Syllabus CS-220

Spring 2025

Instructor Contact Information

- Stoney Jackson, Ph.D., he/him
- Email: Stoney.Jackson@wne.edu
- Office: H207b and class Discord server

Office Hours

Please, please, please make use of my office hours. I love what I teach, and I am more than happy to help you learn it.

Use the following link to schedule a time to meet with me in-person or over Zoom.

When secheduling a meeting, set your timezone by click the timezon icon  .

- https://outlook.office.com/bookwithme/user/2b8e5ed3fd014d8d9a50575b3ed48150@wne.edu?anonymous&ep=plink

Course Information

CS 220 - Collaborative Software Development

Participants will learn modern tools and practices to design and develop large systems in teams such as integrated development environments, build systems, testing, version control, and issue Tracking.

4 cr.

Requisites: complete CS-102 or IT-102 or CS-171 (introductory programming course)

Objectives

- Able to identify a project's license.
- Able to distinguish between a permissive and a non-permissive open source license.
- Able to identify the rights granted by a typical open source license.
- Able to work in small teams using the Scrum Framework and employing Agile Principles.
- Able to contribute changes through standard workflows using Git, GitLab, and GitLab's issue tracker.

- Able to use Docker and Docker Compose to build, run, and manage containers and images.
- Able to write automated tests using Test Driven Development practices.
- Able to improve code based on Clean Code principles.

Required Materials

Free

Most of the materials for this course are free.

- Discord
- Git
- GitHub and Codespaces

Non-Free

- O'Reilly Online Learning - You will need this for 1 month. I will tell you when to sign up. It's about $50/mo. It gives you access to LOTS of books, videos, live sessions, and more. We'll use it for Clean Code by Robert Martin and its accompanying videos.
- A personal computer with a supported version of Windows, MacOS, or Linux (but not Chromebook). If you do not have a personal computer that will run the software required by this course, you will need to plan to use one of the computer labs (H103 or H201) while they are not being used for a class.

Assessment

- 40% Homework (About 5 assignments; 1 every 2-3 weeks)
- 60% Exams (3 @ 20% each)

Grading Scale

The following scale is used to map overall scores to letter grades. The top is the minimum overall percentage needed to earn the letter grade below. Overall scores are rounded to the nearest percent before converting to a letter grade.

0	**60**	**67**	**70**	**73**	**77**	**80**	**83**	**87**	**90**	**93**
F	D	D+	C-	C	C+	B-	B	B+	A-	A

Exams

Exams assess your knowledge of concepts, terminology, and their correct application. Each exam primarily covers the material since the last exam.

Assignments

Assignments are to be completed individually unless an assignment explicitly states otherwise. These assignments will be used to deepen your knowledge and assess your ability to apply your knowledge.

Each assignment is graded using a **9-point rubric**; 3-points in each of three categories.

- Submission - Submitted on-time and is organized as directed.
- Completeness - A reasonable attempt was made on all questions.
- Correctness - Clearly demonstrates understanding of relevant material.

These categories are not entirely independent of each other. If you skip a significant part of the homework, you may lose points in both completeness and correctness.

Just by correctly submitting your work on time and making a reasonable attempt on all parts, you will earn no less than a 6/9 (66.66%).

Notice you don't have to be perfect to get full credit, so long as your work demonstrates clear understanding of the material. I only dock points when I beleive there is a gap in your understanding of key concepts.

FYI, the 9-point scale nicely maps to letter grades as follows:

- 9/9 = 100% = A+
- 8/9 = 88.88% = B+
- 7/9 = 77.77% = C+
- 6/9 = 66.66% = D+ (after rounding)
- 5/9 = 55.55% = F

Late Work

Unless an assignment explicitly states otherwise, the following policies apply.

Work is **due by 9 AM ET** on the day it is scheduled due (usually Monday).

If submitting homework late, the following policy applies. You may submit work up to 72 hours late without penalty. This is called the **grace period**. After the grace period, your work will be accepted up to 1 week from the original deadline, but will receive no more than 55%. Work later than 1 week will not be accepted and will receive a 0. On the 9 point rubric, you will loose 1 point in the **submission** category, and 3 points in **correctness** and no critical feed back is given. It is possible to earn less if the submission is incomplete or is submitted such that it hinders grading (i.e., it does not follow submission guidelines).

The purpose of the grace period is to allow for any unavoidable, last-minute problems that prevent you from getting your work in on time. It also gives you enough time to get the help you need to resolve the mater. **Additional extensions beyond this grace period will not be granted.**

Quizzes and exams must be completed on time, otherwise they receive a 0.

Appeals

You may appeal a score that you believe is erroneous by emailing your instructor. In your email, include the following information:

- Your full name.
- The course and section.
- The assignment, exam, or quiz in question.
- The question(s) or part that you are concerned about.
- A brief description of the problem and why you think the score is incorrect.

