

USC Viterbi

School of Engineering
*Information
Technology Program*

ITP 404: Advanced Front-End Web Development

Units: 4

Fall 2022 – Tuesday – 5pm - 8:20pm

Location: GFS 221 & Online

Instructor: David Tang

Office Hours: By appointment

Contact Info: dtang@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

The objective of this course is to provide students with the necessary skills to build JavaScript web applications using modern techniques, frameworks, libraries, and tools that are used among developers within the industry. The concepts learned in this class will be applicable to many technology stacks used in front-end web development.

Prerequisite(s)

ITP 301, ITP 303, ACAD 275, or experience with HTML, CSS, and JavaScript

Students should be familiar with concepts such as variables, loops, conditional logic, functions, and the basics of objects.

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

Assignments	30%
Quizzes	20%
Midterm	20%
Final Project	30%
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Total	100%
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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

Asynchronous Learning

All lectures will be recorded and made available to students for asynchronous learning. This course can be taken and completed asynchronously.

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.

Late Assignments

A 10% per day penalty is applied to late assignments. No submissions are accepted after five (5) days beyond the due date. 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 on Blackboard. 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	Date	Lecture	Assignment
1	8/23	Course Introduction Synchronous vs Asynchronous Programming HTTP Fundamentals, AJAX, JSON, and Promises	Assignment 1
2	8/30	Promises Fetch Client-side Templating Event Delegation	Assignment 2
3	9/6	JavaScript Frameworks Introduction with React Object-Oriented Programming in JavaScript React: Class Components	Assignment 3
4	9/13	Working with Arrays Primitive vs Reference Values React: Forms and Data Flow	Assignment 4
5	9/20	Quiz 1 React: Client-side Routing REST API Conventions	Assignment 5
6	9/27	React: Building a CRUD Application	Assignment 6
7	10/4	React: Authentication for SPAs (Part 1) React: State Management with Context	
8	10/11	Manipulating Data Node.js: Building an in-memory REST API Deployment to a PaaS	
9	10/18	Midterm	Assignment 7
10	10/25	Authentication for SPAs (Part 2)	
11	11/1	SQL Basics Node.js: Building a database-driven REST API	
12	11/8	React: Building Modals with Portals React: Reusable Component Patterns	Assignment 8
13	11/15	Async / Await React: Testing Components	Assignment 9
14	11/22	Quiz 2 TBA	
15	11/29	WebSockets	Final Project Due 12/4

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>