



School of Engineering

*Information*

*Technology Program*

## **ITP 303: Full-Stack Web Development**

**Units:** 4

**Spring 2025**

**Tue-Thu | RTH 109 | 2pm-3:50pm**

**Thu-Thu | RTH 109 | 4pm-5:50pm**

**Instructor:** Hannah Nguyen

**Contact Info:** [hnguyen0@usc.edu](mailto:hnguyen0@usc.edu)

**IT Help:** Provided by Viterbi IT

**Hours of Service:** 8am – 5pm, Mon-Fri

**Walk-in:** DRB 205

**Contact Info:** (213) 740-0517

**Email:** [engrhelp@usc.edu](mailto:engrhelp@usc.edu)

## Course Description

This course is intended for students who have completed at least one fundamental computer programming course and want to learn how to build a fully functional web application. Prior web programming skills are not required. This is a hands-on course where students will learn core web technologies by creating web pages and applications every week. Students will first create static websites using core front-end languages such as HTML, CSS, JavaScript. They will apply the same concepts to build websites using the popular library, React.js. Then students will learn basic database design and implement them using relational database management systems (RDBMS). Students will write and submit SQL queries to databases and create data interfaces using Node.js.

## Learning Objectives

- Students will:
  - Build a complete web application from scratch utilizing core web technologies.
  - Create static, responsive web pages using HTML and CSS.
  - Implement interactivity on web pages using vanilla JavaScript.
  - Build dynamic and interactive user interfaces using React.js.
  - Design databases.
  - Write SQL queries to create, retrieve, update and delete records from databases.
  - Create server-side applications and data interfaces using Node.js.

**Prerequisite(s):** ITP 265 or CSCI 103

## Technological Proficiency and Hardware/Software Required

Students should have access to their own computers running either Windows, MacOS, or Linux, and should be familiar with the basic operation of their computers.

## Grading Breakdown

Attendance & Participation	5%
Assignments	45%
Project Milestones	10%
Exams	30%
Final Project	10%
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Total	100%

## Grading Scale

Course final grades will be determined using the following scale:

A	93% or up
A-	90% - 92%
B+	87% - 89%
B	83% - 86%
B-	80% - 82%
C+	77% - 79%
C	73% - 76%
C-	70% - 72%
D+	67% - 69%
D	63% - 66%
F	62% or below

## Exams

No make-up exams will be offered. Failure to submit an exam on time or submitting blank work will result in a 0% for the exam grade.

## Attendance & Participation

Lecture attendance is mandatory; each student can miss one (1) lecture without losing attendance & participation credit.

## Assignment Extensions

Each student is given a **total of five (5)** “no questions asked” extension days for all Assignments, Milestones or Final Project combined. One extension day allows a student to turn in their work 24 hours after the deadline with no penalty to the grade. Every student has five (5) extension days to cover for any emergency, scheduling, or unforeseen circumstances during the semester. Students may distribute the five (5) days however they want, but a maximum of two (2) extension days may be used for the final project. Extensions cannot be used for Attendance & Participation questions, nor Exams.

If a student has no more extensions left, their late assignments will be graded with a -10% deduction **for each day late**, for up to 5 days after the deadline. Afterwards their work will not be accepted.

To receive a grade, students must email the grader once the late assignment, with or without extension days, is submitted.

## Grade Corrections

Any questions or concerns regarding grades must be addressed within seven (7) days after grades are posted. No changes to any grades will be made after seven (7) days.

## Academic Integrity

All coursework is expected to represent each student’s individual effort. Students may not collaborate, share, or look at other students’ code.

## Course Material

All lectures will be recorded and made available to students enrolled in the course. These class recordings are made available only for access by students in this class for educational purposes only and shall not be disclosed to any other party for any purpose.

Students may not reproduce, distribute, or post any course material, including notes, assignments, labs, and tests, without the instructor’s written consent. Refer to *SCampus* in Part B, Section 11.12 for more information <https://policy.usc.edu/scampus/>.

## Course Schedule

Note: Subject to change throughout the semester

Week	Lecture	Assignment
1	Course Overview, HTML & CSS Responsive Web Design, Bootstrap	A1: Web Resume
2	Intro to JavaScript, Events DOM Manipulation	A2: Shopping Cart
3	Intro to React Components, Events, States	A3: E-Commerce Website
4	Updating States Array	A4: Product Add
5	Fetch API User Input Validation, RegEx	A5: Products API
6	React Router React Native	A6: E-Commerce Multi Page Website
7	Database Basics, Designing Databases Intro to SQL	A7: Football Schedule Database Design
8	Q&A for Exam Review <b>Client-Side Exam</b>	
9	SQL Q&A for Exam Review	A8: SQL Statements
10	Intro to Node.js, Express.js Node.js & PostgreSQL	A9: User Search & Registration Form M1: Final Project Proposal
11	CRUD	A10: DVD CRUD
12	Rest API	A11: DVD API M2: Final Project Front-End Pages
13	Authentication File Upload, ThirdParty APIs	
14	Q&A for Exam Review <b>Server-Side Exam</b>	
15	Deployment	Final Project Front-End Pages due
16	<b>Finals Week</b>	<b>Final Project Due</b>

## Statement on Academic Conduct and Support Systems

### Academic Conduct

Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in *SCampus* in Part B, Section 11, “Behavior Violating University Standards” <https://policy.usc.edu/scampus-part-b/>. Other forms of academic dishonesty are equally unacceptable. See additional information in *SCampus* and university policies on scientific misconduct, <http://policy.usc.edu/scientific-misconduct>.

### Support Systems

*Student Counseling Services (SCS) - (213) 740-7711 – 24/7 on call*

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention. <https://engemannshc.usc.edu/counseling/>

*National Suicide Prevention Lifeline - 1-800-273-8255*

Provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week. <http://www.suicidepreventionlifeline.org>

*Relationship and Sexual Violence Prevention Services (RSVP) - (213) 740-4900 - 24/7 on call*

Free and confidential therapy services, workshops, and training for situations related to gender-based harm. <https://engemannshc.usc.edu/rsvp/>

*Sexual Assault Resource Center*

For more information about how to get help or help a survivor, rights, reporting options, and additional resources, visit the website: <http://sarc.usc.edu/>

*Office of Equity and Diversity (OED)/Title IX Compliance – (213) 740-5086*

Works with faculty, staff, visitors, applicants, and students around issues of protected class. <https://equity.usc.edu/>

*Bias Assessment Response and Support*

Incidents of bias, hate crimes and microaggressions need to be reported allowing for appropriate investigation and response. <https://studentaffairs.usc.edu/bias-assessment-response-support/>

*The Office of Disability Services and Programs*

Provides certification for students with disabilities and helps arrange relevant accommodations. <http://dsp.usc.edu>

*Student Support and Advocacy – (213) 821-4710*

Assists students and families in resolving complex issues adversely affecting their success as a student EX: personal, financial, and academic. <https://studentaffairs.usc.edu/ssa/>

*Diversity at USC*

Information on events, programs and training, the Diversity Task Force (including representatives for each school), chronology, participation, and various resources for students. <https://diversity.usc.edu/>

*USC Emergency Information*

Provides safety and other updates, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible, <http://emergency.usc.edu>

*USC Department of Public Safety – 213-740-4321 (UPC) and 323-442-1000 (HSC) for 24-hour emergency assistance or to report a crime.*

Provides overall safety to USC community. <http://dps.usc.edu>