

Student Originated Software

Spring 2026

Faculty:

Margo Bergman, margo.bergman@evergreen.edu

Richard Weiss, weissr@evergreen.edu

The goal of this two-quarter program is for students to learn the intellectual concepts and skills that are part of advanced work in computer science. This program will focus on how to build computer systems. It is designed for advanced computer science students and anyone with a strong interest in computer science and how to apply it to other disciplines. The program content is organized around four interwoven themes (topics).

The topics in this program for spring will include

- Operating Systems
- Data Science
- Database Systems
- Software Construction Project

The Operating Systems theme is about how operating systems work. It will be a combination of principles and hands-on labs. Understanding OSs is important for understanding complex systems and for writing efficient code. There are four main topics that we cover: virtualization, concurrency, persistence, and security.

Database Systems explore database systems through hands-on projects using real-world data. Students will learn concepts such as relational database design, data modeling, and query languages. Then, we will design entity-relationship (ER) diagrams and write SQL queries to retrieve, manipulate, and manage data. There will be an introduction to NoSQL systems such as MongoDB. Both local and cloud-based database interfaces will be discussed.

Data Science will teach students the principles and practice of data science using industry-standard tools and programming languages. Students will learn what packages are appropriate for statistical analysis and data visualization, using both Python and R languages. Modern AI tool will be introduced as well, including LLMs and automated ML. The ethical considerations of using these tools will be discussed. Work will be project-based using real-world data.

The Software Construction Project will be a team project. It can be a continuation of the project from winter, or it can be a new project. Even if it is a continuation, the team can be different. This project is meant to reinforce the habits and practices of accessible, agile development as introduced in DS&A.

Tentative schedule

	Mon	Tues	Wed	Thurs	
10-12	OS 2619	Database Systems 2619	OS 2619	Database Systems 2619	
1-3	Project	Data Science 2619		Data Science 2619	
4-6					

This program meets in person. If you need an accommodation, please email both instructors.