

WAYNE STATE UNIVERSITY

COLLEGE OF ENGINEERING

Computer Science Department

CSC 4110 Lab Sec 002 ***Software Engineering Lab*** ***Winter 2026***

Room/Building: Meyer & Anna Prentis Bldg. | Room 0211
Tuesday 11:30AM – 1:10PM

Instructor:

Name: Ujunwa Mgbob

Office location: 5057 Woodward, room 3210. (One can meet with me on MS teams/Zoom by scheduling a meeting.)

Email: hi3950@wayne.edu

Office Hours: T 1:30 PM – 3:00 PM

Course Description:

Mandatory two-hour closed lab: lecture materials and hands-on exercises which complement CSC 4110. Material Fee as indicated in the Schedule of Classes.

Credit Hours:

1 Credit Hour

Prerequisite:

CSC 2200, CSC 2201, and CSC3020 each with a grade of C or better

Co-requisites:

CSC 4110

Text(s) Book:

No textbook required. Any required materials will be supplied.

Computer Programs:

Any object-oriented programming language and its IDE

ArgoUML (Drawing UML diagrams)

Git and GitHub (Version Control System and repository)

Course contents:

You will work on a group term project during the whole semester. Attendance is required.

1. Project proposal

In the first week, each of the student must submit a project proposal (lab assignment 1) that aims to solve a real-life problem. Only **20% of the submitted proposals will be selected for implementation**. In the second week, we will publish a list of the selected projects. Project proposals will be selected based on: i) novelty, ii) utility, iii) practicality, and iv) feasibility. The students who proposed the selected projects will be eligible for **20% bonus** on their first lab assignment.

2. Project team

Each of the team will have **no more than 5 students**. The students who get his/her project selected can lead his/her team (recommended, optional). It is the responsibility of each project lead to recruit four other team members for his/her project. The team formation will be finalized during the second week. We would prefer students **selecting their own teams**. However, if a student is unable to find a team, we will assign him/her to a team that has available slot(s). **Students can mutually switch team by taking permissions from the instructor, but any team switching is not allowed after the end of second week.**

3. Collaboration

Large scale software development requires close collaboration and rapport among the team members. Each team will be using a shared public GitHub repository to work on this project. Since collaboration on GitHub is transparent to everyone, we will track the project activities on GitHub to monitor collaboration and efforts of each student. Apart from GitHub, you can also collaborate using a myriad of online (e.g., slack, discord, Gitter) / offline (e.g. face-to-face meeting, email, text, phone call) mediums.

4. Development principle

You must follow Scrum, an agile software development principle (will be taught in CSC 4110) to manage this project. There would be totally three sprints (iterations). The length of each sprint would be between 3-4 weeks. At the end of each sprint, each team must demonstrate the features developed in that sprint. After the commencement of the project, you will do a weekly stand-up meeting during each lab to report status to the entire team. Each team need to post their agile principle documentation (i.e., product backlog, sprint retrospective, scrum meeting summary, sprint review feedback, sprint planning summary) on GitHub.

5. Peer reviews

At the end of each sprint review, each of the student need to submit a written peer review for all the team-members (including him/herself). For each member, he/she would write (or fill an online form)

- Name
- Contributions during last sprint
- Areas to improve

- How would you rate his/her contributions on a scale of 1 to 10

Apart from the GitHub contribution stats, we will also use these peer reviews to grade each student's project contributions. **The peer reviews from the first sprint would not be used for grading.** However, **reviews from the second and third sprints would be used to grade a student's project contributions.**

6. Presentations

Each team must do totally four presentations for the term project (Presentation 0 is not graded; this presentation will be conducted just to share your ideas with the class). Each of the team member must be present during these presentations and must actively participate by showcasing the part that he/she has worked on. Following is the outline of the presentations.

Title	Contents	Type	Points
Presentation 0	Project Idea-Indv.	PowerPoint	0
Presentation 1	Project kickoff, vision	PowerPoint	50
Presentation 2	Sprint 1 review	No PowerPoint, live product demo	50
Presentation 3	Sprint 2 review	No PowerPoint, live product demo	50
Presentation 4	Sprint 3 review (final)	No PowerPoint, live product demo	100
			250

7. Assignments

Although, the lab assignments would be graded separately, all the lab assignments would be tied to your term project. For example, your second lab assignment would be submitting software requirement specification (SRS) for your term project. You would need to write use case for the features that you are working on for your term project (assignment 3). You will write unit tests for the modules that you have written (assignment 6).

