CSCE 4902 Software Development Capstone II

Instructor Contact

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Communication Expectations: The best way to reach me outside of class/office hour is via email. During the week I will respond to your email within 24 hours. During the weekend, response time may be longer. This includes personal concerns or questions about the class, a particular assignment, etc. The TA's and I strive to get grades back between 1-1.5 weeks from the due date though that is not always possible when the class is large. Communication is expected to be professional and respectful where tips are available at Online Communication Tips (https://clear.unt.edu/online-communication-tips).

Welcome to UNT!

As members of the UNT community, we have all made a commitment to be part of an institution that respects and values the identities of the students and employees with whom we interact. UNT does not tolerate identity-based discrimination, harassment, and retaliation. UNT's full Non-Discrimination Policy can be found in the UNT Policies section of the syllabus.

Course Description

Students demonstrate their mastery of the breadth of computer science learned in their studies. Focus is on the application of computer science techniques to the design of applications involving multiple software components. Students apply the theory acquired from numerous computer science courses to solve real-world design and developmental problems. The design considers realistic constraints including economic, environmental, critical thinking, technical writing and communications skills, and group management skills in completing their design and development project.

Course Structure

This course is 3 credits, and is one semester long though some of you will continue onto 4902 to finish your capstone (check with advising if you are not sure if this is the case for you). This course is offered both face-to-face and online at the same time.
The course calendar is presented later in the syllabus so that you can see the pace of the course and the due dates. The course is primarily project-driven, where you work on a long-term project in a team of 3-5 people. Your team may include persons in either the face-to-face or online section. There are also individual assignments.

Course Prerequisites or Other Restrictions

CSCE 4901 (the first part of Capstone)

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 in the course of the project.
6. Analyze and maintain appropriate project artifacts to reflect inclusive design and societal impact for the project sponsors, users, and other stakeholders.

Materials

- There is no textbook
- Resources are provided on Canvas and you can use others as needed by the project.

Teaching Philosophy

This course is very hands-on, with the expectation that you will both apply material from prior courses as well as learn new skills as appropriate to your project. In order to truly benefit from the course you will want to be open to learning new development skills and technologies. The bulk of the course will be the project (which includes team meetings with the instructor and demos of progress).

Course Technology & Skills

Minimum Technology Requirements
Provide a list of the minimum technology requirements for students, such as:
- Computer
- Reliable internet access
- Speakers
- Webcam
- Microphone
- Appropriate programming tools to support your project
- GitHub account (can be created during class)
- Trello account (can be created during class)
- Microsoft Office Suite
- Canvas Technical Requirements (https://clear.unt.edu/supported-technologies/canvas/requirements)

Computer Skills & Digital Literacy

Provide a list of course-specific technical skills learners must have to succeed in the course, such as:

- Using Canvas
- Using email with attachments
- Downloading and installing software
- Using code repositories such as Github
- Programming using the IDE's and tools you selected for your project.
- Ability to conduct college-level research in support of your project and relevant assignments.
- Using presentation and graphics programs

Technical Assistance

Part of working in the online environment involves dealing with the inconveniences and frustration that can arise when technology breaks down or does not perform as expected. Here at UNT we have a Student Help Desk that you can contact for help with Canvas or other technology issues.

UIT Help Desk: UIT Student Help Desk site (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)

Rules of Engagement

Rules of engagement refer to the way students are expected to interact with each other and with their instructors. Here are some general guidelines:

- While the freedom to express yourself is a fundamental human right, any communication that utilizes cruel and derogatory language on the basis of race, national origin, religion, sex, sexual orientation, gender identity or expression, age, disability, veteran status, or any other characteristic protected under applicable federal or state law will not be tolerated.

- Treat your instructor and classmates with respect in any communication online or face-to-face, even when their opinion differs from your own.
- Ask for and use the correct name and pronouns for your instructor and classmates.
- Speak from personal experiences. Use "I" statements to share thoughts and feelings. Try not to speak on behalf of groups or other individual's experiences.
- Use your critical thinking skills to challenge other people's ideas, instead of attacking individuals.
- Avoid using all caps while communicating digitally. This may be interpreted as "YELLING!"
- Be cautious when using humor or sarcasm in emails or discussion posts as tone can be difficult to interpret digitally.
- Avoid using "text-talk" unless explicitly permitted by your instructor.
- Proofread and fact-check your sources.
- Keep in mind that online posts can be permanent, so think first before you type.

