
SOFTWARE ENGINEERING

CRN: 92922/92923– TR (2:45pm-4:30pm) – ACS66 –Classroom South 528

TA Grader:

- Mounika Koduri: mkoduri1@student.gsu.edu

Course Description

This course focuses on techniques used in large scale scientific or technical software development, including requirements analysis, specification, systems design, implementation, testing, validation, verification, and maintenance. Serves as the Critical Thinking Through Writing (CTW) course, as well as the capstone experience, required of all Computer Science majors.

Contact Information

- My office hours are Tuesday at 1:00pm - 2:30pm, Wednesday 1:30 - 2:00pm.
- 25 Park Place, 7th floor, Room 741 (WebEx available, by appointment only and 24-hr notice in email.)
- **Email:** wjohnson6@gsu.edu
- **WebEx:** <https://gsumeetings.webex.com/meet/wjohnson6>

Course Outcomes

After finishing this course, you should be able to:

- Express abstract concepts through descriptive, targeted documentation for software design and development
- Understand standards of documentation, security, and ethics as they relate to software creation
- Engage with standard tools using UML, version control/repository, collaboration, and AGILE techniques (Scrum)

Your new skills should help you in the following ways:

- Ability to apply knowledge of computer science to produce systems software
- Ability to design a software system, component, or process within related requirements and descriptive diagrams (UML)
- Ability to communicate effectively and function on a development team by way of reports and in-person peer presentation
- Ability to identify, formulate, and understand complex problems using software as a solution

Other:

- CLO-1: Analyze a complex software problem and to apply principles of computer science to identify solutions (ABET SO-1);
- CLO-2: Design, implement, and evaluate a software solution to meet a given set of functional, non-functional, and domain requirements (ABET SO-2);
- CLO-3: Communicate technical information orally and in writing (ABET SO-3);
- CLO-4: Understand professional, ethical, and social responsibilities of a software engineering professional (ABET SO-4);

- CLO-5: Function effectively as a member or leader of a software development team (ABET SO-5);
- CLO-6: Apply computer science theory and software engineering fundamentals to produce software solutions (ABET SO-6).

Assessments and Grades

Your assessment tests will be proctored by myself and/or a graduate teaching assistant (GTA) in a face-to-face setting. These will be on paper, supplied by myself and no scantron is needed. The exams will consist of multiple-choice and complex problem-solving questions. Grading will be completed at most, one week after each assessment. Since there are three sections of this course, I will be varying each assessment among the sections.

- No grades for assessments will be dropped and refer to make-up section if you are unable to be present for an exam.
- If you have accommodations, I will need a letter of approval from the GSU Student Services, office of access and accommodations. Your exams will be taken in their proctored office location on Atlanta campus.
- Final Exam (2.5 hrs.) time/date are: **December 7, 2023 – 1:30pm – 4:00pm**
- Final Exam locations are same as classroom lectures.

CSC4350 Grading:

Event	Quantity	Course Grade Weight
Exams	Maximum 4	40%
Team Project	1 (3 or 5 presentations)	30%
Final Exam	1	20%
Assignments and/or quizzes	Between 4 and 9	10%

CSC6350 Grading:

Event	Quantity	Course Grade Weight
Exams	Maximum 4	40%
Team Project	1	30%
Topic presentation	1	20%
Assignments and/or quizzes	Between 4 and 9	10%

Make-up and Late Assignment Policy

- Make-up exams are not automatically given. If you have a wellness emergency such as injury, confirmed COVID infection, hospitalization, you will need to get excused 'absence' support here: <https://deanceofstudents.gsu.edu/student->

[assistance/#professor](#). If you do find yourself with this dilemma, you will be given an exam by myself within 7 days of the missed exam date, if you are not incapacitated. It is your responsibility to contact me before or ON the day of exam to present your circumstances for evaluation of eligibility for make-up.

- All make-up exams are given during my office hours in a conference room near my location: One Park Place, Rm 717. I can only accommodate in my office hours unless otherwise, a conflicting class lecture.
- Chapter assignments and quizzes are not allowed to be late or have make-up. This is a non-tolerant, non-negotiable policy to enable fairness, responsible work ethic, and prevent disruptive events for my graders and myself.

COURSE HELP

What are the Required Materials?

