University of Oklahoma
College of Engineering

Computer Science 4273

Capstone Design Project
Spring 2023 Syllabus
AS DESIGNED BY DR. Rafal Jabrzemski

General Information

Class Time: Tuesday and Thursday 1:30 pm - 2:45 pm
Prerequisites: C S 3053 and C S 4263 and CS major or CS minor

Instructor and Office Hours:

Name	Office	Hours	Email
Temitope OLORUNFEMI	DEH 205	12.00 noon - 1:00 pm (Monday)	temitope.o.olorunfemi-1@ou.edu
	DEH 205	11:30 am - 12:30 pm (Friday)	

Important Dates

Final Exam	May 8, 2023, 1:30 pm - 3:30 pm

1.1 Ownership of Course Materials

The instructor retains ownership and all rights to original content. This includes but is not limited to exams, lectures, quizzes, handouts, protocols, electronic documents, syllabi, and all other materials. Original or transcribed course content may not be copied, recorded, retransmitted, posted on-line, or sold without the expressed written consent of the instructor. Violation of content ownership will be treated as academic misconduct.

Course Description

This course introduces the theory and practice of software engineering, with a focus on planning and design processes. Topics include methods and tools for software specification, design, and documentation, software development processes, professional ethics, responsibility, and liability in the software lifecycle. You will learn about current software engineering practices and tools, and complete team projects in the process. Interaction with project sponsors from industry, government, and academia will provide realistic experience with software engineering from a professional perspective.

2.1 ABET Student Outcomes

The general learning objectives for this course include the following ABET Outcomes:

3: Communicate effectively in a variety of professional contexts.

4: Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.

5: Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline. Apply computer science theory and software development fundamentals to produce computing-based solutions.

The primary key to this course is its practicality and direct relationship to the types of things you will be doing in the real-world. The goal is to have you equipped with a broad set of tools and ideas that will prepare you for real-world software engineering.

Course Expectations and Policies

3.1 Class Home Page

This class will use Canvas software for our home page. The URL for the home page is `https://canvas.ou.edu`. Log in with your 4+4 using your standard OU password. If you have difficulty logging in, call 325-HELP. This software provides a number of useful features, including a list of assignments and announcements, an electronic mailing list, newsgroups, and grade book. I will use this web site for all updates. I may update the Canvas page several times a week. When I update the site in any significant way, I will post an announcement on Canvas telling you what has been added and where it is located. You are responsible for things posted on the site within 48 hours of the post.

Note that you can configure Canvas to send you email whenever a new piece of information is posted.You should check the site regularly.

3.2 Class Attendance

You are expected to attend all of the lectures in which you are enrolled. In this class, it means that you will participate in the activities of your team.

3.3 Class Email

Urgent announcements will be sent through Canvas email. It is your responsibility to:

- Regular read your university-supplied email or have it forwarded to a location where you do regularly read email. I will send out a test message during the first week of class. If you do not receive this message, it is your responsibility to get the problem resolved.
- Have your email program set up so that replying to your email will work correctly. You can send email to yourself and reply to yourself to test this. If you need assistance in accomplishing any of these tasks, contact 325-HELP. You are responsible for reading emails within 24 hours.

*Please put **CS4273** as the first word in the subject line of your email.*

Learning Activities and Assessment

4.1 Project Phases

Each phase of the group project will be scaled by peer evaluation. The individual's contribution will be assessed using 360 feedback forms. The group assessment will be scaled for each individual based on their 360 feedback.

Example: The grade for a group: 85%, The 360 feedback for a student: 7, The individual grade for a student: 59.5%.

4.2 Presentations

There will be an opportunity to present the technology used for the projects and indicate the possible advantages and challenges of particular technology choices. Each presentation will be scaled by peer evaluation.

4.3 Final Examination

There is no final examination. In its place, we will have the Final Presentation. Yes, it will be scaled by the peer evaluation as well.

4.4 Grading Questions

If there is a dispute about the grading of a homework problem, you may stay after class the day the tests are returned to discuss it. If you cannot stay at this time, return the paper to me and stop by during my office hours. Once a homework has been removed from the classroom after it has been returned, the grade is final and will not be changed, even if it is found to be in error.

- You should first bring grading questions for project phases and reports graded by the TA. If this does not resolve your problem, please see the instructor.
- You may bring all other grading questions to the instructor.

