

CSCE 3444 - Summer 2026

Software Engineering

Instructor: [Hadiseh Gooran](#)

Email: Hadiseh.Gooranorimi@unt.edu

Office Hours: By Appointment

Class Format: Asynchronous – Videos and assignments will be posted weekly on **Wednesdays at Noon.**

Communication Expectations:

We will primarily use email for direct communication. Please send personal concerns or questions to hadiseh.gooranorimi@unt.edu. I aim to respond to emails within 24-48 hours on weekdays, provide assignment feedback within a week, and post grades within a week of the submission deadline. Remember to adhere to netiquette principles in your communication, and check course announcements for updates. Your questions and concerns are important, so don't hesitate to reach out.

Course Description

Modular design and implementation of software systems. Topics include requirements and specifications development, documentation of the design using current design tools such as UML, testing of software implementation, and system and user documentation.

Course Prerequisites:

CSCE 3110 with a grade of C or better.

Course Objectives

By the end of this course, students will be able to:

1. Gather and refine user functional requirements and other functional and non-functional requirements and constraints for a large-scale software system and create a software requirements specification document.
2. Perform software analysis and design tasks using recognized software methods to create a preliminary design specification for software based on a requirements specification.
3. Utilize project management principles, skills and tools in creating the requirements and preliminary design specifications.
4. Create a project management plan, including a schedule and budget for a large-scale software project.
5. Utilize configuration management, project management and design tools during the project.
6. Analyze and maintain appropriate project artifacts to reflect inclusive design and societal impact for the project sponsors, users, and other stakeholders.

Course Requirements:

- **Exams:** None
- **Project:** Most of the deliverables in this course will relate to a large group project that will be completed based on requirements. You are expected to participate in all aspects of your team's project. Your effort, including that of coding, will be monitored (e.g. repository check-ins and peer evals). In particular, lack of coding on the project WILL RESULT in a large penalty to your project grade.

Suggested book:

- Software Engineering: A Practitioner's Approach 9th Edition By Roger Pressman and Bruce Maxim.

Teaching Methods:

- **Weekly Video Lectures:**
 - Engaging, pre-recorded video lectures will be posted every Wednesday at Noon, providing foundational knowledge and contextual insights for each module.
- **Hands-On Assignments:**
 - Each week, you will be tasked with practical assignments that allow you to apply course concepts directly to project-based work. Detailed instructions and examples will be provided to guide you through each task.
- **Collaborative Discussions:**
 - Online discussion boards will serve as a platform for you to engage with your peers, share project updates, and discuss course content. Participation is required and will be part of your assessment.
- **Teaching Assistant's Feedback:**
 - Constructive feedback will be provided on assignments and project deliverables to help you refine your work and deepen your understanding of key concepts.
- **Bi-Weekly Check-Ins:** Every second and fourth Wednesday, a check-in assignment will be posted. This will include:
 - Progress Updates: Share what you've accomplished, challenges faced, and next steps.
 - Reflection Questions: Reflect on how the content applies to your project or any areas where you need further clarification.
 - Peer Feedback: Provide feedback to at least one peer's submission to foster collaboration and shared learning.
- **Office Hours (By Appointment):**
 - Individual or group sessions can be scheduled to discuss project challenges, clarify concepts, or seek further guidance.
- **Progress Tracking:**
 - Weekly progress submissions will help you stay accountable and provide an opportunity for early feedback on ongoing projects.

Topics:

Week 1: Course Overview & PM Methodologies

- **Objective:** Introduce course structure, objectives, and project guidelines.
- **Content:** Overview of Agile, Waterfall, and Design Sprint methodologies.
- **Deliverable:** Team formation and project idea submission.

Week 2: Software Requirements Analysis (SRS)

- **Objective:** Define and document software requirements comprehensively before implementation.
- **Content:** Techniques for gathering requirements, creating SRS documents, and identifying project scope.
- **Deliverable:** Software Requirements Specification (SRS) Document – due by the end of the week.

Week 3: Implementation – Phase 1: Design and Initial Development

- **Objective:** Start implementing the project based on the approved SRS.
- **Content:** Creating initial modules, implementing basic features, and developing initial prototypes.
- **Deliverable:** Initial Implementation Report – highlighting progress and encountered challenges.

