

SWE 621: Software Modeling & Design

Contact Information

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Tuesdays – 11a – 12p and
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(Or by appointment / drop-in)

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 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

There is no required textbook for the class. I will teach from the Learning Modules on Blackboard and provide supplementary reading material there as applicable.

You will need to install the [StarUML](#) modeling tool for use with the project and any modeling assignments.

Grading Policy

In-class activities	10%
Team Project	40%
Mid-term Exam	20%
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	SWE 621 will have a large scale software design project that will require you to work as a team. There will be multiple modeling assignments and design reviews. Your final grade for this component will also include peer evaluation grades provided by your teammates. (See "Final Assignment" in Blackboard.)
Mid-term Exam	The mid-term will be mostly multiple choice and based on the learning modules.
Final Exam	The final exam will be comprehensive. It may include multiple choice questions but will also test practical knowledge (i.e. requiring you to develop and/or correct models)

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.