Name	Topic	Type	Points
Assignment 1	Project proposal	Individual	100
Assignment 2	Software requirement specification	Group	75
Assignment 3	UML diagram and use case	Part 1(Group)+ Part 2 (Individual)	100
Assignment 4	Software design	Individual	100
Assignment 5	Unit Test	Individual	100
Assignment 6	Continuous integration	Group	75
Total			550

8. Grade for the term project

Please read this section carefully!! We will grade each team at the end of Sprint review 3..

Teams will be evaluated based on the following criterion:

Criterion	Rubrics	Pts
Features	How well the features were implemented? Do the features fulfill the proposal?	150
Software design	How is the software designed? Is the architecture appropriate? Do the project follow any software design principle taught in the class?	100
Unit testing	How well the software is covered by unit tests?	50
Code reviews	Was each commit reviewed by teammates? Were there active participations in those code reviews?	50
Coding convention	Is the codebase well organized? Is code well- indented? Are the file names descriptive? Do the identifies have meaningful and descriptive names?	50
Bug management	Did the team actively manage a bug repository? How many bugs were posted? How were those bugs resolved?	50
Documentation	Two primary documentations are expected: i) readme.md file describing the functionalities, purpose, and contributors; ii) installation.md describing the system requirements and instructions to build and install the software.	25
Product backlog	How well the team managed and updated its product backlog?	25
Sprint planning	How well the minutes of the sprint planning meetings were maintained and reported?	25
Collaboration	Was their rapport among the team members? Did they share the workload fairly? Were all members actively participating?	25
Scrum meetings	Did the team do scrum meetings? Were the minutes of those meetings maintained adequately?	25
Sprint retrospective	Did the team do sprint retrospective meetings? Were minutes for those meetings maintained? Did the team follow up on the plans of action?	25
Total		600

*However, your team's grade is not necessarily your grade for the project. We will investigate the GitHub activities as well as your peer evaluations to determine your contribution to the project. Based on that we will assign you a rating. Your individual grade for the project would be the team grade multiplied by your rating. For example, let's assume your team's grade scored 570 out of 600. Based on the peer evaluations and GitHub activities, we have rated your contribution as 85% of the top performer from your team. Therefore, your score for the project would be $570 * 0.85 = 484.5$. If you are the top performer of your team, then you will get 570.*

9. Tentative schedule

Week	Lab lecture	Homework
Week 1 (01/13/2026)	Introduction, syllabus, grading criterion, solicitation of term project proposal	Assignment 1: Term project proposal due in five days from the first class.
Week 2 (01/20/2026)	Presentation 0, Declaration of the selected projects, team formation, instructions on presentation 1	Finalize project vision and features to build, prepare a presentation
Week 3 (01/27/2026)	Presentation 1, each team will have 10 minutes of presentation followed by 5 minutes of Q&A, instructions on assignment 2	Assignment 2: SRS would be due before next class, conduct sprint 1 planning group meeting, add minutes in GitHub, work on sprint 1 features
Week 4 (02/03/2026)	Scrum meeting, project meeting, progress reporting, instructions on Assignment 3	Assignment 3: Would be due in 2 weeks, work on sprint 1 features
Week 5 (02/10/2026)	Scrum meeting, project meeting, progress reporting	work on sprint 1 features
Week 6 (02/17/2026)	Presentation 2, each team will have 10 minutes of presentation followed by 5 minutes of Q&A. Peer review 1.	Conduct sprint 1 retrospective and sprint 2 planning meeting. Assignment 4: due in one week, post minutes of those meetings in GitHub. Work on Sprint 2 features
Week 7 (02/24/2026)	Scrum meeting, project meeting, progress reporting, instructions on assignment 4	work on sprint 2 features
Week 8 (03/03/2026)	Scrum meeting, project	Assignment 5 and 6: due in

	meeting, progress reporting, instructions on assignment 5	two weeks, Work on Sprint 2 features
Week 9 (03/10/2026)	Presentation 3, each team will have 10 minutes of presentation followed by 5 minutes of Q&A. Peer review 2	Conduct sprint 2 retrospective and sprint 3 planning meeting, post minutes of those meetings in GitHub. Work on Sprint 3 features
Week 10 (03/24/2026)	Scrum meeting, project meeting, progress reporting, instructions on assignment 6	Work on Sprint 3 features.
Week 11 (03/31/2026)	Scrum meeting, project meeting, progress reporting.	Work on Sprint 3 features.
Week 12 (04/07/2026)	Final Presentation	

