ITP 303: Full-Stack Web Development
Units: 4
Spring 2024
Tue | DMC 205 | 4pm-7:20pm
Thu | ZHS 252 | 4pm-7:20pm

Instructor: Hannah Nguyen
Office Hours: See Blackboard
Contact Info: 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
**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. 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 PHP. Students will also be exposed to common frameworks and libraries such as Bootstrap (CSS), jQuery (JS), and Laravel (PHP).

**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.
  - Design databases.
  - Write SQL queries to create, retrieve, update and delete records from databases.
  - Identify advantages of using web frameworks and libraries such as Bootstrap, jQuery, and Laravel.

**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

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attendance &amp; Participation</td>
<td>5%</td>
</tr>
<tr>
<td>Assignments</td>
<td>50%</td>
</tr>
<tr>
<td>Midterm Exams</td>
<td>30%</td>
</tr>
<tr>
<td>Final Project</td>
<td>15%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
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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 five (5) no questions asked extension days to use throughout the semester. Extensions may only be used for assignments and a maximum of two (2) extensions may be used for the final project. They cannot be used for Attendance & Participation questions, nor Exams. To receive a grade, students must notify the grader once the late assignment 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

<table>
<thead>
<tr>
<th>Week</th>
<th>Lecture</th>
<th>Assignment</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Course Overview</td>
<td>A1: Web Resume</td>
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<tr>
<td></td>
<td>HTML &amp; CSS</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Page Layouts, Compound CSS Selectors, Display</td>
<td>A2: Interests Page</td>
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<tr>
<td>3</td>
<td>Fonts, Position Property, Transitions, Transformations</td>
<td>A3: Fonts, Drop-down Menu, Overlay Captions</td>
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<tr>
<td>4</td>
<td>Responsive Web Design, CSS Frameworks, Bootstrap</td>
<td>A4: Responsive Interests Page</td>
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<tr>
<td>5</td>
<td>Intro to JavaScript, Keyboard &amp; Form Events, RegEx</td>
<td>A5: Registration Form Validation</td>
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<tr>
<td>6</td>
<td>DOM Manipulation</td>
<td>A6: DOM Manipulation</td>
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<tr>
<td>7</td>
<td>JavaScript Objects, JSON, AJAX</td>
<td>A7: The Movie DB</td>
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<tr>
<td>8</td>
<td>DOM Storage</td>
<td>M1: Final Project Proposal</td>
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<tr>
<td>9</td>
<td><strong>Client-Side Exam</strong></td>
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<td>10</td>
<td>Database Basics, Designing Databases, Intro to SQL</td>
<td>A8: Football Schedule DB Design</td>
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<td></td>
<td>M2: Final Project Front-End Pages</td>
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<tr>
<td>11</td>
<td>Data Manipulation in SQL, Intro to PHP</td>
<td>A9: SQL Statements</td>
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<tr>
<td>12</td>
<td><strong>CRUD</strong></td>
<td>A10: DVD CRUD Pages</td>
</tr>
<tr>
<td>13</td>
<td>Include, Require, Constants, Pagination, Sessions, Cookies, Membership System</td>
<td>M3: Final Project Database</td>
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<tr>
<td>14</td>
<td>AJAX: JS &amp; PHP, cURL, REST APIs</td>
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<tr>
<td>15</td>
<td><strong>Server-Side Exam</strong></td>
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<td></td>
<td><strong>Final Projects Due</strong></td>
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(Finals)
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