Course Syllabus

CS 3541 Course Syllabus

Software Engineering

Spring 2022

Sections 1: All Class, 3:30-4:45 pm Tue, Thu, in-person
2: Lab 2, 4-6 pm Wed, in-person
3: Lab 3, 6-8 pm Wed, in-person

Link: https://d-umn.simplesyllabus.com/doc/7ijyb6gnq/Spring-2022-CS-3541-001-Software-Engineering?mode=view (https://d-umn.simplesyllabus.com/doc/7ijyb6gnq/Spring-2022-CS-3541-001-Software-Engineering?mode=view)

Course Information

Instructors:	Jomara Sandbulte
Email:	jsandbul@d.umn.edu
Phone:	(218) 726- 8328 (voicemail only)
Office Hours:	2:30-3:30 pm Tuesday - 324B HH 3-4 pm Wednesday - 324B HH 2:30-3:30 pm Thursday- 324B HH
OH Zoom:	By appointment via Email or Slack DM
TA:	Joseph Hnatek
TA Email:	hnate002@d.umn.edu
TA Office Hours:	Room: MWAH 187 Monday: 2pm - 3pm Thursday: 12pm - 1pm Friday: 11am - 12pm

OH Zoom:	By appointment via Email or Slack DM
Lectures:	15:30-16:45 (3:30-4:45 pm) Tue, Thu - in-person
Labs:	Section 2: 4-6 pm Wed, in-person Section 3: 6-8 pm Wed, in-person
Suggested Texts:	• McConnell, *Code Complete*, 2nd Ed., Microsoft Press, ISBN 0735619670 • Martin, *Clean Code: A Handbook of Agile Software Craftsmanship*, Prentice-Hall, ISBN 0132350882 • Pressman and Maxim, *Software Engineering: A Practitioner's Approach*, McGraw Hill, ISBN 0078022126

Catalog Description

Recognition of conditions for the production of high-quality software. Use of current software development technology. Organization and management of software development projects. Includes a significant team project.

Prerequisites (grade of C- required for both)

- CS 2511: Software Analysis and Design
- CS 2531: Discrete Structures for Computer Science *OR* CS 3512: Computer Science Theory

Course Learning Outcomes

Students will be able to ...

1. Appreciate the wider engineering issues that form the background to developing complex and evolving software-intensive systems.

2. Compare and contrast different development processes.

3. Capture, document, and analyze requirements.

4. Translate requirements specification into an implementable design, following a structured and organized process.

5. Formulate a testing strategy for a software system, employing techniques such as unit testing, test-driven development, and functional testing.

6. Work effectively as a member of a development team.

Computer Science Student Learning Outcomes

2. Students can design, develop, and analyze significant software systems.

4. Students understand the fundamentals of data structures and related algorithms.

5. Students understand the application of programming languages in computer systems.

6. Students can apply computer science principles & practices to a variety of problems.

7. Students can work independently & also effectively in teams.

UMD Student Learning Outcomes

1. Demonstrate competence in a major field.

2. Construct, integrate, and apply knowledge from instruction and experience.

3. Think critically and creatively in seeking solutions to practical and theoretical problems.

6. Communicate effectively through writing, speaking, and interpersonal group interactions.

Examinations and Grades

Item	Points	Date and Time
Midterm Exam	250 points	Thursday, March 3, 15-17 (3-5 pm), in-person
Final Project	250 points	Due by the end of the final exam period, 3:50 pm on Thursday, May 5th, 2022
Labs, Homework Assignments, Course Project	500 points	TBD
Total	1000 points	Grade based on total points

The learning outcomes addressed in each exam and assignment will depend on what material has been covered. Exams will be based on material covered to that point, homework and quiz assignments will be used to emphasize and expand on material discussed in class. The focus of the first half of the class will be to prepare you for a six-week group project process undertaken during the last six weeks of class. At least 300 points of the class will be based on the documents you submit for the project and the project grade you receive.

Grades are assigned on a percentage basis, and then an adjustment is applied based on a minimum effort requirement (see below). The grade percentage cutoffs are as follows:

- the A-minus cutoff is 90%,
- the B-minus cutoff is 80%,
- the C-minus cutoff is 70%,
- the D cutoff is 60%, and
- F is below 60%.

These percentages may be lowered but will not be raised.

