CS/CE/SE 3354.005 Course Syllabus

COURSE INFORMATION:

Course Number: CS/CE/SE 3354.005
Course Title: Software Engineering
Course Term: Fall 2022
Schedule: M W 2.30 pm – 3:45 pm
Location: ECSS 2.312

INSTRUCTOR CONTACT INFORMATION:

Email Address: Srimathi.Srinivasan@utdallas.edu
Office Location: ECSN 2.924
Office Hours: Tuesday 11.30 AM – 12.45 PM in MS Teams/In person
Wednesdays 11.30AM – 1 PM in MS Teams/In person.
Click here to enter my Office room

GRADER CONTACT INFORMATION:

TA: TBA
TA email:
Office hours:
Location:

Email: When you send a mail to me or TA, please **specify 3354.005 in the subject of the email.**

Course Pre-requisites, Co-requisites, and/or Other Restrictions
CE/CS/TE 2336 (Computer Science II) with a grade of C or better
or CS 3333(Data Structures)
CE/CS/TE 2305 (Discrete Mathematics for Computing I) with a grade of C or better
Pre- or co-requisite: ECS 3390 (Professional and Technical Communication)

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.

Student Learning Objectives/Outcomes

1) Ability to understand software lifecycle development models.
2) Ability to understand and apply software requirements engineering techniques.
3) Ability to understand and apply software design principles.
4) Ability to understand and apply software testing techniques.
5) Ability to understand the use of metrics in software engineering.
6) Ability to understand formal methods in software development.
7) Ability to establish and participate in an ethical software development team.
8) Ability to use software project management tools and techniques.
9) Ability to use CASE tools for software development.

Required Textbooks and Materials

1) ***(Required)*** Kung D., "Object-Oriented Software Engineering: An Agile Unified Methodology", 1st ed., McGraw Hill, ISBN: 978-0073376257

Suggested Course Materials

2) ***(Recommended)*** I. Sommerville, Software Engineering, Tenth Edition, 2016. Parts 1 and 4.
3) IEEE Software Engineering Body of Knowledge (SWEBOK v3), 2014 (available via eLearning References)
4) Craig Larman, "Applying UML and Patterns: An Introduction to Object-Oriented Analysis and Design and Iterative Development", Prentice-Hall, ISBN: 013 148 9062, 2005.

Academic Calendar (Tentative Schedule)

Week	Dates (M W)	Class Activity	Assignment/Projects
1	08/22 08/24	Review of Syllabus Introduction (1)	A1 assigned
2	08/29 08/31	Software process & methodology (2) System engineering (3)	A1 due P1 assigned
3	09/05 09/07	**Holiday** Software requirements elicitation (4)	A2 assigned
4	09/12 09/14	Domain/System modeling (5)	A2 due A3 assigned P2 assigned
5	09/19 09/21	Use case modeling (7)	A3 due A4 assigned P1 due
6	09/26 09/28	Actor-system interaction model (8) Test Cases (20.3)	A4 due A5 assigned
7	10/03 10/05	Object-interaction modeling (9)	A5 due P3 Assigned
8	10/10 10/12	Architectural design (6)	P4 Assigned, P2 due
9	10/17 10/19	Mid Semester Review Applying Responsibility Patterns (10)	P3 due
10	10/24 10/26	Deriving a design class diagram (11) Implementation (18)	P5 Assigned A6 assigned

11	10/31 11/2	Software Quality Assurance (19)	A6 due P4 due
12	11/7 11/9	Software testing (20)	
13	11/14 11/16	Software project management (23)	**P5 due 11/21/21**
14	**11/21 03/23**	**Thanksgiving Break**	
15	**11/28 11/30**	**Exam, Project Demo**	**2.30 – 3.45 pm in classroom**
16	**12/05 12/07**	**Project Demo**	

Grading Policy

- **One team project with five planned increments (equal weight): 50%**
  - All students are required to participate in all presentations. Participation is part of the project score Presentation and Participation (**10%**).
  - Team members are required to work together throughout the project. You should plan on committing your time and effort to the teamwork. Teams that do not work together produce very poor results and score poorly! Teamwork, teamwork, teamwork! Keep this in mind. Make sure perform well in your team. Teams or team members should report to the instructor as soon as possible if there are problems in the team that will affect teamwork.

- **Homework Assignments 25%.**
  - We will have graded assignments for most topics. They will be posted on the eLearning, and any clarifications or hints will be posted on the discussion board.
  - **No zip files please!** Only pdf or word document.
  - Identical or highly similar solutions could result in zero point and academic discipline.