The following resources are required for this course:

- *Software Engineering, Tenth Edition, Ian Sommerville, ISBN-13: 978-0-13-394-303-0 (print version)*
- *GitHub account (later to be discussed)*
- *Slack account (optional)*

SCHEDULE

Please note that deviations may happen as the semester progresses and this schedule is not immutable. You want to refer to the weekly calendar frequently as we move along in the course. This is a 4-Credit Hour course and GSU recommends that you spend around **4 hours or more per week** interacting with readings, videos, and other sorts of content and **then 3 hours per credit hour per week (12 hours)** completing activities, project meetings, and presentations.

[Please talk to me and your advisor before withdrawing from this course. We care about your success and are here to discuss your options with you. The last day to withdraw without passing \(WP\) is October 10th](#)

Tentative Schedule:

August 22, 24	<ol style="list-style-type: none"> 1. Course introduction, GitHub email account 2. Example SE problem 3. Chapter 1
August 29, 31	<ol style="list-style-type: none"> 1. Chapter 2, Assessments due for team creations 2. Agile

September 5,7	<ol style="list-style-type: none"> Agile/SCRUM, Chapter 3, Teams announced, projects presented Chapter 4, project choices are made via a lottery, Dry run for Gradescope exam grading
September 12, 14	<ol style="list-style-type: none"> Exam1 Review September 12th MANDATORY team meeting after review, Sprint1 begins and delivery of conceptual model Exam1 (chap 1,2,3,4) September 14th
September 19, 21	<ol style="list-style-type: none"> Chapter 5, 6 Chapter 7, MANDATORY team meeting after lecture, delivery of Use Case diagrams
September 26, 28	<ol style="list-style-type: none"> Entire class time: MANDATORY team meeting: delivery of system design, other doc Chapter 8, review rubric for 1st presentation, Exam2 review
October 3, 5	<ol style="list-style-type: none"> First Sprint team presentation, October 3rd Exam2 (chap 5,6,7), October 5th
October 10, 12 Withdrawal on the 10 th by 5pm EDT	<ol style="list-style-type: none"> Career Readiness activities begin in iCollege (must complete 1st activity by October 15th 11:59pm) Chapter 9, skip (10,11), MANDATORY team meeting after lecture, Sprint2 begins
October 17, 19	<ol style="list-style-type: none"> Chapter 12, MANDATORY team meeting after lecture process design due, end of class time
October 24, 26	<p>Database fundamentals (Not in textbook), review, MANDATORY team meeting after lecture</p> <p>Exam3 (chap 8,9,12) -chap22/23 omitted from exam</p>
October 31	<ol style="list-style-type: none"> Presentation 1 (5 to 8 minutes) <ol style="list-style-type: none"> Purpose of software system Initial story boards (min=2, max=4), not tasks Explain chosen technical platform(s) CS/SE Showcase
November 7	<ol style="list-style-type: none"> Chapter 18 (service-oriented SE) Chapter 19 (Systems Engineering in SE) Chapter 21 (Real-time SE) Project team meeting <ol style="list-style-type: none"> Mandatory all attend the team meeting – last 30-45 minutes) User and System requirements definitions due, end of class time Risk analysis due, end of class time
November 14	<ol style="list-style-type: none"> Exam4 (dB fund., chap 18,19,21) Presentation 2 (5 to 8 minutes) <ol style="list-style-type: none"> UML sequence (1) Use case diagrams (2) Test case scenarios (2) November 21 – all Career Readiness completed

November 21 Fall Break	No classes
November 28	1. Graduate Student presentations (Mon or Tues) 2. Project team final presentations (M/W or T/R)
December 5	1. Final Exams (See above for your time/day)

COURSE POLICIES

Sharing instructor created materials

University policy prohibits students from posting instructor-generated materials on external sites. The selling, sharing, publishing, presenting, or distributing of instructor-prepared course lecture notes, videos, audio recordings, or any other instructor-produced materials from any course for any commercial purpose is strictly prohibited unless explicit written permission is granted in advance by the course instructor. This includes posting any materials on websites such as Chegg, Course Hero, OneClass, Stuvia, StuDocu, YouTube, and other similar sites. Unauthorized sale or commercial distribution of such material is a violation of the instructor's intellectual property and the privacy rights of students attending the class and is prohibited.