4.5 Final Grade

The course grade will be determined by the average of the individual homework, and group projects. The final letter grading for the course will be as follows: A $\geq$ 90%, B = 89-80%, C = 79-70%, D = 69-60%, F = $<$ 60%. The instructor will round all averages to two significant figures (69.5 will round to 70 and 69.4 will round to 69) to determine the student's letter grade in the course (70 = C, 69 = D). There is no curve in this course. The instructor reserves the right to make linear adjustments to quiz and final exam grades in cases were a quiz or exam question was found to be in error or unreasonably difficult.

4.6 Canvas Grade Summary

Canvas has a grade book that is used to store the raw data that is used to calculate your course grade. It is the responsibility of each student in this class to check their grades on Canvas after each project or homework is returned. If an error is found, bring the grading document to me, and I will correct it.

4.7 Course Grade

There are the 5 components to the course grade. They are weighted as follows:

Category	*Percent of Final Grade*	*Total Value*
Status Reports		20%
Project Phases		40%
	Design 10%	
	Development 10%	
	Testing 10%	
	Deployment 10%	
Technology Presentation		10%
Final Presentation		20%
Participation		10%
Total		100%

Course Coverage and Procedures

5.1 Teamwork Issues

The workloads of teams are expected to be evenly distributed among the members. One will risk losing all or part of the project grade if he does not make a fair contribution.

5.2 Backup Copies of Projects

It is the student's responsibility to backup their files appropriately. No extensions to deadlines will be given as a result of lost files, unless there is a massive, network wide problem that affects the entire class. Do not rely on anyone else to backup your important files. Configure OneDrive that is a part of your Office365 to make backing up your work a routine part of computer usage. It is particularly important to save a backup copy of any project that is submitted. This backup version should not be opened or edited after submission in case something goes wrong with the submission system.

Course Policies

6.1 Make-up Policy

Although the Instructor does not expect a student to miss an assignment, if a student does miss an assignment for a legitimate, verifiable reason, the Instructor will work with the student to provide an opportunity for make-up work.

6.2 Absences

Attending every lecture is highly recommended and expected. Not attending class will have an indirect negative effect on your grade. If low attendance to lectures becomes problematic, the instructor reserves the right to use attendance as extra-credit. There will not be assigned seating in the lecture, but students are expected to sit next to their study group partners to facilitate communication during problem solving sessions in class.

6.3 Civility

All students are expected to follow proper classroom behavior and treat other students and the instructor with respect. If the instructor deems a student?s actions or behavior disruptive to the class, the students

will be asked to leave the class for that day.

6.4 Emergency Contact

In case of family or medical emergencies, students should send an email (temitope.o.olorunfemi-1@ou.edu). Once the emergency has passed, the student can meet will the instructor to discuss what material/assignments the student has missed and what steps would beneficial to aid the student in continued success in the course.

6.5 Changes in the Syllabus

As the course develops, it might be desirable/necessary to make appropriate changes in aspects of this syllabus. The Instructor reserves the right to make changes if desirable or necessary.

University Policies

7.1 Academic Integrity

Cheating is strictly prohibited at the University of Oklahoma, because it devalues the degree you are working hard to get. As a member of the OU community, it is your responsibility to protect your educational investment by knowing and following the rules. For specific definitions on what constitutes cheating, review the Student's Guide to Academic Integrity at `http://integrity.ou.edu/students_guide.html` . To be successful in this class, all work on exams and quizzes must be yours and yours alone. You may not receive outside help. Should you see someone else engaging in this behavior, I encourage you to report it to myself or directly to the Office of Academic Integrity Programs. That student is devaluing not only their degree, but yours, too. Be aware that it is my professional obligation to report academic misconduct, which I will not hesitate to do. Sanctions for academic misconduct can include expulsion from the University and an F in this course, so don't cheat. It's simply not worth it.

All work submitted for an individual grade, such as quizzes, should be the work of that single individual: not their friends or tutor. **Please ask me if you are in doubt before you collaborate with others. You have to work individually unless it is stated that a collaboration is allowed**.