See these Engagement Guidelines (https://clear.unt.edu/online-communication-tips) for more information.

Course Requirements

Subject to change, as needed

Week	Topics	Due / Announcements
Week 1 (1.12-)	Course Overview, User Testing	Enter your team onto the People -> Teams part of Canvas by Thursday 11:59pm; Update Team List; Update Trello + Github (Saturday at 11:59pm) – including resending links to the TA's and I
Week 2 (1.19-)	Sprint 4 starts (start of weekly meetings with instructor)	
Week 3 (1.26-)	Work week	
Week 4 (2.2-)	Work week	
Week 5 (2.9-)	Sprint 4 Wrap-up check-ins/Sprint 5 starts	See Canvas for assigned meeting slot for check-ins; Sprint artifacts and Trello board updates due by Sat. at 11:59pm
Week 6 (2.16-)	Work week	
Week 7 (2.23-)	Work Week	
Week 8 (3.2-)	Sprint 5 Wrap-up check-ins/Sprint 6 starts	See Canvas for assigned meeting slot for check-ins; Sprint

Week	Topics	Due / Announcements
		artifacts and Trello board updates due by Sat. at 11:59pm
Spring Break March 9-15		
Week 9 (3.16-)	*Work Week*	
Week 10 (3.23-)	Work Week	
Week 11 (3.30-)	Sprint 6 Wrap-up check-ins/Sprint 7 starts	See Canvas for assigned meeting slot for check-ins; Sprint artifacts and Trello board updates due by Sat. at 11:59pm
Week 12 (4.6-)	Work Week	
Week 13 (4.13-)	Work Week	Senior Design Posters due Monday at noon (submit via Canvass)
Week 14 (4.20-)	Work Week	*Deployment Artifacts due Sat 11:59pm*
Week 15 (4.27-)	Delivery to Customer, Sprint 7 final presentation (Sprint 7 ends)	Final presentations done during class time (all asked to attend)
Finals	Team Reflections	Submit Team Reflection Report by Tuesday @ 11:59pm

NOTE: It is expected that your Trello board will be up to date (it will be periodically checked); Also Peer Evals are due for each sprint (in Canvas)

Grading

A = 90%-100%
B = 80%-89%
C = 70%-79%
D = 60%-69%
F = 50%-59%

NOTE: Canvas will not calculate your grade properly, you will need to do so using the weighted distribution below:

The various components of your grade are weighted as follows:
- Team Project Deliverables 65%
- Team Reflection Report (Final one) 15%
- Peer and Client/Faculty Performance Reviews 10%
- Deployment Artifact 10%

ABSOLUTELY NO LATE work will be graded, unless specific arrangements are made with the instructor in advance. All assignments will be turned in by the designated date due. Assignments may be submitted on Canvas in the appropriate drop box unless otherwise indicated.

ALL requests for extensions on assignments must be made prior to the due date, in person, and must be for a valid "emergency" reason. In extreme circumstances, contact after the due date may be accepted if there is a COMPELLING reason (and yes COVID counts).

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. When SPOT becomes available, you will receive an email.

Course Policies

Attendance Policy
Attendance is expected and will be periodically monitored. Your team project will suffer without your attendance to team meetings during class time (or any other time).

While attendance is expected as outlined above, it is important for all of us to be mindful of the health and safety of everyone in our community, especially given concerns about flu, COVID-19, etc. Please contact me if you are unable to attend class because you are ill. It is important that you communicate with me prior to being absent so I may make a decision about accommodating your request to be excused from class. **Any excused absence from end-of-sprint meetings requires documentation (e.g. doctor's note).**

Class Materials for Remote Instruction (due to weather or other circumstances)
Remote instruction may be necessary if circumstances require it (e.g. class temporarily moved online due to weather, etc.) Students will need access to a webcam and microphone, as well as a computer that will allow you to access Canvas, Zoom, Office/Google Docs, Trello, Github, and project-specific tools to participate in fully remote portions of the class. Information on how to be successful in a remote learning environment can be found at https://online.unt.edu/learn.