Appeals for a particular score must be made within 1 week of that score being posted to Kodiak or by 9a the day grades are due, whichever is earlier.

Attendance

Attendance is required and important. Roll may be occasionally recorded, but will not directly count towards your grade. Your attendance record for this class is available in Self-Service. When absent, you are responsible for all material presented in course. There is a positive correlation between attendance and grades.

Student Accessibility Services

I am committed to creating a course that is inclusive in its design. If you encounter barriers, please let me know immediately so we can determine if there is a design adjustment that can be made. I am happy to consider creative solutions as long as they do not compromise the intent of the assessment or learning activity. If you have a disability, or think you may have a disability, you may also want to meet with Student Accessibility Services. The contact information is listed below:

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Student Accessibility Services
Herman Hall, SAS Suite 105
Office Phone: 413-782-1258
Email: accessibility@wne.edu
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Once I have a copy of your approved accommodations from SAS we can plan a time to connect to discuss your accommodation needs. In addition, if you are approved for exam accommodations, please consult with me at least two weeks before any scheduled exam date to confirm the testing arrangements.

Privacy

We'll be using a number of online tools, and some make account information (e.g., username) public. Your instructor will do their best to let you know when their is a chance that your information may become public.

To protect your information, you may want to use emails and account names that obfuscate your real name. For example, you may want to create an email account that you will use specially for this course and create accounts using this email. You may choose usernames that have made up names. That is fine. All we ask is that you keep the names clean and friendly.

Your instructor may require you to provide them with account names so that they can grant it special permissions and so that your work under that account can be attributed to you in the class.

Please respect the privacy of others in this class when working in a potentially public environment by only referring to others by their chosen account name and not their real name.

Here is a list of considerations when using some of the tools we will be using in class.

- Commits and commit messages pushed to a public Git repository will become public. Commit messages contain a name and an email that you set when configuring Git.
- In GitLab and GitHub, when you interact with a project or group (e.g., creating an issue, commenting on an issue, forking a project, etc.), your GitLab account name will become associated with that project or group. If that GitLab project or group is public, then that association may also become public.

Academic Misconduct

Any action that undermines the instructor's ability to assess a student's understanding or undermines the educational objective of an assignment, quiz, or exam may be considered academic misconduct and may result in penalties including reduced scores or expulsion. Examples of academic misconduct include distributing solutions, copying solutions, and redistributing course materials such as exams, quizzes, and homework assignments. Incidents of academic misconduct will be reported to the chair who will determine an appropriate penalty.

All work submitted by a student must be their own work. Copying answers from another source without citation is plagiarism and academic misconduct, regardless of the source or the means of copying. Examples of sources may be: books, articles, websites, code repositories, blog posts, classmates, family members, and AI services. Examples of means of copying include: making a digital copy, digitally copying-and-pasting, transcribing from a video or someone giving dictation, and transcribing what you see. Also, paraphrasing and summarizing the ideas and structure of a source without a citation may also be plagiarism.

Just because an answer is properly cited may not be sufficient to earn a passing score on an assignment or exam. For example, if you are asked to make a case for adopting a new technology based on Agile principles, asking an AI service to generate an answer and then providing that answer and citing it avoids plagiarism, but also avoids the point of the assignment: for you to create a convincing argument and demonstrate your understanding of Agile principles — and you may

receive a 0 for such a response.

To avoid plagiarism and academic misconduct, cite your sources. To also avoid poor scores, produce your own work.

If you are in doubt about whether an act may be considered academic misconduct or result in a reduced score, ask your instructor before committing the act.

Changes

Changes may be made to the syllabus or these policies. Changes are announced in class and a revised document will be posted where you found this document.

Extenuating Circumstances

If a circumstance beyond your control causes you to violate the above policies, you may request special considerations for your circumstance by emailing your instructor with the following information:

1. Your full name.
2. A summary of the extenuating circumstance.
3. A brief but specific list of the accommodations you are requesting.
4. Verifiable evidence of the extenuating circumstance.

Requests must be submitted as soon as you are aware of the extenuating circumstances. Your instructor will determine the acceptability of a request, and the specific accommodations that will be made.

If you have any problems with the above instructions, please discuss your situation with your instructor.

Rough, Tentative Schedule

Below is a rough schedule of topics. A more detailed, up-to-date schedule will be kept along with our class notes. Please follow along there.

- Week 1 - Workflow
- Week 2 - Workflow
- Week 3 - Licensing
- Week 4 - Agile and Scrum
- Week 5 - Command line
- Week 6 - Git
- Week 7 - Git
- Week 8 - Clean Code

- Week 9 - HOLIDAY
- Week 10 - Clean Code
- Week 11 - Testing
- Week 12 - Testing
- Week 13 - Testing
- Week 14 - Dev Env
- Week 15 - Dev Env
- Week 16 - Finals