Laboratory:

The primary goal of the lab is to simulate how software is developed in the contemporary software industry. You will be working as part of a team to deliver a reliable and trustworthy software economically and quickly. This project will also help you to apply the software engineering principles and practices that you will be learning in CSC 4110. This lab is NOT intended as an introductory programming course. A good working knowledge of an object-oriented programming language is required.

Course Learning Objectives:

Upon successful completion of this class, the student will be able to:

CSC 4110 Lab Course learning Objectives
1. Summarize and apply software configuration-management techniques and tools.
2. Enhance existing realistic software by adding new features to it.
3. Collaborate with peers working in a software development team.
4. Practice software engineering techniques to system development and apply appropriate metrics.

Assessment:

Category	Allocation
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Group term project	40%
Presentations	16.67%
Assignments	36.67%
Attendance	6,66%

Grading Policies:

- **You will not receive a separate grade for the lab. See the lecture section syllabus for grading details.**
- **No late submission for assignments/presentations/projects would be accepted** without a compelling and documented reason. If you have a compelling and documented reason for not being able to meet the deadline, you must notify the instructor with documentations before the due date.
- **You are responsible to check your grades** and report an inconsistent grade to the instructor **no later than 7 days after the grade is assigned**. After 7 days from posting, it on Canvas, the grade will become final.
- Additional rules for submissions will be given in details in the corresponding assignment or project. You must fulfill all requirements to get full credit.
- We expect all students to have the highest level of academic honesty and work individually. We strongly encourage you to discuss with the instructor(s) any problems that you might have in the course work. For most of your assignments/projects, we may use MOSS (<http://theory.stanford.edu/~aiken/moss/>) to detect first, then judge the results manually. If we find two or more assignments/projects, which appear to be copied from each other, the grade will be 0. If we find the assignment/project is copied from previous semesters, the grade will also be 0. In addition, a more severe disciplinary action may be taken in accordance to WSU's policy on cheating and plagiarism.
- All students are requested to access their Wayne State e-mail account regularly. You may be contacted when important matters arise. If you have any questions about the course or need assistance, please contact the instructor in person during office hours or by e-mail at any time.
- Cell phones and other two-way communication devices: Students are expected to turn off their devices or turn them to the silent mode when they come to the lecture or to the lab. If a device is used in any way in the lab, you will receive a verbal warning first and then you will be asked to leave immediately.

University policies

Class recordings

Students need prior written permission from the instructor before recording any portion of this class. If permission is granted, the audio and/or video recording is

to be used only for the student's personal instructional use. Such recordings are not intended for a wider public audience, such as postings to the internet or sharing with others. Students registered with Student Disabilities Services (SDS) who wish to record class materials must present their specific accommodation to the instructor, who will subsequently comply with the request unless there is some specific reason why they cannot, such as discussion of confidential or protected information. Violations of this syllabus policy may result in charges under the student code of conduct.

Religious holidays (from the online Academic Calendar)

Because of the extraordinary variety of religious affiliations of the University student body and staff, the Academic Calendar makes no provisions for religious holidays. However, it is University policy to respect the faith and religious obligations of the individual. Students with classes or examinations that conflict with their religious observances are expected to notify their instructors well in advance so that mutually agreeable alternatives may be worked out.

Land acknowledgement

Wayne State University rests on Waawiyaataanong (Waa-we-yaa-tih-nong), also referred to as Detroit, the ancestral and contemporary homeland of the Three Fires Confederacy. These sovereign lands were granted by the Ojibwe (Oh-jib-way), Odawa (Oh-daa-waa), Potawatomi (Pow-tuh-waa-tuh-mee), and Wyandot nations, in 1807, through the Treaty of Detroit. Wayne State University affirms Indigenous sovereignty and honors all tribes with a connection to Detroit. With our Native neighbors, WSU can advance educational equity and promote a better future for the earth and all people.