Week 4: Software Design & UML Diagrams

- **Objective:** Develop comprehensive design documentation based on the initial implementation.
- **Content:** Design principles, UML diagrams, and architectural considerations.
- **Deliverable:** Design Document and UML Diagrams – aligning design with the initial SRS.

Week 5: Accessibility & Usability

- **Objective:** Integrate accessibility and usability principles in the design phase.
- **Content:** Implementing accessibility standards and conducting initial usability checks.
- **Deliverable:** Accessibility and Usability Plan – outlining testing strategies and identified improvements.

Week 6: Mid-Term Progress Submission – Recorded Presentation

- **Objective:** Document and record progress update, showcasing implementation and testing strategies.
- **Content:** Overview of completed modules, design documentation, and testing plans.
- **Deliverable: Recorded Presentation Submission** – Highlighting implementation progress and addressing challenges.
- **Check-In:** Bi-weekly check-in – Reflect on recorded presentation and peer feedback.

Week 7: Refactoring & Debugging

- **Objective:** Improve code quality based on mid-term feedback.
- **Content:** Identifying code smells, implementing refactoring techniques, and debugging.
- **Deliverable:** Refactored Code and Debugging Report – documenting changes and justifications.

Week 8: Usability Testing & Evaluation

- **Objective:** Evaluate user-friendliness and make necessary adjustments.
- **Content:** Conducting usability testing and analyzing results for further refinement.
- **Deliverable:** Usability Testing Report – identifying areas of improvement and corrective actions.

Week 9: Testing & Final Debugging

- **Objective:** Conduct comprehensive testing to ensure project functionality and stability.
- **Content:** Unit testing, integration testing, and user acceptance testing.
- **Deliverable:** Testing Report – documenting testing methods, results, and identified bugs.

Week 10: Final Project Submission – Recorded Presentation

- **Objective:** Document and record the final project presentation, including key findings and project outcomes.
- **Content:** Project demonstration, reflections on the development process, and lessons learned.
- **Deliverable:** Final Recorded Presentation & Project Submission – Final project deliverables and comprehensive report.
- **Check-In:** Final bi-weekly check-in – Project completion reflections and key takeaways.

Technical Requirements & Skills

Minimum Technology Requirements

- Computer
- Reliable internet access
- Canvas Technical Requirements
(<https://clear.unt.edu/supported-technologies/canvas/requirements>)

Computer Skills & Digital Literacy

- Using Canvas
- Using email with attachments
- Downloading and installing software

Netiquette

- Treat your instructor and classmates with respect in email or any other communication.
- Use clear and concise language.
- Remember that all college level communication should have correct spelling and grammar (this includes discussion boards).
- Avoid slang terms such as “wassup?” and texting abbreviations such as “u” instead of “you.”
- Avoid using the caps lock feature AS IT CAN BE INTERPRETTED AS YELLING.
- Limit and possibly avoid the use of emoticons like :) or .
- Be cautious when using humor or sarcasm as tone is sometimes lost in an email or discussion post and your message might be taken seriously or sound offensive.
- Be careful with personal information (both yours and others).
- Do not send confidential information via email

Academic Support Services

- Academic Resource Center (<https://clear.unt.edu/canvas/student-resources>)
- Academic Success Center (<https://success.unt.edu/asc>)
- UNT Libraries (<https://library.unt.edu/>)
- Writing Lab (<http://writingcenter.unt.edu/>)
- MathLab (<https://math.unt.edu/mathlab>)

Course Policies:

Late Work

You will not be able to receive a full grade for late submissions. Please ensure that you submit your work on time. If you anticipate needing more time for any reason, it is essential to inform the instructor in advance and provide a valid reason for requesting an extension. Without advance notice and a valid reason, we may not be able to accommodate late submissions.

Grading Policy – Asynchronous Course

- **Team Project & Recorded Presentations (45%):**
Assessment based on project implementation quality, teamwork, and clarity in recorded presentations.
- **Group Assignments (25%):**
Collaborative tasks demonstrating effective teamwork and problem-solving skills.
- **Updated Documentation & Agile Adherence (20%):**
Evaluation of project documentation updates and adherence to Agile practices.
- **Peer Evaluations (5%):**
Feedback from peers on individual contributions to group work.
- **Bi-Weekly Check-Ins (5%):**
Completion and quality of bi-weekly progress updates.

