

Tentative Syllabus

CS 308: Software Engineering

Fall 2020

Lecture Hours	Mondays	15:40 – 17:30
	Tuesdays	15:40 – 16:30
Lab Hours	Thursdays	08:40 – 11:30

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Software Engineering: 1) the application of a systematic, disciplined, quantifiable approach to the development, operation, and maintenance of software; that is, the application of engineering to software. (2) The study of approaches as in (1)”
IEEE Standard Glossary of Software Engineering Terminology, 1990

DESCRIPTION

This course is an introductory level course to the fundamentals of software engineering. One focus of this course is to provide software engineering knowledge and skills that students can put into immediate practical use. Topics covered include: Requirements engineering, architecting and designing software systems, quality assurance, managing software process, and getting familiar with the state-of-the-art software development tools.

TENTATIVE PROGRAM

- week 1** Introduction to Software and Software Engineering
- week 2** Managing the Software Process
- week 3** Agile SW Development: Scrum
- week 4** Requirements Engineering
- week 5** Modeling with Classes I
- week 6** Modelling with Classes II
- week 7** Modeling Interactions and Behavior
- week 8** Software Design Patterns I
- week 9** Software Design Patterns II
- week 10** Software Design Patterns III
- week 11** Software Architecture
- week 12** Software Verification and Validation I
- week 13** Software Verification and Validation II
- week 14** Advanced Topics

GRADING POLICY

	Contribution (%)
Short Quizzes	10
Midterm	20
Final	20
Project	50

All the Short Quizzes will have the same weight.

As the midterm grade, 4 of the best Long Quizzes (each with equal weight) will be used.

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

The date and time of the final exam will be announced by Student Resources.

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 5-6 (up to 7 with approval) students. Several suggested project topics will 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 carried 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

Object Oriented Software Engineering: Practical Software Development using UML and Java (2nd edition), Timothy C. Lethbridge and Robert Laganier, McGraw-Hill, 2005, ISBN 0-07-710908-2
<https://www.homerbooks.com/urun/object-oriented-software-engineering>

RECOMMENDED BOOKS

- *The Mythical Man-Month*, Frederick P. Brooks, ISBN 0-201-83585-9
- *Design Patterns*, Eric Gamma et. al., ISBN 0-201-63361-2
- *Scrum: A Breathtakingly Brief and Agile Introduction*, C. Sims and H. L. Johnson, ISBN 978-1-937965-04-4
- *The Elements of Scrum*, C. Sims and H. L. Johnson, ISBN 978-0-9828669-1-7
- *Code Complete (2nd edition)*, Steve McConnell, ISBN-13: 9780735619678
- *Death March (2nd edition)*, Edward Yourdon, ISBN 0-13-748310-4