- **Instead of midterm exams, we will have quizzes 10%.**
  - Quizzes will occur every Friday, covering the material discussed during the week. Exceptions will be announced via email (there will be no quizzes during exam weeks or the final week of class).
  - Quizzes are open book and open notes. You may use a calculator. Do not do searches on the Web for a solution to a problem.
  - Quizzes may be taken between 12:30am and 11:59pm of the day of the quiz. Quizzes not finished by 11:59pm will get a grade of 0.
  - Quizzes may be excused; quizzes cannot be made up; excused absences result in a null grade.
  - Quizzes will be administered online in the eLearning / Testing Folder.
  - Quizzes will last 20 minutes from the time started (and then will be automatically submitted).
  - The lowest grade will be dropped, only the best N-1 count for the final grade.
  - Quiz results will be available in eLearning after the due date/time.

- **One Final Exam 10%.**
  - There is no Retake for the Final Exam.

➢ **DISCUSSION BOARD USE**
  - We will use the discussion board throughout the semester. Participation on discussion board will be counted towards your course participation grade.
  - Please ask all your technical questions/concerns regarding the course or the assignments using the discussion board. **Only email the personal questions/concerns**.

- You should post about software failures, errors in the books or slides, or about topics that extend from our classroom discussion. You can respond to other students and/or rate the responses.

- **ATTENDANCE 5%**
  - You are expected to attend class. You will have a 5% for attendance. By CS Dept policy, missing three (3) consecutive classes results in a letter grade drop and missing four (4) consecutive classes is an automatic failure for the class

Quiz and Exam Questions

- Questions will be true/false, multiple choice, and/or problems.
- Problems will have essay responses or file responses.
- For a file response, submit a file in pdf, jpg, or png format (may be hand drawn and photographed/scanned or may be the output of a tool, such as a drawing tool).

Connectivity Issues

- Since quizzes and exams are online, it is possible that a network problem could result in a connection failure. If you drop out of a quiz or exam, the timer will continue to count down. If you log back in quickly, you may be able to resume without penalty.

- If you continue to have connectivity issues, contact the 24/7 IT helpdesk immediately to document the problem in a timely manner: https://ets.utdallas.edu/elearning/helpdesk or (866) 588-3192. The IT helpdesk may be able to resolve the problem in a timely manner.

Assignments

- You will typically have a week to do a homework assignment
- Assignments will be assigned by Wednesdays.
- Assignments will typically be due by following Tuesday midnight.
- Assignments must be turned in on time – late assignments will receive a grade of 0 unless an excuse is accepted by the teacher
- Assignments may be deferred for an excused absence; students are still responsible for the material covered in class. Deferred assignments may be replaced by a make-up assignment (since I typically review assignments at the beginning of the class when they are due). I will determine whether a late assignment will be deferred, replaced, or get a grade of 0
- Assignments shall include the class/section, the assignment, and your name at the beginning of the file. File names of softcopy assignments shall include the class/section, the assignment, and your name, e.g., se3354.005a01jdoe.pdf
- Assignments should be submitted through eLearning
- You have an unlimited number of submission attempts for an assignment up until the time it is due.

Grading Policy Summary

- Project: 50%
- Individual Homework Assignments: 25%
- Quizzes: 10%
- Final Exam: 10%
- Participation (discussion board, activities, attendance etc,): 5%

97-100	A+	94-97	A	90-94	A-
87-90	B+	84-87	B	80-84	B-
77-80	C+	74-77	C	70-74	C-
67-70	D+	64-67	D	60-64	D-
Below 60	F				

Course & Instructor Policies

1) There will be no extra credit work.
2) Assignments and quizzes will not be accepted late unless there are extenuating circumstances as accepted by the teacher.
3) Excused absences are provided for serious medical issues and school-sponsored events (e.g., professional conferences or athletic events for athletes) or at the discretion of the professor.
4) Evidence, e.g., a doctor's excuse, for the reason for an excused absence should be emailed to me.
5) Assignments may be deferred for an excused absence, but students are still responsible for the material covered in class.
6) If you send email to the teacher or the TA, include which class you are discussing in the email subject including the section number) say **CS 3354.005**.

Comet Creed

This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:
"As a Comet, I pledge honesty, integrity, and service in all that I do."

Academic Support Resources

The information contained in the following link lists the University's academic support resources for all students. Please go to Academic Support Resources webpage for these policies.

UT Dallas Syllabus Policies and Procedures

The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus. Please go to UT Dallas Syllabus Policies webpage for these policies.

The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.