Class Participation (including Project Participation)
Attendance and participation is required, is part of your grade, and will be monitored in order to ensure that all groups operate at peak efficiency. You are responsible for all discussion, lecture and other information disseminated during the class period, regardless of whether you attend or not. You are also responsible for all team assignments made by your team lead and deliverable leads regardless of your attendance. **You must provide documentation for excused absences for emergencies etc**. When you are online, it is appreciated that you show your face in order to help connect with your classmates and instructor. You will feel better too in maintaining more social contact. You can always use a background image if you feel more comfortable (just keep it in good taste) – there are UNT themed ones available online.

Lectures and assignments are included in this syllabus. However, you should regularly check the class website, as well as take note of in-class announcements for changes in the schedule or assignments.

You should plan to spend, on average, about 10-15 hours per week outside of the normal class meetings working on the various aspects of your project. As deadlines draw near, the time commitment will likely increase

Project: The majority of the deliverables in this course will relate to a large group project that will be completed based on client requirements.   You are expected to participate in ALL aspects of your team's project (so not just coding or not just writing docs). <u>Your effort, including that of coding, will be monitored (e.g. repository check-ins, peer evals and observations). Lack of coding on the project WILL RESULT in a large penalty to your project grade – also code contributions are non-trivial amounts of code that are integrated into the Main branch (e.g. code on other branches do not count unless you get prior approval in rare cases of needing to create a prototype). ALSO lack of helping the team succeed in a meaningful way on the written docs and related tasks WILL ALSO RESULT IN A LARGE PENALTY.</u>

Professional Conduct and Ethical Responsibility:
You will be representing yourself, your team, the CSE Department and UNT as you conduct the activities needed to deliver your capstone project. You are expected to conduct yourself professionally during team, class and sponsor interactions both verbally and in writing. This responsibility carries through in the project as well. Yes, you are learning new skills and applying what you have learned in other courses. The ACM Code of Ethics, available at: https://ethics.acm.org/, reflects the expectations of your conduct in this course. You are also expected to abide by the UNT Code of Conduct (discussed later in the syllabus).

Late Work
ABSOLUTELY NO LATE work will be graded, unless specific arrangements are made with the instructor in advance. All assignments will be turned in by the designated date due. Assignments may be submitted on Canvas in the appropriate drop box unless otherwise indicated. ALL requests for extensions on assignments must be made prior to the due date, in person, and must be for a valid "emergency" reason. In extreme circumstances, contact after the due date may be accepted if there is a COMPELLING reason (and yes COVID counts).

Examination Policy
There are no exams in the course.

Use of AI, LLM's, and related Tools in the Project
It will be expected that you will use these tools in your project, however we will have deliverables to go with this expectation. The degree will vary by project and your interest. Having experience is expected nowadays and will give you new/more skills that will help you as

you start your career. Given that, you will be expected to be honest with your use of said tools and that you will be expected to know what the code or other material does, and that it is correct/accurate and follows best practices for the item that it is connected to (e.g. code, testing, a written document). More information will be provided in the Project and Assignments in Canvas.

Collaboration and Cheating:

Collaboration among students in class is encouraged, as it is my belief that it provides a better learning environment, and is required for team assignments. BUT THERE ARE RULES TO FOLLOW. All resources used should be clearly cited in written work of any kind, both individual and team, using appropriate references/documentation style as relevant to the item. While using existing API's is a given nowadays, paying someone to code for you or taking a project and calling it your own is not appropriate. It is also not appropriate to make it look you are coding more than what you actually contributed.

For further details and clarifications regarding collaboration and cheating, view the university Student Rights and Responsibilities web page.

Assignment Policy

Official due dates are for each assignment, project item, etc. are listed on Canvas. Unless otherwise directed in the assignment/project item description, all course submissions (e.g. assignments, project deliverables) are submitted via Canvas in PDF in their respective item drop box.

The University is committed to providing a reliable online course system to all users. However, in the event of any unexpected server outage or any unusual technical difficulty which prevents students from completing a time sensitive assessment activity, the instructor will extend the time windows and provide an appropriate accommodation based on the situation. Students should immediately report any problems to the instructor and contact the UNT Student Help Desk: helpdesk@unt.edu or 940.565.2324 and obtain a ticket number. The instructor and the UNT Student Help Desk will work with the student to resolve any issues at the earliest possible time.