A = 90-100

B = 80-89

C = 70-79

D = 60-69

F = 50-59

Course Evaluation

Student Perceptions of Teaching (SPOT) is the student evaluation system for UNT and allows students the ability to confidentially provide constructive feedback to their instructor and department to improve the quality of student experiences in the course.

Syllabus Change Policy

Please be aware that the syllabus, course details, and due dates are subject to change during the course. Updates will be communicated through class announcements, email, or the course management system. Changes may arise to enhance the learning experience or address unforeseen circumstances. It is your responsibility to stay informed and adapt as necessary. Your understanding and cooperation are appreciated as we strive to provide the best possible learning environment.

Academic integrity

This course follows UNT's policy for *Student Academic Integrity* that can be found at <https://policy.unt.edu/policy/06-003> as well as the *Cheating Policy* for the Department of Computer Science and Engineering. Specifically, the first instance of a student found to have violated the academic integrity (i.e., cheating) policy will result in a grade of "F" for the course and have a report filed into the Academic Integrity Database, which may include additional sanctions.

ADA Policy

UNT makes reasonable academic accommodation for students with disabilities. Students seeking accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide a student with an accommodation letter to be delivered to faculty to begin a private discussion regarding one's specific course needs. Students may request accommodations at any time, however, ODA notices of accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of accommodation for every semester and must meet with each faculty member prior to implementation in each class. For additional information see the ODA website (<https://disability.unt.edu/>).

AI Policy

In this software engineering class, the use of AI tools for any purpose is strictly prohibited. Students are expected to complete all assignments, projects, and exams using their own knowledge, skills, and effort without assistance from AI. Any use of AI-generated code, solutions, or suggestions will be considered a violation of the course's academic integrity policy and will result in disciplinary action. The goal is to ensure students develop a deep understanding of software engineering principles through independent problem-solving and learning.

Technical Assistance

Here at UNT we have a Student Help Desk that you can contact for help with Canvas or other technology issues.

UIT Help Desk: <http://www.unt.edu/helpdesk/index.htm>

Email: helpdesk@unt.edu

Phone: 940-565-2324

In Person: Sage Hall, Room 130

Walk-In Availability: 8am-9pm

Telephone Availability:

- Sunday: noon-midnight
- Monday-Thursday: 8am-midnight
- Friday: 8am-8pm
- Saturday: 9am-5pm

Laptop Checkout: 8am-7pm

For additional support, visit Canvas Technical Help

(<https://community.canvaslms.com/docs/DOC-10554-4212710328>)

Student Support Services

- Registrar (<https://registrar.unt.edu/registration>)
- Financial Aid (<https://financialaid.unt.edu/>)
- Student Legal Services (<https://studentaffairs.unt.edu/student-legal-services>)
- Career Center (<https://studentaffairs.unt.edu/career-center>)
- Multicultural Center (<https://edo.unt.edu/multicultural-center>)
- Counseling and Testing Services (<https://studentaffairs.unt.edu/counseling-and-testing-services>)
- Student Affairs Care Team (<https://studentaffairs.unt.edu/care>)
- Student Health and Wellness Center
(<https://studentaffairs.unt.edu/student-health-and-wellness-center>)
- Pride Alliance (<https://edo.unt.edu/pridealliance>)

Emergency Notification & Procedures

UNT uses a system called Eagle Alert to quickly notify students with critical information in the event of an emergency (i.e., severe weather, campus closing, and health and public safety emergencies like chemical spills, fires, or violence). In the event of a university closure, please refer to Blackboard for contingency plans for covering course materials.

Retention of Student Records

Student records pertaining to this course are maintained in a secure location by the instructor of record. All records such as exams, answer sheets (with keys), and written papers submitted during the duration of the course are kept for at least one calendar year after course completion. Course work completed via the Blackboard online system, including grading information and comments, is also stored in a safe

electronic environment for one year. Students have the right to view their individual record; however, information about student's records will not be divulged to other individuals without proper written consent. Students are encouraged to review the Public Information Policy and the Family Educational Rights and Privacy Act (FERPA) laws and the University's policy. See UNT Policy 10.10, Records Management and Retention for additional information.

Acceptable Student Behavior

Student behavior that interferes with an instructor's ability to conduct a class or other students' opportunity to learn is unacceptable and disruptive and will not be tolerated in any instructional forum at UNT. Students engaging in unacceptable behavior will be directed to leave the classroom and the instructor may refer the student to the Dean of Students to consider whether the student's conduct violated the Code of Student Conduct. The University's expectations for student conduct apply to all instructional forums, including University and electronic classroom, labs, discussion groups, field trips, etc. Visit UNT's Code of Student Conduct (<https://deanofstudents.unt.edu/conduct>) to learn more.

