

Course Syllabus

CSCI 39548 – Practical Web Development

Fall 2022

Instructor: Johnny Lai

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Tuesdays and Thursdays 7:00 PM - 8:15 PM

COURSE DESCRIPTION

This course introduces students to some of the popular technologies and tools used for full-stack web development. The goal is to offer an opportunity for Computer Science students to: build their online portfolios; practice working collaboratively with peers on the same codebase; and learn about tools for full-stack web development, so that they continue to work on personal projects after completion of the course.

TOPICS

- How to work collaboratively using Git and GitHub
- JavaScript, HTML, and Document Object Model (DOM) manipulation
- React
- React Router and client-side routing in a Single Page Application (SPA)
- Making external Application Programming Interface (API) requests
- React Redux
- Node.js
- Express and RESTful APIs
- PostgreSQL and Sequelize Object-Relational Mapping (ORM)

LEARNING OBJECTIVES

By the end of this course, students should:

- Be able to build end-to-end full-stack web applications
- Have acquired hands-on experience in modern web development technologies, including React, Node.js, Express, and PostgreSQL
- Be able to implement RESTful APIs and create databases for storing and retrieving data
- Have gained expertise in managing source code using Git and GitHub
- Become experienced users of various web development tools

This course partially fulfills the Computer Science student learning goals of 2B and 3D.

PRE-REQUISITES

- **CSCI 23500:** Students must have taken CSCI 23500 before taking this course. It is recommended that you are very comfortable writing and testing code on your own, and have basic experience with Git/GitHub, JavaScript, HTML, and CSS.

TEXTBOOK

None

GRADING

- **Assignments and Final Project can be done in groups (maximum 4 students per group). Working in groups is strongly recommended and encouraged so that students can learn to work collaboratively.**
- **Course Assessment Test is done individually.**

Assignment 1	10%	There are four assignments and a final project for this course.
Assignment 2	10%	
Assignment 3	10%	
Assignment 4	20%	
Final Project	50%	
100%		
Course Assessment Test (optional)	5% extra credit	Course Assessment Test is optional. You can earn up to 5% extra credit by completing the course assessment which is intended to determine whether you have mastered the course content.

COURSE SCHEDULE

See course page on Blackboard and GitHub.

HUNTER POLICIES

Policy on Academic Integrity: Hunter College regards acts of academic dishonesty (e.g., plagiarism, cheating on examinations, obtaining unfair advantage, and falsification of records and official documents) as serious offenses against the values of intellectual honesty. The College is committed to enforcing the CUNY Policy on Academic Integrity and will pursue cases of academic dishonesty according to the Hunter College Academic Integrity Procedures.

ADA Compliance: In compliance with the American Disability Act of 1990 (ADA) and with Section 504 of the Rehabilitation Act of 1973, Hunter College is committed to ensuring educational parity and accommodations for all students with documented disabilities and/or medical conditions. It is recommended that all students with documented disabilities (Emotional, Medical, Physical and/ or Learning) consult the Office of AccessABILITY located in Room E1124 to secure necessary academic accommodations. For further information and assistance please call (212-772-4857)/TTY (212-650-3230).

Hunter College Policy on Sexual Misconduct: In compliance with the CUNY Policy on Sexual Misconduct, Hunter College reaffirms the prohibition of any sexual misconduct, which includes sexual violence, sexual harassment, and gender-based harassment retaliation against students, employees, or visitors, as well as certain intimate relationships. Students who have experienced any form of sexual violence on or off campus (including CUNY-sponsored trips and events) are entitled to the rights outlined in the Bill of Rights for Hunter College.

- a. **Sexual Violence:** Students are strongly encouraged to immediately report the incident by calling 911, contacting NYPD Special Victims Division Hotline (646-610-7272) or their local police precinct, or contacting the College's Public Safety Office (212-772-4444).
- b. **All Other Forms of Sexual Misconduct:** Students are also encouraged to contact the College's Title IX Campus Coordinator, Dean John Rose (jtrose@hunter.cuny.edu or 212-650-3262) or Colleen Barry (colleen.barry@hunter.cuny.edu or 212-772-4534) and seek complimentary services through the Counseling and Wellness Services Office, Hunter East 1123. CUNY Policy on Sexual Misconduct Link: <http://www.cuny.edu/about/administration/offices/ia/Policy-on-Sexual-Misconduct-12-1-14-withlinks.pdf>