CSC 290 - Web Application Development

Spring 2016 Semester
Swirl Library 100
Tuesdays, 4:30—5:45pm
Prerequisites: CSC 270 (Survey of Programming Languages) Credits: 1

Instructor:	Hannah Groves	hgroves@adelphi.edu
Office Hours:	Tuesdays, 6—7pm	Post Hall 211

Feel free to contact me via email at any time for questions, help, or to set up appointments. I frequently check email and am available for virtual office hours via video or regular chat. Office hours and contacting me are not a last resort! I am always happy to help any students with questions.

I. Course Aims and Outcomes:
Aims: In general, this course aims to give students a general overview of all parts of the web application development process. Web applications are becoming increasingly ubiquitous in our world, and as a result demand for programmers to create and maintain such applications has skyrocketed. Through this course, students will learn how they can grow their knowledge in this extremely opportunistic field.

Specific Learning Outcomes:
By the end of this course, students will:

1. Understand the meanings of key web application concepts, including frameworks, data models, routing, controllers, version control, deployment, APIs, and HTTP requests.
2. Demonstrate mastery of creating a basic web application.
3. Understand unit, integration, and functional testing and how to apply each to an application.
4. Be equipped to evaluate future employment opportunities with startup and web application companies.

II. Format and Procedures: Each class meeting will consist of instruction on a different aspect of web application development. Students are responsible for completing their own web application project on their own, outside of class. Each student is required to complete this main project individually and not as a part of a group; however, students are encouraged to share knowledge with each other, provided that each student codes only their own project. Excessive absences will almost certainly affect students' final grades, as in-class instruction and demos are the main method of disseminating knowledge in this course.

III. My Assumptions: I assume that if you're enrolled in this course, you are interested in learning how web application programming and engineering occurs in a real-life setting. I also assume that you've completed CSC 270 and are comfortable learning new languages, libraries, and technologies quickly.

IV. Course Materials: In order to effectively complete this course, students must have administrative access to a computer with internet access, preferably a personal computer.

V. Grading Procedures: Grades will be based solely on students' completion of a web application project. Important factors for this project will include:

- Functionality
- Scope of work
- Code quality, readability, and correctness
- Test Coverage

Grading Scale:

A = 93 – 100
A- = 90 – 92.9
B+ = 87 – 89.9
B = 83 – 86.9
B- = 80 – 82.9
C+ = 77 – 79.9
C = 73 – 76.9
C- = 70 – 72.9
D+ = 67 – 69.9
D = 63 – 66.9
D- = 60 – 62.9
F = 59 – 0

VI. Academic Integrity: Students enrolled in this course are expected to abide by the Adelphi University Honor Code. The purpose of the Honor Code is to protect the academic integrity of the University by encouraging consistent ethical behavior in assigned coursework by students.

The Code of Academic Honesty: The code of academic honesty prohibits behavior, which can broadly be described as lying, cheating, or stealing. Violations of the code of academic honesty will include, but are not limited to, the following:

1. Collaborating in areas prohibited by the professor
2. Unauthorized multiple submission of work
3. Sabotage of others' work, including library vandalism or manipulation
4. Plagiarism: presenting any work as one's own that is not one's own
5. The creation of unfair advantage
6. The facilitation of dishonesty
7. Tampering with or falsifying records
8. Cheating on examinations through the use of written materials or giving or receiving help in any form during the exam, including talking, signals, electronic devices, etc.

VII. Accommodations for students with disabilities: If you have a disability that may impact your ability to carry out assigned course work, and are not enrolled in the Learning Disabilities Program, it is important that you contact the staff in the Disability Support Services Office (DSS), University Center, Room 310, (516) 877-3145. DSS@adelphi.edu. DSS will review your concerns and determine, with you, appropriate and necessary accommodations. All information and documentation of disability is confidential.

VIII. Tentative Course Schedule: (*Subject to change to accommodate student needs*)

Date	Topics
January 26	Intro, Ruby/Rails/Github set up, Web application structure overview I
February 2	Ruby/Rails set up, Web application structure overview II
February 9	TBD
February 16	Rails basics, starting an app
February 23	Models and database migrations
March 1	Testing I - models and RuboCop
March 8	Controllers & Routing
March 15	No class - Spring Break
March 22	HTML, CSS and Views
March 29	Testing II - controllers & mocking
April 5	Advanced functionality - complex associations, gems, good design principles, CSS frameworks
April 12	No class - Research Day
April 19	Deploying applications to remote servers
April 26	Deploying cont., security risks
May 3	Professional Web Development I / In-class work time
May 10	Professional Web Development II / In-class work time
May 17	Final Meeting/Presentations