Full-Stack Web Development
ITP 303 (4 Units)

Course 31804, Spring 2018

Objective

This course will teach students front-end and back-end techniques necessary to build web applications. Students will learn how to make websites interactive, how to structure and manage content for websites in databases, and how to create data-driven web applications.

Concepts

Students will first learn front-end technologies including HTML, CSS, JavaScript, jQuery library, and other JavaScript-based plugins. They will learn how to access and manipulate objects displayed by browsers, as well as client browser properties. Then, the course will teach basics of database design and implementation using relational database management systems (RDBMS). Students will learn how to submit SQL queries to databases and how to create data interfaces using PHP scripting language. The course will also introduce Model-View-Controller (MVC) design pattern, and software frameworks adhering to MVC. Students will be working with web servers, database tools, integrated development environments (IDEs), and other technologies currently used in the web industry.

Prerequisites	CSCI 104 or ITP 365
Instructor	Nayeon Kim
Contact	nayeonki@usc.edu
Office Hours	TBA
Teaching Assistants	Jae Jung (jaewoongj@usc.edu), Tianhang Liu (tianhanl@usc.edu)
Lecture and Lab	Mondays & Wednesdays 12:00pm - 1:50pm at KDC 240
Course Website	http://itpwebdev.com/spring-2018/itp-303/ All course information, including assignments, lecture notes, and resources can be found here. Bookmark this site for easy access.

Online Q&A

Piazza is a forum where students can post questions and get answers efficiently from other students, TAs, and the instructor. Students will get an invite to join this course's Piazza.

Textbooks

None. Online reading and resources will be provided.

Grading

The following percentage breakdown will be used in determining the grade for the course.

Attendance & Labs	15%
Assignments	30%
Midterm Exams	20%
Final Project	35%
Total	100%

Grading Scale

The following shows the grading scale to be used to determine the letter grade.

A	100-93
A-	92-90
B+	89-87
B	86-83
B-	82-80
C+	79-77
C	76-73
C-	72-70
D+	69-67
D	66-65
F	64 or below

Policies

Attendance

As this is a very hands-on course, attendance is critical to successfully learn the material taught in this class. As a result, attendance is taken every lecture via Blackboard's Qwickly Attendance system. To get credit for attending class, students must do the following:
- Login to Blackboard, go to *Tools -> Qwickly Attendance* and "check-in" using the four-digit code given to students by the instructor.
- Check-in must be completed within the first 30 minutes of class. Check-in closes after the first 30 minutes of class and students will not receive attendance credit after this time.

- There is no concept of unexcused or excused absences. **Three (3) absences will be automatically dropped** from student's grade at the end of the semester, to be used at student's discretion. Anything beyond the first three absences will count as an absence, no exceptions.

Labs & Assignments
- Usually one lab and one assignment are assigned every week. All lab and assignment requirements and their deadlines are listed on the course website. It is the students' responsibility to read and adhere to requirements and deadlines.
- To submit a lab or assignment, students must upload their completed work on the USC server as defined by the instructor (covered on Lab 1). Only files on the server are graded. Students **may not** submit labs/assignments in any other way (e.g. email, Blackboard, Google Drive, etc).
- Students may use up to **three (3) extensions** on any lab or assignment. An extension extends the deadline of any lab or assignment up to for an extra 72 hours. Only one extension per lab or assignment. Extensions can be requested via a Google Form posted on the class website.
- Any assignment turned in after the deadline without an extension results in a score of **zero (0). No late penalty exists in this course.**

Exams
There are two midterm exams in this course. No make-up exams (except for documented medical or family emergencies) will be offered. Final projects take place of the final exam.

Final Project
In this course, a final project and presentation takes place of a final exam. Final project presentations will take place on the Final Examination date as scheduled by the University. All students are required to attend final project presentations and is treated like a final exam. No make-up presentations will be offered except for cases defined by the University for Final Examinations.

Adding After the First Day
University allows students to add courses until the end of week 3. However, it is the responsibility of students who add after the first class to **immediately notify the instructor** and make a plan to catch up on any missed work.

IT Help
Hours of Service: 8AM-9PM; Phone: 213-740-0517; Email: engrhelp@usc.edu

Incomplete and Missing Grades
Excerpts for this section have been taken from the University Grading Handbook, located at http://www.usc.edu/dept/ARR/grades/gradinghandbook/index.html. Please see the link for more details on this and any other grading concerns.

A grade of Missing Grade (MG) "should only be assigned in unique or unusual situations… for those cases in which a student does not complete work for the course before the semester ends. All missing grades must be resolved by the instructor through the Correction of Grade Process. One calendar year is allowed to resolve a MG. If an MG is not resolved [within] one year the grade is changed to [Unofficial Withdrawal] UW and will be calculated into the grade point average a zero grade points.

A grade of Incomplete (IN) "is assigned when work is not completed because of documented illness or other 'emergency' **occurring after the twelfth week** of the semester (or 12th week equivalency for any course scheduled for less than 15 weeks)."

Students with Disabilities

Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to your course instructor (or TA) as early in the semester as possible. If you need accommodations for an exam, the form needs to be given to the instructor at least two weeks before the exam.