- Do not show another student a copy of your homework or individual projects before the submission deadline. The penalties for permitting your work to be copied are the same as the penalties for copying someone else work.
- If you choose to do your work on your computer, make sure that your computer account is properly protected. Use a good password, and do not give your friends access to your account or your computer system. Do not leave printouts, or thumb drives around a laboratory where others might access them.
- Upon the first documented occurrence of collaborative work, I will report the academic misconduct to the Campus Judicial Coordinator. The procedure to be followed is documented in the University of Oklahoma Academic Misconduct Code (`http://integrity.ou.edu/summary_of_the_process.html`). In the unlikely event that I elect to admonish the student, the appeals process is described in `http://www.ou.edu/provost/integrity-rights/` .
- If you work with anyone else in completing an assignment, you must include that person's name on the submitted work. Failure to list a student you worked with on the assignment is a violation of academic integrity. If I find that the submitted work appears to be plagiarized, all students involved will be invited to my office individually to explain the work and/or perform similar work. The instructor will determine whether plagiarism occurred based on the match between the depth of understanding of the material displayed in the assignment and the individual interviews.

  [See `http://integrity.ou.edu/faculty_guide.html`]

- Programming projects may be checked by software designed to detect collaboration. This software is extremely effective and has withstood repeated reviews by the campus judicial processes.
- Tutors can be an excellent source of support for students who are having difficulty in the class, but only if the tutor is aware of the distinction between teaching students the material so that they can do their own work, and doing work for students. Tutors who do work for students are not only failing to help the students learn, they are abetting academic misconduct. Examples of misconduct include: If your tutor is sitting behind you while you are typing and methodically telling you what to enter, he or she is abetting academic misconduct. If your tutor is emailing files containing partial or complete programming projects to you, you will commit academic misconduct if you use those lines in your program. More effective use of tutoring services is to do problems that are similar to the assigned work, instead of doing assigned work. For example, it would be fine to work unassigned problems from the textbook with a tutor. This requires significant discipline, both on the part of the tutor and the part of the student. Copying from a tutor is as unacceptable as copying from another student. If your tutor doesn't know how to teach properly, please ask them to call or visit me and I will provide training and guidance. If you are tutoring someone else in the class, you can be accused of academic misconduct if this person copies your work.
- Cheating is strictly prohibited at the University of Oklahoma, because it devalues the degree you are working hard to get. As a member of the OU community it is your responsibility to protect your educational investment by knowing and following the rules. For specific definitions on what constitutes cheating, review the Student's Guide to Academic Integrity at `http://integrity.ou.edu/students_guide.html`.

  To be successful in this class, all work on exams and quizzes must be yours and yours alone. You may not receive outside help. On examinations and quizzes you will be informed about permissible study aids. Should you see someone else engaging in this behavior, I encourage you to report it to myself. That student is devaluing not only their degree, but yours, too. Be aware that it is my professional obligation to report academic misconduct, which I will not hesitate to do. Sanctions for academic misconduct can include expulsion from the University and an F in this course, so don't cheat. It's simply not worth it.
- Feel free to discuss all assignments with the instructor or the TAs. However, do not discuss, look at, or copy another student's solution to a Zyante or lab assignment. Doing so is considered cheating. For group projects, communication is expected between group members. However, communication about the solution to a project between groups is disallowed. Doing so is considered cheating.
- You may make use of the net as a reference as you are working on assignments. For projects, these references must be explicitly documented in your code. However, downloading or deriving specific solutions from the net is considered cheating.

7.2 Code Sharing for Group Projects

If you are keeping your code on GitHub, you have to keep your code in private repositories.

7.3 Religious Observance

It is the policy of the University to excuse the absences of students that result from religious observances and to reschedule examinations and additional required classwork that may fall on religious holidays, without penalty. [See Faculty Handbook 3.15.2 (`https://apps.hr.ou.edu/FacultyHandbook#3.15.2`).]

7.4 Reasonable Accommodation Policy

There is not specific language for the Reasonable Accommodation policy to be included in the syllabus. It is good to become familiar with the policy and describe it in your own words. Including the link to

Disability Resources Center is encourage, http://www.ou.edu/drc/home.html . [See Faculty Handbook (https://apps.hr.ou.edu/FacultyHandbook#5.4).]

Students requiring academic accommodation should contact the Disability Resource Center for assistance at (405) 325-3852 or TDD: (405) 325-4173. For more information please see the Disability Resource Center website http://www.ou.edu/drc/home.html Any student in this course who has a disability that may prevent him or her from fully demonstrating his or her abilities should contact me personally as soon as possible so we can discuss accommodations necessary to ensure full participation and facilitate your educational opportunities.