Attendance and Participation Policy

Course participation is beneficial to your success. This course has **27** required meetings. Our university community has a strong tradition of upholding the value of mutual respect, I therefore ask students to not engage in behavior that would be disruptive if your fellow students make a different choice about wearing masks. If you have concerns, please discuss them with me and I will work to the best of my ability to provide a comfortable environment conducive to student learning. COVID mask restriction information can be found here: <https://covidinfo.gsu.edu/vaccine>.

A well-developed attendance policy will be especially helpful this semester and you are expected to attend class if you do not have an excused absence. University has a process for students seeking excused absences through the Dean of Students Office. Students submit documentation to: <https://deanofstudents.gsu.edu/student-assistance/professor-absence-notification/>. I will be notified by the Dean of Students of any excused absence without the need to manage medical information individually.

Make-up Policy

- Make-up exams are not allowed for any reasons other than excused absences from the Dean of Students. This is not negotiable.
- Make-up quizzes are not allowed for any reasons other than excused absences from the Dean of Students. This is not negotiable.
- Make-up homework assignments are not allowed for any reason(s). The homework assignments are specifically timed to coincide with the course content and pedagogy delivery. This pairing is by design to aid in your learning of the course topics. Solutions are

posted in iCollege very soon after the 'due' date/time so you may benefit from the correct answers. This is not negotiable.

Basic Needs Statement

Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to contact the Dean of Students for support. Furthermore, please notify the professor if you are comfortable in doing so. This will enable us to provide resources that we may possess. The Embark program at GSU provides resources for students facing homelessness.

Academic Honesty

All parties involved in cheating and/or plagiarism will be given a zero on the specified event for the first offense. By all parties, I mean the person(s) who used someone else's work and the person whose work was used. A second offense of cheating and/or plagiarism will result in a grade of F for the course and possible expulsion from university. OpenAI is a new technology using ML and deep learning to answer questions of a variety of topics, i.e., cheating. It is being used in academe for student assignments and its usage can be detected with various techniques and analysis tools.

Academic Honesty Policy: <https://deanofstudents.gsu.edu/files/2019/07/Academic-Honesty-Policy.pdf>

Accommodation

Students who wish to request accommodation may do so by registering with the Office of Access and Accommodation. Students may only be accommodated upon issuance by a signed Accommodation Plan and are responsible for providing a copy of that plan to me and lab instructors in which accommodations are sought. Students with special needs should then make an appointment with me during the first week of class to discuss any accommodations that need to be made. <https://access.gsu.edu/>

FERPA

In keeping with University System of Georgia and GSU policy, this course website will make every effort to maintain the privacy and accuracy of your personal information. Specifically, unless otherwise noted, it will not actively share personal information gathered from the site with anyone except university employees whose responsibilities require access to said records. However, some information collected from the site may be subject to the Georgia Open Records Act. This means that while we do not actively share information, in some cases we may be compelled by law to release information gathered from the site. Also, the site will be managed in compliance with [the Family Educational Rights and Privacy Act \(FERPA\)](#), which prohibits the release of education records without student permission.

Sexual Harassment

In instances of sexual misconduct, the present instructor(s) and teaching assistants, are designated as Responsible Employees who are required to share with administrative officials all reports of sexual misconduct for university review. If you wish to disclose an incident of sexual misconduct confidentially, there are options on campus for you do so. For more

information on this policy, please refer to the [Sexual Misconduct Policy](#) which is included in the GSU Student Code of Conduct.

Campus Carry

The Campus Carry legislation allows anyone properly licensed in the state of Georgia to carry a handgun in a concealed manner on university property with noted exceptions. Information about the law can be found at safety.gsu.edu/campus-carry. It is the responsibility of the license holder to know the law. Failure to do so may result in a misdemeanor charge and may violate the Georgia State Student Code of Conduct. Please follow the guidelines established by the Board of Regents.

Recommendation Requests

The topic of recommendations for numerous events is a personal matter. I prefer you to meet with me prior to me granting any and all requests for a recommendation for graduate school, employment (full-time or internship), awards, etc. The time to create a recommendation is not small, so I may ask you write the recommendation to highlight your achievements and knowledge, then allow me to edit.