DSP is located in STU 301 and is open from 8:30am to 5:00pm, Monday through Friday. Contact info: 213-740-0776 (Phone), 213-740-6948 (TDD only), 213-740-8216 (FAX), ability@usc.edu, http://sait.usc.edu/academicsupport/centerprograms/dsp/home_index.html.

Emergency Preparedness/Course Continuity in a Crisis

In case of emergency, when travel to campus is difficult, if not impossible, USC executive leadership will announce a digital way for instructors to teach students in their residence halls or homes using a combination of the Blackboard LMS (Learning Management System), teleconferencing, and other technologies. Instructors should be prepared to assign students a "Plan B" assignment that can be completed 'at a distance.' For additional information about maintaining your classes in an emergency, please access: http://cst.usc.edu/services/emergencyprep.html

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 Section 11, *Behavior Violating University Standards* https://scampus.usc.edu/1100-behavior-violating-university-standards-and-appropriate-sanctions/. 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/.

Discrimination, sexual assault, and harassment are not tolerated by the university. You are encouraged to report any incidents to the *Office of Equity and Diversity* http://equity.usc.edu/ or to the *Department of Public Safety* http://capsnet.usc.edu/department/department-public-safety/online-forms/contact-us. This is important for the safety whole USC community. Another member of the university community – such as a friend, classmate, advisor, or faculty member – can help initiate the report, or can initiate the report on behalf of another person. *The Center for Women and Men* http://www.usc.edu/student-affairs/cwm/ provides 24/7 confidential support, and the sexual assault resource center webpage sarc@usc.edu describes reporting options and other resources.

Examples of behavior violating University standards:
·   The submission of material authored by another person but represented as the student's own work, whether that material is paraphrased or copied in verbatim or near-verbatim form.
·   Acquisition of term papers or other assignments from any source and the subsequent presentation of those materials as the student's own work, or providing term papers or assignments that another student submits as his/her own work.
·   Obtaining for oneself or providing for another person a solution to homework, a project or other assignments, or a copy of an exam or exam key without the knowledge and expressed consent of the instructor.

· Unauthorized collaboration on a project, homework or other assignment. Collaboration between students will be considered unauthorized unless expressly part of the assignment in question or expressly permitted by the instructor.

If the instructor, a grader, or a lab assistant suspects you of academic dishonesty, it has to be reported to SJACS. Do not share lab assignments with another student. Do not submit another student's work as your own. Do not look at other students' papers during exams. Do not leave the room during an exam. Do not cheat! As Trojans, we are faithful, scholarly, skillful, courageous, and ambitious.

Support Systems
USC provides many services to support students at USC.

Viterbi Academic Resource Center (VARC)
Free peer tutoring, workshops, writing consultations, and more offered to all Viterbi students.
http://viterbiundergrad.usc.edu/varc/

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/

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/

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/

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Course Outline
Note: Schedule subject to change

Week		Lecture	Lab	Assignment
1	01/08	Course Overview, Intro to HTML & CSS	L1: cPanel, Student Pages	A1: Resume
	01/10	Lab session		
2	01/15	*University Holiday*		A2: TV Show / Movie Article
	01/17	CSS Selectors, Pseudo-classes, Layouts		
3	01/22	External CSS, Responsive Web Design		A3: Responsive TV Show / Movie Article
	01/24	Intro to JavaScript	L2: JS Photo Gallery	
4	01/29	JS String Operations, Forms and Input Validations		A4: JS Calculator
	01/31	String Parsing and Regular Expressions	L3: TBD	
5	02/05	JavaScript Objects		A5: RegExp Validation
	02/07	JSON, JSONP		
6	02/12	AJAX	L4: MySQL Workbench	A6: AJAX - The Movie DB
	02/14	**Midterm: Client-side**		
7	02/19	*University Holiday*	L5: Simple Film Database Design	A7: Football Schedule Database Design
	02/21	Database Basics, Designing Databases		
8	02/26	Intro to SQL, Retreiving Data	L6: MAMP	A8: SQL SELECT

		from DB		Statements,
	02/28	Data Manipulation in SQL		A9: Full SQL Statements
9	03/05	Intro to PHP	L7: PHP Page	A10: DVD Search
	03/07	PHP MySQLi		
		Spring Break!		
10	03/19	Insert, Detail Pages		A11: DVD CRUD Pages
	03/21	Edit, Delete Pages		
11	03/26	**Midterm: Server-side**		Final Project Announcement
	03/28	Include, Require, Constants, Pagination		A12: Final Project Proposal
12	04/02	Sessions, Cookies		
	04/04	Membership System, Mail		
13	04/09	cURL, Server-side REST APIs		A13: Final Project - Frontend
	04/11	AJAX&PHP, jQuery/jQuery Plugins		
14	04/16	CSS Frameworks, Bootstrap		
	04/18	JavaScript Frameworks		
15	04/23	Design Patterns, MVC Back-end Frameworks		
	04/25	MEAN/MERN		
-	05/04	Final Project Presentations		**Final Project Due**