

EE418 Software Engineering Senior Design

(Fall 2021 (Aug. 30, 2021 – Dec. 10, 2021) Tue. & Thu. 11AM-12:15PM)

(3) Credit Hours



Instructor Contact Information

Name: Yu Liu

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Student Hours: Tue. & Thu. 1-4pm, please make an appointment by email at any time, and will be held virtually via Zoom in Fall 2021.

Instructor Participation

During this course, as your instructor, you can expect me to

- Respond to emails and voicemails within 12 hours
- Grade activities and assessments within 7 days
- Be an active participant on the moodle

Delivery Method

In classroom

Course Description

Study of the principles and practices of software engineering. Topics include software engineering tools, process models, software requirements analysis, design methodologies, software testing, and software maintenance. Hands-on experience building a software system using the waterfall life cycle model and multiple software engineering tools. Working in a team environment, students will develop all life cycle deliverables: requirements document, design documents, test plan and test suites, source codes, and user manuals.

Prerequisites

EE368 Software Engineering Junior Design.

Instructional Materials

Textbook(s)

- Ian Sommerville, Software Engineering, Tenth Edition, Pearson (recommended but not requested)

Technology

- [Computer System & Software Requirements](#)
- [Software Accessibility Policies](#) in General
- [Software Privacy Policies](#) in General
- Specific Course Software Policies

Minimum Technology Skills

- Use a learning management system
- Sufficient programming skills
- Use the Linux Operation System

Course Outcomes (CO)

CO1: Understand the basic concepts of the software development process and lifecycle.

CO2: Practice the software development process through the course project.

CO3: Build a strong team spirit for effective teamwork.

Course Schedule & Graded Activities

This calendar is tentative and that revisions, if needed, will be provided following Clarkson policy II-C – Course Policies in both the undergraduate and graduate student regulations.

Week	Date	Topic	Assignment Due/Milestone/Notes
1	08/31/2021	Course Overview & Team Setup	
	09/02/2021	L01 – Introduction to Software Engineering	
2	09/07/2021	L02a – Software Processes (Section I)	
	09/09/2021	L02b – Software Processes (Section II)	
3	09/14/2021	Course Project Intro & Feature Discussion	
	09/16/2021	M01 – Team Meeting (Kick-off Meeting) P01 – Project Kick-off Presentation	Presentation slides are prepared during the meeting
4	09/21/2021	L03 – Agile Software Development	
	09/23/2021	L04a – Requirements Engineering (Part I)	
5	09/28/2021	L04b – Requirements Engineering (Part II)	
	09/30/2021	P03 – Project Requirements Presentation	Requirement book is due by midnight of 09/29
6	10/05/2021	M02 – Team Meeting (Requirement Phase Postmortem)	Postmortem report is prepared during the meeting
	10/07/2021	P04 – Supporting Tech Presentation	Presentation slides are due by midnight of 10/06
7	10/12/2021	Break	
	10/14/2021	L05 – Architectural Design	
8	10/19/2021	L06 – Design and Implementation	
	10/21/2021	P05 – Project Design Presentation	Design document is due by midnight of 10/20

Week	Date	Topic	Assignment Due/Milestone/Notes
9	10/26/2021	M03 – Team Meeting (Design Phase Postmortem)	Postmortem report is prepared during the meeting
	10/28/2021	L07 – Software Testing	
10	11/02/2021	L08 – Software Evolution	
	11/04/2021	P06 – Project Test Plan Presentation	Test plan is due by midnight of 09/29
11	11/09/2021	L09 – Software Security Exam Review	
	11/11/2021	Time Reserved for Coding & Exam Preparation	
12	11/16/2021	Exam	
	11/18/2021	Coding Inspection Planning Project Status Demo	
13	11/23/2021	Time Reserved for Coding	
	11/25/2021	Break	
14	11/30/2021	M04a – Team Meeting (Code Inspection) – Kyleigh Demo	Package for inspection is due by midnight of 11/29 for both team
	12/02/2021	M04b – Team Meeting (Code Inspection) – Robbie Demo	
15	12/07/2021	M05 – Team Meeting (Coding Phase Postmortem)	Postmortem report is prepared during the meeting
	12/09/2021	P07 -Team Presentation and Demo of Products	All deliverables are due by midnight of 12/08

Grading

Activity	Percent of Final Grade
Exam	25%
Project	65%
Team Members Cross Evaluation	5%
Attendance	5%
Total	100%

Criteria & More Info

- This course has 1 team-based course project (details about the project will be posted on moodle during this semester).
- Grading rules for each deliverable of course project will be posted on the moodle during this semester.
- Students will be organized into teams, and each team has a team leader. The team leader will be responsible for the communication with the instructor and coordinate the internal task assignment and presentation. The team leader will have 5% bonus of the total team-based grading.

- If the team has concern on individual's performance in the team, please communication with the instructor on time. Although the team members will get the identical grading usually, poor individual performance may result in partial or full penalty in grading.

Course Success

Upon success of finishing this course, all deliverables need to be submitted on time and requesting help from the instructor if needed.

Course Policies

Etiquette Expectations & Learner Interaction

Educational institutions promote the advance of knowledge through positive and constructive debate--both inside and outside the classroom. Please visit and follow: [Netiquette and Electronic Learner Interaction Guidelines](#).

Late Work

Late submission will not be graded unless an acceptable reason has been sent to the instructor prior to the due day.

Attendance

There are 10 random checkpoints for attendance. Absence from any of them will result in 0.5 point loss from your final grading unless an acceptance reason has been sent to the instructor prior to the absence.

Academic Unit Information/Policies

Department of Electrical and Computer Engineering, Department Office, CAMP 156

Institutional Policies

Institutional Policies & Regulations

Academic Integrity

Academic Integrity, based on the values of honesty, trust, fairness, respect, and responsibility, is a fundamental principle of scholarship in higher education. Clarkson's Academic Integrity Policy prohibits: plagiarism (using another person's writing or copying any work without proper citation), falsification, unauthorized collaboration during a test or on an assignment, or substitution for another student to take an exam, course or test, and other forms of academic dishonesty.

If you are to benefit from this class and be properly evaluated for your contributions, it is important for you to be familiar with and follow Clarkson University's Academic Integrity policy. Please review this policy online [\(Undergraduate section IV – Academic Integrity, Graduate](#)

[section IV – Academic Integrity](#)). ***Work that violates this policy will not be tolerated.*** Students who are found responsible for a violation of the Academic Integrity Policy will have both a university process sanction and an academic outcome, that could include a failing grade on the assignment or exam, or a failing grade for the course.

Please refer to **Clarkson Library's [Guide to Plagiarism](#)** and the [guide to Citing Sources](#) for assistance on avoiding plagiarism and properly citing sources.

Students with Disabilities Requesting Accommodation(s)

The University strives to make all facilities and programs accessible to students with permanent, ongoing, and temporary disabilities by providing appropriate and reasonable academic accommodations, as necessary. Disabilities that may benefit from reasonable accommodations include, but are not limited to, broken wrist, ADHD, surgery recovery, Learning Disability, concussion, visual impairment, etc. For more information and/or to request accommodations, contact the Office of Accessibility Services at oas@clarkson.edu or 315-268-7643.

[Students with Disabilities Policy](#)
[Office of Accessibility Services Website](#)

Other Policies of Note:

Student Regulation Requirements for Excused and Extended Absence

[Undergraduate: III-F. Attendance](#)
[Graduate – II-F. Attendance](#)

Grading System

Discrimination & Harassment

Religious Accommodations