Student Disability Services

If you have a documented disability that requires accommodations, you will need to register with Student Disability Services (SDS) for coordination of your academic accommodations. Please visit <https://studentdisability.wayne.edu> to

register your condition. Once you have accommodations in place, please inform your instructor. Student Disability Services' mission is to assist the University in creating an accessible community where students with disabilities have an equal opportunity to fully participate in their educational experience at WSU. SDS supports students with a variety of conditions, such as mental health disorders, learning disabilities, chronic health conditions, etc.

Counseling and Psychological Services (CAPS)

It is quite common for college students to experience mental health challenges, such as stress, anxiety, and depression, that interfere with academic performance and negatively impact daily life. Help is available for any currently enrolled WSU student who is struggling with a mental health difficulty. Go to <https://caps.wayne.edu> for information on the services offered and how to access them. Other options, for students and non-students, include the [Mental Health and Wellness Clinic at the College of Education](https://education.wayne.edu/mental-health-and-wellness-clinic) (<https://education.wayne.edu/mental-health-and-wellness-clinic>). Services at all these clinics are free and confidential. Remember that getting help, before stress reaches a crisis point, is a smart and courageous thing to do – for yourself, and for those you care about. CAPS provides afterhours/weekend crisis support: students living on campus can call (313) 577-2277, and all others, call (313) 577-9982. In a life-threatening emergency, call the WSU Police at 313-577-2222.

Sexual Misconduct and Title IX

Most faculty and staff are considered “**Responsible Employees**” and are **required to report** information they receive about incidents of sexual misconduct (including sexual assault, stalking, dating/domestic violence, and sexual harassment) to the Title IX Coordinator when it involves a student.

Confidential support is available 24/7 through the [Rape, Abuse & Incest National Network \(RAINN\)](https://www.rainn.org/) (<https://www.rainn.org/>). Call **1-800-656-4673** or [Chat](https://hotline.rainn.org/online) (<https://hotline.rainn.org/online>) with a professional support specialist.

Options for Self-Reporting Sexual Misconduct

Any student impacted by sexual misconduct or sexual harassment has the right to report to the University (i.e., Responsible Employee or Title IX Coordinator), to law enforcement (i.e., WSUPD or other jurisdiction), to both, or to neither. Every Warrior is encouraged to make the reporting decision that is right for them.

Reporting to the University

The [Title IX Office \(https://titleix.wayne.edu/\)](https://titleix.wayne.edu/) is available to consult with individuals impacted by sexual violence or discrimination regarding resource referrals, supportive and protective measures, and reporting and resolution options. Where WSU has jurisdiction, the affected party may request an administrative investigation by the University.

Phone: 313-577-9999

Email: TitleIX@wayne.edu

Reporting to Law Enforcement

The [WSU Police Department \(https://police.wayne.edu/\)](https://police.wayne.edu/) is available 24/7 to assist individuals reporting criminal activity or concerns on or near campus. Report off-campus incidents to the appropriate police jurisdiction. In the event of an emergency or imminent threat, reporting to the police is highly encouraged.

Phone: 313-577-2222

Every Warrior has the right to live, learn, and work at WSU – free from Harassment or Discrimination. If you or someone you know has been impacted by sexual violence or discrimination, please visit [TitleIX.wayne.edu](https://titleix.wayne.edu) to learn more about resources and support on campus and in the community.

Food Pantry and Basic Needs

Wayne State has a food pantry, a free resource available for all students. See the hours on the website <https://thew.wayne.edu/pantry>.

Learning is always more challenging when you are struggling to meet basic needs. Wayne State recognizes that you may face a number of challenges during your time here, and we are here to support you. Any student who faces challenges securing food, housing, or medical care is encouraged to contact relevant university offices noted on the [Financial Aid website](https://wayne.edu/financial-aid/) (<https://wayne.edu/financial-aid/>) for support. You are also encouraged to contact Care, Support, and Intervention services in the Dean of Students Office (DOSO) for assistance with connecting to resources for basic needs. Students can call DOSO at 313-577-1010 or submit a [care referral form](https://doso.wayne.edu/conduct/student-support-intervention) (<https://doso.wayne.edu/conduct/student-support-intervention>).