Access to Information - Eagle Connect

Students' access point for business and academic services at UNT is located at: my.unt.edu. All official communication from the University will be delivered to a student's Eagle Connect account. For more information, please visit the website that explains Eagle Connect and how to forward email Eagle Connect (<https://it.unt.edu/eagleconnect>).

Sexual Assault Prevention

UNT is committed to providing a safe learning environment free of all forms of sexual misconduct, including sexual harassment sexual assault, domestic violence, dating violence, and stalking. Federal laws (Title IX and the Violence Against Women Act) and UNT policies prohibit discrimination on the basis of sex, and therefore prohibit sexual misconduct. If you or someone you know is experiencing sexual harassment, relationship violence, stalking, and/or sexual assault, there are campus resources available to provide support and assistance. UNT's Survivor Advocates can assist a student who has been impacted by violence by filing protective orders, completing crime victim's compensation applications, contacting professors for absences related to an assault, working with housing to facilitate a room change where appropriate, and connecting students to other resources available both on and off campus. The Survivor Advocates can be reached at SurvivorAdvocate@unt.edu or by calling the Dean of Students Office at 940-565- 2648. Additionally, alleged sexual misconduct can be non-confidentially reported to the Title IX Coordinator at oeo@unt.edu or at (940) 565 2759.

Important Notice for F-1 Students taking Distance Education Courses

Federal Regulation

To read detailed Immigration and Customs Enforcement regulations for F-1 students taking online courses, please go to the Electronic Code of Federal Regulations website (<http://www.ecfr.gov/>). The specific portion concerning distance education courses is located at Title 8 CFR 214.2 Paragraph (f)(6)(i)(G).

The paragraph reads:

(G) For F-1 students enrolled in classes for credit or classroom hours, no more than the equivalent of one class or three credits per session, term, semester, trimester, or quarter may be counted toward the full course of study requirement if the class is taken on-line or through distance education and does not require the student's physical attendance for classes, examination or other purposes integral to completion of the class. An on-line or distance education course is a course that is offered principally through the use of television, audio, or computer transmission including open broadcast, closed circuit, cable, microwave, or satellite, audio conferencing, or computer conferencing. If the F-1 student's course of study is in a language study program, no on-line or distance education classes may be considered to count toward a student's full course of study requirement.

University of North Texas Compliance

To comply with immigration regulations, an F-1 visa holder within the United States may need to engage in an on-campus experiential component for this course. This component (which must be approved in advance by the instructor) can include activities such as taking an on-campus exam, participating in an on-campus lecture or lab activity, or other on-campus experience integral to the completion of this course. If such an on-campus activity is required, it is the student's responsibility to do the following:

- (1) Submit a written request to the instructor for an on-campus experiential component within one week of the start of the course.
- (2) Ensure that the activity on campus takes place and the instructor documents it in writing with a notice sent to the International Student and Scholar Services Office. ISSS has a form available that you may use for this purpose.

Because the decision may have serious immigration consequences, if an F-1 student is unsure about his or her need to participate in an on-campus experiential component for this course, s/he should contact the UNT International Student and Scholar Services Office (telephone 940-565-2195 or email internationaladvising@unt.edu) to get clarification before the one-week deadline.

Student Verification

UNT takes measures to protect the integrity of educational credentials awarded to students enrolled in distance education courses by verifying student identity, protecting student privacy, and notifying students of any special meeting times/locations or additional charges associated with student identity verification in distance education courses.

See UNT Policy 07-002 Student Identity Verification, Privacy, and Notification and Distance Education Courses (<https://policy.unt.edu/policy/07-002>).

Use of Student Work

A student owns the copyright for all work (e.g. software, photographs, reports, presentations, and email postings) he or she creates within a class and the University is not entitled to use any student work without the student's permission unless all of the following criteria are met:

- The work is used only once.
- The work is not used in its entirety.
- Use of the work does not affect any potential profits from the work.
- The student is not identified.
- The work is identified as student work.

If the use of the work does not meet all of the above criteria, then the University office or department using the work must obtain the student's written permission.

Download the UNT System Permission, Waiver and Release Form