Tutoring Center

The Tutoring Center on the second floor of Martin Library offers free tutoring sessions for this course. Your tutor will be a high-achieving student trained to assist you. To learn more about the Tutoring Center, find the tutor(s) qualified for this subject area, or reserve a time with a tutor, please visit the **Tutoring Center website (https://awlc.d.umn.edu/tutoring-center)** . The tutors look forward to working with you!

Policies

Student Directive

Students often ask what is required of them to be successful in a Computer Science class. The short answer is: spend time with the material. The longer response is to read the appropriate sections at least twice before coming to class, then try your hand at working a few examples and homework problems, then come to class and participate, then go back home and reread the material, study your notes, and continue trying to work problems. In the class presentations, the instructor presumes that students are reading and studying the relevant material in the text. Find a classmate who will study with you. A reasonable time to spend on this offering is approximately 8-10 hours on your own every week. The key to learning a discipline is spending time with the material.

Student Conduct Code

Appropriate classroom conduct promotes an environment of academic achievement and integrity. Disruptive classroom behavior that substantially or repeatedly interrupts either the instructor's ability to teach or student learning, is prohibited. Students are expected to adhere to the **Board of Regents Policy (https://regents.umn.edu/sites/regents.umn.edu/files/policies/Student_Conduct_Code.pdf)** .

Teaching & Learning -- Instructor and Student Responsibilities

UMD is committed to providing a positive, safe, and inclusive place for all who study and work here. Instructors and students have a mutual responsibility to ensure that the environment in all of these settings supports teaching and learning, is respectful of the rights and freedoms of all members, and promotes a civil and open exchange of ideas. To reference the full policy please see **this link (http://www.d.umn.edu/academic-affairs/academic-policies/classroom-policies/instructor-and-student-responsibilities)** .

Academic Integrity

Academic dishonesty tarnishes UMD's reputation and discredits the accomplishments of students. Academic dishonesty is regarded as a serious offense by all members of the academic community. UMD's **Student Academic Integrity Policy (http://www.d.umn.edu/academic-affairs/academic-policies/classroom-policies/student-academic-integrity)** .

Final Exam Policy of UMD

All 1xxx-5xxx courses offered for undergraduate credit must include a final graded component or end of term evaluation that assesses the level of student achievement of one or more course objectives. All final graded components are to be administered or due at the time and place according to the final exam schedule and not during the last week of class. Find complete information **here (http://www.d.umn.edu/academic-affairs/academic-policies/examination-policies/final-examinations)** .

Assignments

All assignments outside of class will be collected at the beginning of class on the due date. Late assignments will be penalized 20% of the grade for each working day the assignment is late.

Excused Absences

Students are expected to attend all scheduled class meetings. It is the responsibility of students to plan their schedules to avoid excessive conflict with course requirements. However, there are legitimate and verifiable circumstances that lead to excused student absence from the classroom. These are subpoenas, jury duty, military duty, religious observances, severe illness, bereavement for immediate family, and NCAA varsity intercollegiate athletics. For complete information, please click **here (http://www.d.umn.edu/academic-affairs/academic-policies/classroom-policies/excused-absences)** .

Students with Disabilities

It is the policy and practice of the University of Minnesota Duluth to create inclusive learning environments for all students, including students with disabilities. If there are aspects of this course that result in barriers to your inclusion or your ability to meet course requirements such as time-limited exams, inaccessible web content, or the use of non-captioned videos, please notify the instructor as soon as possible. You are also encouraged to contact the Office of Disability Resources to discuss and arrange reasonable accommodations. Call 218-726- 6130 or visit the **Disability Resources website (https://umd-general.umn.edu/disability-resources)** for more information. Policy **here (https://regents.umn.edu/sites/regents.umn.edu/files/policies/DisabilityServices.pdf)** .

Appropriate Student Use of Class Notes and Course Materials Policy here (http://d.umn.edu/academic-affairs/academic-policies/classroom-policies/course-notes-and-materials)

Grading and Transcripts Policy here (http://d.umn.edu/academic-affairs/academic-policies/grading-policies/grading-and-transcripts)

Sexual Harassment, Sexual Assault, Stalking and Relationship Violence Policy here (https://regents.umn.edu/sites/regents.umn.edu/files/policies/Sexual_Harassment_Sexual_Assault_Stalki

Equity, Diversity, Equal Employment Opportunity, and Affirmative Action Policy here (https://regents.umn.edu/sites/regents.umn.edu/files/policies/Equity_Diversity_EO_AA.pdf)

Academic Freedom and Responsibility Policy here (https://regents.umn.edu/sites/regents.umn.edu/files/policies/Academic_Freedom.pdf)