Academic Dishonesty – Plagiarism and Cheating

[Academic misconduct](https://doso.wayne.edu/conduct/academic-misconduct) (<https://doso.wayne.edu/conduct/academic-misconduct>) is any activity that tends to compromise the academic integrity of the institution or undermine the education process. Examples of academic misconduct include:

- **Plagiarism:** To take and use another's words or ideas as your own without appropriate referencing or citation.
- **Cheating:** Intentionally using or attempting to use or intentionally providing unauthorized materials, information, or assistance in any academic exercise. This includes copying from another student's test paper, allowing another student to copy from your test, using unauthorized material during an exam and submitting a term paper for a current class that has been submitted in a past class without appropriate permission.
- **Fabrication:** Intentional or unauthorized falsification or invention of any information or citation, such as knowingly attributing citations to the wrong source or listing a fake reference in the paper or bibliography.
- **Other:** Selling, buying, or stealing all or part of a test or term paper, unauthorized use of resources, enlisting in the assistance of a substitute when taking exams, destroying another's work, threatening, or exploiting students or instructors, or any other violation of course rules as contained in the course syllabus or other written information.

Such activity may result in failure of a specific assignment, an entire course, or, if flagrant, dismissal from Wayne State University.

Course drops and withdrawals

For courses running the full term, students can drop this class and receive 100% tuition and course fee cancellation for the first two weeks. After the end of the second week there is no tuition or fee cancellation. Students who wish to withdraw from the class can withdraw on [Academica](https://academica.wayne.edu/) (<https://academica.wayne.edu/>). You will receive a mark of W at the time of withdrawal. No withdrawals can be initiated after the deadline. Students enrolled beyond the deadline will receive a grade. Because withdrawing from courses may have negative academic and financial consequences, students considering course withdrawal should make sure they fully understand all the consequences before taking this step, including speaking with your instructor or advisor. More information on course drops and withdrawals can be found on the [Registrar's website](https://wayne.edu/registrar) (<https://wayne.edu/registrar>). For classes that are shorter than the full term, deadlines for dropping and withdrawal can be found on the section's detail in the [Schedule of Classes](https://registration.wayne.edu/) (<https://registration.wayne.edu/>).

Student Services

The Academic Success Center

The Academic Success Center (1600 Undergraduate Library) assists students with content in select courses and in strengthening study skills. Visit the [Academic Success Center](https://success.wayne.edu/) (<https://success.wayne.edu/>) for schedules and information on study skills workshops, tutoring and supplemental instruction (primarily in 1000 and 2000 level courses).

The Writing Center & Writer's Studio

The Writing Center provides a variety of tutoring options free of charge for graduate and undergraduate students at WSU. Tutoring sessions are available in the following modes:

- In-person during our Writer's Studio open hours (to learn more, please visit our website)
- Online, synchronous sessions (up to 50-minutes)
- Online, asynchronous sessions (please review our guidelines for asynchronous tutoring)

Tutoring services are provided by trained undergraduate and graduate student tutors. Our tutors assist with writing from all disciplines and on a range of topics including but not limited to: brainstorming, drafting, revising, organization, and editing. All tutoring sessions are collaborative, so please come prepared to work with your tutor (whether online or in-person). We look forward to working with you!

To schedule a one-on-one appointment, please visit our website:

<https://writing.wayne.edu>

For in-person services or just a dedicated space to write and study, you're welcome to drop into our Writer's Studio any time during our regular business hours – no appointment necessary! You can find our current hours at our website: <https://writing.wayne.edu>

For more information about the Writing Center and Writer's Studio, please contact the Director, Amy Latawiec (email: amy.latawiec@wayne.edu)

Library research assistance

The University Libraries are available 24x7 to help students locate and access articles, books, and other credible and reliable resources you need for your research papers and projects. Librarians can also help you understand assignments and cite the articles and images that you use in your papers. You can

connect with librarians at <https://library.wayne.edu/help> for chat, email, phone, drop-in hours, or appointments.