Software Engineering

Course Syllabus

Course Description

Introduction to software life cycle models. Software requirements engineering, formal specification and validation. Techniques for software design and testing. Cost estimation models. Issues in software quality assurance and software maintenance.

Course Information

Course Title: Software Engineering
Course Number: CS / SE 3354.502
Semester: Spring 2023
Meeting At: Tuesday & Thursday 5:30-6:45 in ECSS 2.412
Credit Hours: 3

Instructor's Contact Information

Name: Dr. Michael Christiansen
NetID: mgc013000
Email: michael.christiansen@utdallas.edu
Office: ECSS 4.201
Office Hours: Tuesday & Thursday 2:30-3:30PM
and any time I am available via MS Teams.

Grader Contact Information

Name: TBD
Office Hours: TBD
Office: TBD
Email Address: TBD

Academic Calendar and Events

- Classes Start: 1/17
- Last Day of Class: 5/5
- Midterm Exam: Mar 2 & 3 in the UTD Testing Center. Study guide will be provided.
- Final Exam: May 9 & 10 in the UTD Testing Center. Study guide will be provided.

See the official UTD calendar for university holidays and closings here.

Notice: The testing center requires that students reserve a seat on the exam date through the UTD Testing Center site. There will be no opportunity to take exams outside of the assigned date. Reserve seats for both midterm and final exams ASAP.

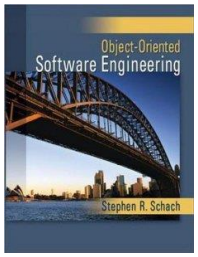
Course Prerequisites

1. Computer Science II (CS 2336) with a grade of C or better, or CS 3333.
2. Discrete Mathematics for Computing (CS 2305) with a grade of C or better.
3. Professional and Technical Communication (ECS 3390).

Course Learning Objectives

- Ability to understand software lifecycle development models.
- Ability to understand and apply software requirements engineering techniques.
- Ability to understand and apply software design principles and modeling.
- Ability to understand and apply software testing techniques.
- Ability to understand the use of metrics in software engineering.
- Ability to understand formal methods in software development.
- Ability to establish and participate in an ethical software development team.
- Ability to understand software project management.
- Ability to understand CASE tools for software development.

Required Textbook

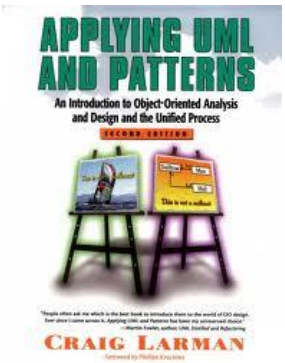


Object Oriented Software Engineering by Stephen R. Schach.

ISBN-13: 978-0073523330

The course eLearning site contains all announcements, slides, assignments, and other materials for this course.

Supplemental Textbook and Materials



Applying UML and Patterns: An Introduction to Object-Oriented Analysis and Design and Iterative Development, Second or Third Edition by Craig Larman.

Other materials as provided in the “Supplemental Materials” folder of the eLearning site.

Grading Policy

The grade will be determined as follows:

- The final course grade will be calculated against the following factors:

Requirements Project	10 %
Design & Analysis Project	20 %
Homework Assessments	10 %
Class Attendance	5%
Midterm Exam	25 %
Final Exam	30 %

- **No bonus work, make-up work, dropped scores, or other means of raising your grade will be provided.**

Undergraduate Grade Ranges and GPA Points

	Score	Letter Grade	GPA
A+	X ≥ 97	A+	4.00
A Excellent	93 ≥ X < 97	A	4.00
A-	90 ≥ X < 93	A-	3.67
B+	87 ≥ X < 90	B+	3.33
B Good	83 ≥ X < 87	B	3.00
B-	80 ≥ X < 83	B-	2.67
C+	77 ≥ X < 80	C+	2.33
C Fair	73 ≥ X < 77	C	2.00
C-	70 ≥ X < 73	C-	1.67
D+	67 ≥ X < 70	D+	1.33
D Poor	63 ≥ X < 67	D	1.00
D-	60 ≥ X < 63	D-	0.67
F Failure	< 60	F	0.00

Attendance Policy

University and department policy is students attend live, face to face lectures and to record attendance when possible. My policy is to record attendance for live lectures only. This is accomplished by circulating an attendance sheet for each class meeting. It is the responsibility of each student to ensure that their attendance is recorded during the lecture only.

Cheating the process (e.g., having a friend sign-in for you) will be reported to the university.

It is understood that some lectures may be missed for valid reasons e.g., sickness. But the course policy stands, attendance is only counted for signed roll sheets. To offset this inequity, each student receives an additional point to their final course grade. This extra point more than offsets the penalty of missing a few days throughout the semester.

Classroom Policy

Students are encouraged to attend the live lectures, when available, in accordance with university and department policy.

Students will be required to interact with their assigned project teams regardless of their locality or status as an asynchronous student.

University policies can be found here.

The materials in this syllabus are subject to change at the professor's discretion.