CS 395: Full Stack Web Development
Spring 2024

Contact Information
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Course Description
CS 395: Student Initiated Special Topics are 1-credit courses that cover special and emerging topics of interest to computer science undergraduates. Lectures are guided by student facilitators under faculty advisement.

This class will introduce students to common full-stack development concepts seen in the industry, such as front-end technologies like HTML5 and CSS3, back-end development concepts such as database implementations and usage of application interfaces, application development, deployment, and security methodologies. Students will also work on group projects, designing and building their full-stack web application throughout the semester to reiterate concepts learned in class.

This is a 10-week course.

Course Outcomes
Upon completion of this course, students should have gained the following knowledge and skills:

- Understanding of full-stack development concepts and practices.
- Knowledge of the front-end technologies such as HTML, CSS, and JavaScript.
- Knowledge of back-end technologies such as databases, server-side languages, and APIs.
- Ability to develop a web application from scratch using full-stack development tools and frameworks.
- Ability to design, develop, and deploy a full-stack web application.
- Understanding of web security and best practices for securing a web application.
- Ability to work in a team and collaborate on a full-stack development project.
- Familiarity with the Agile software development methodology.
- Experience with project management tools.
- Demonstrate understanding of the topics covered in this course by working on a project.

Prerequisite
Grade of C or better in CS211

Textbook
No textbook will be required. Assigned readings will be shared with the students or will be available online or through the library.

Grading Policy

Class Participation — Participating in in-class discussions and providing constructive comments to the presenters. 2 lowest participation grades are dropped.

Homework — Coding assignments that reflect key concepts taught in class. You must submit all related files by the deadline.

Midterm Project — An individual project where students will create and present a front-end interactive website.

Final Project — A group project where the students will create and present a full-stack app.

Class Participation	20%
Homework	25%
Midterm Project	20%
Final Project	35%

The class will use the following grading scale to determine your final letter grade:

A	> 85%
B	> 80%
C	> 70%
D	> 60%
F	< 60%

Contesting of grades on any/all submissions must be requested within one week of the item's return. No grade changes will be considered after that deadline or one week after the final class meeting.

Late Policy

If you need an extension for an assignment, you must contact the instructors <u>as soon as possible</u> and explain your situation. The instructors will decide whether to accept your late submissions on a case-by-case basis which is not guaranteed for every student.

No late submissions will be accepted for the final project.

Honor Code

All students are expected to abide by the [GMU Honor Code](#) and the [CS Department Honor Code](#). 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 the 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 the faculty advisor ASAP to discuss accommodations.

Campus Resources

George Mason University offers a multitude of campus resources which we encourage you to seek out if needed:

- **Student Support and Advocacy Center (SSAC)** - offers one-on-one consultations and resources in the areas of interpersonal violence, personal wellness, and alcohol/drug abuse
- **Counseling and Support Services (CAPS)** - offers individual and/or group counseling, workshops, and community education programs
- **The Office of Disability Services** - handles short and long-term disability accommodations.
- **Learning Services** - offers a lot of support options for things like time management, test-taking skills, college reading skills, etc.
- **The Writing Center** - offers support for writing improvement, including specific support for English for Speakers of Other Languages (ESOL)
- **Open Computer Labs** - free-to-use computers on campus
- **Software and IT Services for Students** - everything from video recording software (such as Kaltura) to cloud storage (such as OneDrive), to development software (such as jGrasp, Notepad++, PuTTy, Python, etc.).