7.5 Title IX Resources and Reporting Requirement

For any concerns regarding gender-based discrimination, sexual harassment, sexual assault, dating/domestic violence, or stalking, the University offers a variety of resources. To learn more or to report an incident, please contact the Sexual Misconduct Office at 405/325-2215 (8 to 5, M-F) or smo@ou.edu. Incidents can also be reported confidentially to OU Advocates at 405/615-0013 (phones are answered 24 hours a day, 7 days a week). Also, please be advised that a professor/GA/TA is required to report instances of sexual harassment, sexual assault, or discrimination to the Sexual Misconduct Office. Inquiries regarding non-discrimination policies may be directed to: Bobby J. Mason, University Equal Opportunity Officer and Title IX Coordinator at 405/325-3546 or bjm@ou.edu. For more information, visit http://www.ou.edu/eoo.html.

7.6 Adjustments for Pregnancy/Childbirth Related Issues

Should you need modifications or adjustments to your course requirements because of documented pregnancy-related or childbirth-related issues, please contact your professor or the Disability Resource Center at 405/325-3852 as soon as possible. Also, see http://www.ou.edu/eoo/faqs/pregnancy-faqs.html for answers to commonly asked questions.

7.7 Final Exam Preparation Period

Pre-finals week will be defined as the seven calendar days before the first day of finals. Please refer to OU's Final Exam Preparation Period policy (https://apps.hr.ou.edu/FacultyHandbook#4.10).

Emergency Protocol

During an emergency, there are official university procedures that will maximize your safety.
http://www.ou.edu/emergencypreparedness/procedures

8.1 Severe Weather

If you receive an OU Alert to seek refuge or hear a tornado siren that signals severe weather:

1. LOOK for severe weather refuge location maps located inside most OU buildings near the entrances
2. SEEK refuge inside a building. Do not leave one building to seek shelter in another building that you deem safer. If outside, get into the nearest building.
3. GO to the building's severe weather refuge location. If you do not know where that is, go to the lowest level possible and seek refuge in an innermost room. Avoid outside doors and windows.
4. GET IN, GET DOWN, COVER UP.
5. WAIT for official notice to resume normal activities.

Link to Severe Weather Preparedness - Video: https://vimeo.com/237922159

8.2 Fire Alarm/General Emergency

If you receive an OU Alert that there is a danger inside or near the building, or the fire alarm inside the building activates:

1. LEAVE the building. Do not use the elevators.
2. KNOW at least two building exits
3. ASSIST those that may need help
4. PROCEED to the emergency assembly area
5. ONCE safely outside, NOTIFY first responders of anyone that may still be inside building due to mobility issues.
6. WAIT for official notice before attempting to re-enter the building.

Link to OU Fire Safety on Campus - `https://vimeo.com/125093634`

8.3 Armed Subject/Campus Intruder

If you receive an OU Alert to shelter-in-place due to an active shooter or armed intruder situation or you hear what you perceive to be gunshots:

1. GET OUT: If you believe you can get out of the area WITHOUT encountering the armed individual, move quickly towards the nearest building exit, move away from the building, and call 911.
2. HIDE OUT: If you cannot flee, move to an area that can be locked or barricaded, turn off lights, silence devices, spread out, and formulate a plan of attack if the shooter enters the room.
3. TAKE OUT: As a last resort fight to defend yourself.

Link to OU Fire Safety on Campus - `http://www.ou.edu/emergencypreparedness/procedures/active-shooter`

8.4 Masking Statement

As outlined by the University of Oklahoma's Chief COVID Officer, until further notice, employees, students, and visitors of the OU community will be mandated to wear masks (1.) when they are inside University facilities and vehicles and (2.) when they are outdoors on campus and social distancing of at least six feet is not possible. For the well-being of the entire university community it is important that everyone demonstrate the appropriate health and safety behaviors outlined in the University Mandatory Masking Policy (`https://www.ou.edu/coronavirus/masking-policy`). As this mandate includes all campus classrooms, please make sure you are wearing your mask while in class. If you do not have a mask or forgot yours, see the professor for available masks. If you have an exemption from the Mandatory Masking Policy, please see the professor to make accommodations before class begins. If and where possible, please make your professor aware of your exemption and/or accommodation prior to arriving in class.

If a student is unable or unwilling to wear a mask and has not made an accommodation request through the ADRC, they will be instructed to exit the classroom.