Web Application Project
ITP 460 (4 Units)

Course *31934*, Spring 2016

Objective

This course is intended to give experienced web developers practical industry theory, skills, and experience. Students will build websites for actual clients. They will work in teams with assigned roles, developing the site throughout one semester and following the traditional development stages and cycles.

Concepts

Students will be taught important development theory including: methodologies and frameworks; project planning and resource management; project roles and collaboration; information architecture; applied database design and implementation; user interface design and testing; version control; quality assurance; testing and debugging; documentation; and migration and updating projects.

Prerequisites	Upper division ITP Web courses or equivalent experience.
Instructor	Yuanbo Wang
Contact	yuanbo@usc.edu OHE542
Office Hours	Wednesday 4pm – 5pm *Please make an appointment ahead of time.*
TA	Jack Clancy (jclancy@usc.edu)
Grader	Jack Clancy (jclancy@usc.edu)
Lecture and Lab	Wednesday 5 – 7:50 pm
Website	http://uscitp.com/spring-2016/itp460/
Optional Textbooks	*Essential Scrum: A Practical Guide to the Most Popular Agile Process* By Kenneth S. Rubin

Optional Materials

Running Lean, 2nd Edition © 2012, Ash Maurya, O'Reily, ISBN-10: 1449305172, ISBN-13: 978-1449305178. Purchase **hard cover** book here: http://www.amazon.com/Running-Lean-Iterate-Works-Series/dp/1449305172

Growth Hacking Marketing, 2nd Edition © 2014, Ryan Holiday, Portfolio (Penguin), ASIN: B00TFR6OCM. Part of Kindle Owner's Lending Library and Kindle Unlimited. If needed, purchase the **paperback** or **ebook** here: http://www.amazon.com/Growth-Hacker-Marketing-Primer-Advertising/dp/1591847389

Grading

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

Individual Assignments	10%
Group Assignments	25%
Labs and Attendance	15%
Milestones	20%
Individual Contributions	30%
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	66-63
F	62 or below

Policies

Due dates and requirements for all Labs and Assignments will be posted on the course site. Students will "post" their work to their USC web space as defined on the course site.

The course will have both individual and group assignments. Labs and assignments will often be due at different times of the week. It is each student's responsibility to keep track of due dates and post work on time as specified on the course site, even if they miss class. Work turned in late will lose 10% credit per day and late work is not accepted after two weeks past the due date. To receive credit for late work you MUST email the grader that you posted a lab or assignment after the due date or you will not receive credit.

Attendance is very important in this course. An attendance sheet will be circulated each lecture. You must sign in for lecture to receive lecture attendance credit. Just as in an actual development firm, missing sessions and meetings will have negative consequences.

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 no 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)."

Academic Integrity

USC seeks to maintain an optimal learning environment. General principles of academic honesty include the concept of respect for the intellectual property of others, the expectation that individual work will be submitted unless otherwise allowed by an instructor, and the obligations both to protect one's own academic work from misuse by others as well as to avoid using another's work as one's own. All students are expected to understand and abide by these principles. *Scampus,* the Student Guidebook, contains the Student Conduct Code in Section 11.00, while the recommended sanctions are located in Appendix A: http://www.usc.edu/dept/publications/SCAMPUS/gov/. Students will be referred to the Office of Student Judicial Affairs and Community Standards (SJACS) for further review, should there be any suspicion of academic dishonesty. The Review process can be found at: http://www.usc.edu/student-affairs/SJACS/.

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.

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

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Course Outline

Week 1	Jan 13	Hour 1: Course introduction
		Project life cycle, roles, student backgrounds, client proposals
		Hour 2: Joint lectures
		Intro to entrepreneurial thinking
		Student background questionnaire – IA (Due Saturday 01/16)
Week 2	Jan 20	Hour 1: Agile Development for Large Initiatives,
		Sprint Development Cycle
		Hour 2: Joint Presentations
		Jira Demo
		Google Drive
		Slack
		Tools setup – GA (Due Tuesday 01/26)
		Vote for Projects – IA (Due Sunday 01/24)
Week 3	Jan 27	HTML & CSS style guides, CSS architecture
		Client Meeting
		Poker Planning
		Git Setup
		Server Setup
	SP1 Start	Sprint Planning
		SP1: Planning Doc & Product Feature Backlog - GA
		 (Due Sunday 01/31)
		SP1: Setup Environment – GA (Due Tuesday 02/02)
		Git Commit – IA (Due Tuesday 02/02)
Week 4	Feb 3	UI/UX, Designing, creative concepts, comps, wireframing
		Product Design Theory
	SP1	Review
Design	(D) SP2	Sprint Planning
		SP1: Sprint Report – GA (Due Thursday 02/04)
		SP2: Planning Doc & Update Feature Backlog - GA
		 (Due Thursday 02/04)
		SP2: Wireframes Design – GA (Due Tuesday 02/09)
		SP2: UI Guide – GA (Due Tuesday 02/09)

