CS 395: Full-Stack Web Development

Spring 2025

Contact Information

Facilitators (Contact via Piazza):	Rohan Payyavula
	Rishitha Voleti
Faculty Advisor (Contact via Piazza or email):	Dr. Katherine Russell

Course Description

CS 395: Student-Initiated Special Topics is a 1-credit course focused on exploring emerging subjects relevant to computer science undergraduates. These courses are led by student facilitators with oversight from faculty advisors.

In this class, students will be introduced to key full-stack development principles commonly applied in the industry, including front-end technologies like HTML5 and CSS3, as well as back-end concepts like database integration and working with application interfaces. Additionally, it covers front end development, back-end development, and basic security practices. Throughout the semester, students will collaborate on group projects to design and develop their own full-stack web applications, reinforcing the concepts covered in lectures.

This is a 10-week course.

Course Outcomes

Upon completion of this course, students should have:

- Understanding full-stack development concepts and practices.
- Familiarity with technologies like HTML, CSS, and JavaScript.
- A basic understanding of back-end technologies, including databases and server-side languages.
- The ability to build a web application from scratch using various full-stack tools and frameworks.
- Knowledge of team collaboration skills, including Agile methodology in software development and project management tools.

Topics Will Include: Agile, Github, HTML, CSS, Bootstrap, JavaScript, Node.js, Server-side scripting and languages, Basic Security concepts in web-development , SQL and RDBM, MongoDB, Django ORM (time permitting).

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	**20%**
Homework	**20%**
Quizzes	**20%**
Final Project Check-in	**10%**
Final Project	**30%**

Class Participation — Participating in class discussions, in-class activities, surveys, and providing constructive comments to the presenters will all be part of your participation grade.

Quizzes — Quizzes will be posted on Canvas, and you are required to complete them by the deadline. If you miss an examination, you cannot retake it later.

Homework — This will mostly be small coding assignments. You must submit all related files by the deadline. Every week we will have a homework assignment due. Only 1-day late submission is allowed for homework with a late penalty of 10% of the assignment's grade.

Final Project Check-in — After the final project assignment has been released, there will be weekly check-ins to state your progress with the final project. This is to prevent students from leaving the project till the last minute.

Final Project — A group project where students will create and present a full-stack app. **No extensions will be given for the final project.**

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

A	>=90%
B	>=80%
C	>=70%
D	>=60%
F	< 60%

Semester grades will be automatically rounded up to the nearest whole number.

Honor Code

All students are expected to abide by the GMU's Academic Standards 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 and Nondiscrimination Policy

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.

GMU, the CS Department, and the CS Faculty are committed to providing an educational environment free from any discrimination on the basis of race, color, religion, national origin, sex, disability, veteran status, sexual orientation, gender identity, gender expression, age, marital status, pregnancy status, or genetic information. If you feel there has been a violation of the University's policies on discrimination, please contact GMU's Office of Diversity, Equity, and Inclusion.