Instructor Responsibilities and Feedback

As the instructor, I want you to succeed and graduate. To do so I will guide you in your project and advise you as needed. I try to provide clear instructions on the assignments and deliverables though there will be differences in how something may be represented due to your project. I (and the TA's) will answer questions about assignments, identify additional resources as necessary, provide grading rubrics for possible, as well as review and update course content.

- Grading project deliverables and assignments can be time consuming given the size of the class, but the TA's and I strive to get grades back within 1-1.5 weeks of submission. Grades and comments/feedback are provided in Canvas.

- Emails to the instructor are answered within 24 hours, often earlier assuming the email is received before 5pm on the day (during the week). The instructor checks discussion board posts every day or two. If an immediate answer is needed, you should send an email to the instructor. The TA will generally answer a student email within 24 hours. When contacting either the instructor or TA's please include your class, section and team name in the subject line (e.g. CSCE 4901-01 Team A: Deliverable 1 grade question).

Syllabus Change Policy
The instructor reserves the right to change the course as needed, specifically (though not limited to) the case of topics, due dates, and assignments/assessment items. Any changes are done after careful consideration of the class/learning.

UNT Policies

Academic Integrity Policy
Academic Integrity Standards and Consequences. According to UNT Policy 06.003, Student Academic Integrity, academic dishonesty occurs when students engage in behaviors including, but not limited to cheating, fabrication, facilitating academic dishonesty, forgery, plagiarism, and sabotage. A finding of academic dishonesty may result in a range of academic penalties or sanctions ranging from admonition to expulsion from the University. [Insert specific sanction or academic penalty for specific academic integrity violation.]

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/).

Prohibition of Discrimination, Harassment, and Retaliation (Policy 16.004)
The University of North Texas (UNT) prohibits discrimination and harassment because of race, color, national origin, religion, sex, sexual orientation, gender identity, gender expression, age, disability, genetic information, veteran status, or any other characteristic protected under applicable federal or state law in its application and admission processes; educational programs and activities; employment policies, procedures, and processes; and university facilities. The University takes active measures to prevent such conduct and investigates and takes remedial action when appropriate.

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 Canvas 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 Canvas 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 e-mail Eagle Connect (https://it.unt.edu/eagleconnect).

Student Evaluation Administration Dates

Student feedback is important and an essential part of participation in this course. The student evaluation of instruction is a requirement for all organized classes at UNT. The survey will be made available during weeks 13, 14 and 15 [insert administration dates] of the long semesters to provide students with an opportunity to evaluate how this course is taught. Students will receive an email from "UNT SPOT Course Evaluations via IASystem Notification" (no-reply@iasystem.org) with the survey link. Students should look for the email in their UNT email inbox. Simply click on the link and complete the survey. Once students complete the survey

they will receive a confirmation email that the survey has been submitted. For additional information, please visit the SPOT website (http://spot.unt.edu/) or email spot@unt.edu.

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

Academic Support & Student Services

Student Support Services

Mental Health

UNT provides mental health resources to students to help ensure there are numerous outlets to turn to that wholeheartedly care for and are there for students in need, regardless of the nature of an issue or its severity. Listed below are several resources on campus that can support your academic success and mental well-being:

- Student Health and Wellness Center (https://studentaffairs.unt.edu/student-health-and-wellness-center)
- Counseling and Testing Services (https://studentaffairs.unt.edu/counseling-and-testing-services)
- UNT Care Team (https://studentaffairs.unt.edu/care)
- UNT Psychiatric Services (https://studentaffairs.unt.edu/student-health-and-wellness-center/services/psychiatry)
- Individual Counseling (https://studentaffairs.unt.edu/counseling-and-testing-services/services/individual-counseling)

Chosen Names

A chosen name is a name that a person goes by that may or may not match their legal name. If you have a chosen name that is different from your legal name and would like that to be used in class, please let the instructor know. Below is a list of resources for updating your chosen name at UNT.

- UNT Records
- UNT ID Card
- UNT Email Address
- Legal Name

*UNT euIDs cannot be changed at this time. The collaborating offices are working on a process to make this option accessible to UNT community members.

Additional 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)
- Pride Alliance (https://edo.unt.edu/pridealliance)
- UNT Food Pantry (https://deanofstudents.unt.edu/resources/food-pantry)

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/)