Week 5	Feb 10	Javascript, Frontend Frameworks and libraries
		Test server environment setup
	SP2	Review
	(D) SP3	Sprint Planning
		SP2: Sprint Report – GA (Due Thursday 02/11)
		SP3: Planning Doc & Update Feature Backlog - GA
		(Due Thursday 02/11)
		SP3: Final Site Mockups – GA (Due Tuesday 02/16)
Week 6	Feb 17	Joint Session: Digital Marketing Methodology & Implementation
	SP3	Review
	(D) SP4	Sprint Planning
		SP3: Sprint Report – GA (Due Thursday 02/18)
		SP4: Planning Doc & Update Feature Backlog - GA
		(Due Thursday 02/18)
		SP4: HTML and code style guidelines – GA (Due Tuesday 02/23)
		SP4: Final Site Design and HTML – GA (Due Tuesday 02/23)
		(Milestone 1)
		SP4: Site Demo: Mockup – GA (Due Wednesday 02/24 in class)
Week 7	Feb 24	Joint Session: Technology Strategy & Operations
	SP4	Review
Development	(C) SP5	Sprint Planning
		SP4: Sprint Report – GA (Due Thursday 02/25)
		SP5: Planning Doc & Update Feature Backlog - GA
		(Due Thursday 02/25)
		SP5: Database Build – GA (Due Tuesday 03/01)
		SP5: Site Demo –GA (Due Wednesday 03/02 in class)
Week 8	Mar 2	How to work with and build APIs
	SP5	Review
	(C) SP6	Sprint Planning
		SP5: Sprint Report – GA (Due Thursday 03/03)
		SP6: Planning Doc & Update Feature Backlog - GA
		(Due Thursday 03/03)
		SP6: Site Demo – GA (Due Wednesday 03/08 in class)
Week 9	Mar 9	PHP Review or Ruby on Rails or NodeJS
		OOP , MVC development model
	SP6	Review
	(C) SP7	Sprint Planning
		SP6: Sprint Report – GA (Due Thursday 03/10)
		SP7: Planning Doc & Update Feature Backlog - GA
		(Due Thursday 03/10)

SP7: 1st Functionality Build – Milestone 2 (Due Tuesday 03/22)
SP7: Site Demo – GA (Due Wednesday 03/23 in class)

	Mar 16	Spring Break

Week 10   Mar 23   Data structures/ Database Designs
SP7   Review
(D) SP8   Sprint Planning
SP7: Report – GA (Due Thursday 03/24)
SP8: Planning Doc & Update Feature Backlog - GA
 (Due Thursday 03/24)
SP8: QA/Test environment setup – GA (Due Tuesday 03/29)
SP8: Site Demo – GA (Due Wednesday 03/30 in class)

Week 11   Mar 30   JS Review, ReactJS/AngularJS and other libriary
SP8   Review
(C) SP9   Sprint Planning
SP8: Sprint Report – GA (Due Thursday 03/31)
SP9: Planning Doc & Update Feature Backlog - GA
 (Due Thursday 03/31)
SP9: Jira Bug Tracking Report1 – GA (Due Tuesday 04/05)
SP9: Site Demo: Bugs – GA (Due Wednesday 04/06 in class)

Week 12   Apr 6   Quality Assurance
Testing overview and terminology
SP9   Review
(C) SP10   Sprint Planning
SP9: Sprint Report – GA (Due Thursday 04/07)
SP10: Planning Doc & Update Feature Backlog - GA
 (Due Thursday 04/07)
SP10: Site Demo – GA (Due Wednesday 04/13 in class)

Week 13   Apr 13   Joint Session: Fundraising / Accelerators
SP10   Review
(C) SP11   Sprint Planning
SP10: Sprint Report – GA (Due Thursday 04/14)
SP11: Planning Doc & Update Feature Backlog - GA
 (Due Thursday 04/14)
SP11: Site Demo – GA (Due Wednesday 04/20 in class)

Week 14   Apr 20   Web performance optimization / best practices
SP11   Review
(C) SP12   Sprint Planning
SP11: Sprint Report – GA (Due Thursday 04/21)
SP12: Planning Doc & Update Feature Backlog - GA
 (Due Thursday 04/21)

SP12: Final Build – Milestone4 (Due Tuesday 04/26)
SP11: QA Report Final – GA (Due Wednesday 04/26)
SP11: Presentation – GA (Due Wednesday 04/27)

Week 15	Apr 27	Site presentations to Judges
		Peer evaluation - I (Due Sunday 05/01)
		Site manual including migration plan & files - G (Due Sunday 05/01)