teamwork and communication skills through a team project.

## **Learning Outcomes**

- Describe the basics of the software engineering process life cycle.
- Identify, formulate, and solve fundamental software engineering problems, including requirements gathering, specification, design, architecture, and testing of software systems.
- Analyze software engineering artifacts, including the requirements, design, and architecture of software systems.
- Design basic object-oriented software systems that meet requirements by applying OO software development principles and design/architectural patterns.
- Evaluate the impact of potential solutions to basic software engineering problems.

## **Course outline**

1. Software process and development life cycle
2. Requirements
3. Unified Modeling Language
4. Software design
5. Software development practices and collaboration
6. Software testing

## **TextBook (Optional)**

Textbooks are just for reference, and all the necessary materials will be provided with lecture notes.

1. Software Engineering by Ian Sommerville (10th Edition)
2. Software Engineering: a Practitioner's Approach by Roger Pressman (8th edition)

## Tentative Grading (subject to change)

|                                  |     |
|----------------------------------|-----|
| Midterm Exam                     | 20% |
| Final Exam                       | 30% |
| Course Project                   | 50% |
| Quiz & Homework & Participation* | 5%  |

You must succeed separately in the course project and exams (midterm + final). Receiving a score less than **50/100** in one of those will automatically result in a failing grade.

\*\*Bonus extra grade

## Course project

The course project will provide hands-on software engineering experience involving **4 students**.

In this project, you will design and develop either

- i. your ideas or
- ii. instructor given ideas

into a final product for the **theme/topic** defined by the instructor.

The theme of this course will be announced in the first week.

In both cases, the teaching team serves as both customer and manager. You must submit a **project proposal** and **present** it to show your vision and convince the teaching team.

Just like in real software development projects, you will have milestones, and each week you will submit reports and attend meetings, in addition to developing your product:

- i. submit a weekly status report (every Tuesday 11:40),
- ii. hold weekly team meetings (at mutually agreed time),
- iii. hold weekly project meetings (during Thursday section).

In terms of programming languages and technologies to use you are free to select any, however, your project must follow certain constraints that will be announced in the first lecture.

## Course Grading Catalog

|    |        |
|----|--------|
| A  | 100-95 |
| A- | 94-90  |
| B+ | 89-85  |
| B  | 84-80  |
| B- | 79-75  |
| C+ | 74-70  |
| C  | 69-65  |
| C- | 64-60  |
| D+ | 59-55  |
| D  | 54-50  |
| F  | <50    |

## Exam Policies

Unless otherwise noted, exams are in the classroom, closed books and closed notes; no computing or communication devices are allowed during the exams.

In case of online exams :

- During the exam, the TAs will be proctoring online over Zoom. You'll be assigned to the Zoom session of one of the TAs.
- Each student will also be assigned a personal GoogleMeet link. When the exam begins, the students are supposed to click the provided link and press 'Record Screen'. The TA will join this meeting arbitrarily in order to check whether the recording has started appropriately and the entire screen is shared.
- Note that during the exam, each student must be connected to both Zoom and GoogleMeet links. Once connected, Zoom will be used to share your computer's camera and microphone and GoogleMeet for screen recording.
- Make sure to check that your setup (i.e., webcam, microphone, etc.) functions properly before the exam.

In the case of non-compliance with this and other declared exam procedures, your exam will be void.

## **Exam Review Policy**

Students are allowed to review their midterm and final examinations. You can only review your grades based on an appointment with the course's primary instructor within 7 days after the respective grade is announced.

Grade bargaining will absolutely not be tolerated.

## **Expectations from Students**

- Students are expected to attend all classes.
- Students are responsible for the material covered in class, even if it is not part of the lecture notes published on the website (Sometimes, we explain some stuff on the board). That is why attendance is essential.
- Students are responsible for checking their emails (Sabanci University accounts), SUCourse and course website daily for any announcements related to this course.
- **PLAGIARISM WILL NOT BE TOLERATED.**
  - Any act of plagiarism may result in a direct failure (F) of the course.

## **Make-up Policy**

No make-up is allowed for the **quizzes, homework, or project milestones**. Students automatically get 0 (zero) from the respective grade item if any of them is missed.

Make-up is only allowed for the midterm and final examination to those with an official report from the University Health Center and to those with an official permission notice from the university for participating in a university event on the date of the exam in question. Students must submit their reports/notices to one of the instructors **before the exam in question**. The ones having other excuses should contact the instructors within the day of the exam to be missed, and then the instructors will decide whether these students are allowed to take the make-up exam. Any excuses to be brought to the instructors' attention after the exam will not be considered. **No exceptions to these rules!**