

SWE 621: Software Modeling & Design

Spring 2022



Contact Information

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Office Hours:
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Tuesdays – 2p-4p
(But feel free to pop in
anytime my door is open!)

Course Overview

This is a course in concepts and methods for the architectural design of software systems of sufficient size and complexity to require the effort of several people for many months. This course will focus on object-oriented software design concepts for large-scale, distributed, and concurrent software systems and will focus on constructing software designs primarily using the Unified Modeling Language (UML)

Learning Objectives

Upon completion of this course, students should have:

- An understanding of software requirements and design concepts and methods for large-scale systems
- An understanding of why modeling is an important aspect of modern software intensive systems
- An ability to create and use UML models to develop and document software requirements and design artifacts.
- An ability to articulate software design decisions and reason about trade-off decisions made during the design process

Prerequisite

SWE foundation courses

Course Materials

I will teach from the Learning Modules on Blackboard and provide supplementary reading material there as applicable. Any textbook resources I use will be available online from the GMU library.

Grading Policy

In-class activities	20%
Project Assignments	20%
Mid-term Exam	30%
Final Exam	30%

In-Class Activities	I strive for highly interactive classes. Please don't be shy about asking questions or volunteering ideas. Attendance is critical for this class as we will also use class time for your term project assignments.
Team Project	Software modeling is a highly interactive activity that works best in a team environment where you can discuss tradeoff decisions and different perspectives. You will self-form into teams at the start of the semester and work with these teams to solve modeling assignments throughout the course. Note: For group project assignments, you are NOT ALLOWED to include "guest names." Every person listed as a collaborator must contribute. If someone is listed as a collaborator but did not contribute, all will be given a zero on the assignment and reported to the university honor committee. Bottom line – if you have a team member that is ghosting you, it's far better to let them take the zero for an assignment than for the entire group to be penalized.
Mid-term Exam	The mid-term will be an applied / practical exam
Final Exam	The final exam will be comprehensive and will also be an applied / practical exam.

Email policy:

You must use your Mason email account for all email correspondence having anything to do with your work at Mason. Federal laws protecting your privacy rights require that we only communicate student information directly to students –and use of the university email system is our only way to validate your identity. You may forward your campus email elsewhere, but we can respond only to a Mason email account.

Honor Code

You are expected to abide by the [University's honor code](#) and the [CS Department's Honor Code and Academic Integrity Policies](#) during the semester. This policy is rigorously enforced. All class-related assignments are considered individual efforts unless explicitly expressed otherwise (in writing). Review the university honor code and present any questions regarding the policies to instructor. Cheating on any assignment will be prosecuted and result in a notification of the Honor Committee as outlined in the GMU Honor Code.

Disability Accommodations

Students with a learning disability or other condition (documented with [GMU Office of Disability Services](#)) that may impact academic performance should speak with me ASAP to discuss accommodations.

Safe Return to Campus

All students taking courses with a face-to-face component are required to follow the university's public health and safety precautions and procedures outlined on the university [Safe Return to Campus webpage](#). Similarly, all students in face-to-face and hybrid courses must also complete the Mason COVID Health Check daily, seven days a week. The COVID Health Check system uses a color code system and students will receive either a Green, Yellow, or Red email response. Only students who receive a "green" notification are permitted to attend courses with a face-to-face component. If you suspect that you are sick or have been directed to self-isolate, please quarantine or get testing. Faculty are allowed to ask you to show them that you have received a Green email and are thereby permitted to be in class.

Students are required to follow Mason's current policy about facemask-wearing. As of August 11, 2021, all community members are required to wear a facemask in all indoor settings, including classrooms. An appropriate facemask must cover your nose and mouth at all times in our classroom. If this policy changes, you will be informed; however, students who prefer to wear masks either temporarily or consistently will always be welcome in the classroom.

Campus Closure or Emergency Class Cancellation / Adjustment Policy

If the campus closes, or if a class meeting needs to be canceled or adjusted due to weather or other concern, students should check Blackboard [or other instruction as appropriate] for updates on how to continue learning and for information about any changes to events or assignments.