



USC VITERBI SCHOOL OF ENGINEERING DATA SCIENCE/INF PROGRAM

Data Science 556: User Experience Design & Strategy - 4 units

Fall 2019 (32409D) Syllabus

Monday 2:00pm -5:20pm – KAP 159

Professor Jaime Levy

jaime@jaimelevy.com

Video Conf: <https://zoom.us/s/3233045389>

TA: Chao Wang

wang724@usc.edu

Google Hangouts: wang724@usc.edu

Slack Workspace URL: <https://uscinf556Fall2019.slack.com/>

Professor's Office Hours:

Office hours are available throughout the week over Zoom by appointment. Appointments can be booked by accessing the professor calendar here: <https://jaimelevy.as.me/OfficeHours>. For minor issues (i.e. absences, simple homework questions) it is highly recommended that you contact a teacher's assistant first.

Catalogue Description

The practice of User Experience Design and Strategy principles for the creation of unique and compelling digital products and services.

Expanded Course Description:

Designers, engineers and entrepreneurs must work collaboratively to create innovative and compelling user-centered products and services. The process of developing a shared vision of a product's value proposition requires an open mind to experimentation and failure. User Experience Design and Strategy are practices that, when conducted empirically, are a better guarantee of a successful digital product than just writing a bunch of code and crossing your fingers.

This course is a combination of contemporary methodologies culled from several disciplines including user research, interaction design, and business strategy. Topics will include: competitive analysis and identification of marketplace opportunities, value innovation, rapid prototyping, customer discovery, and designing for conversion using metrics. By the conclusion of the course each student should be equipped with a strategic method to quickly and effectively launch a product or service online.

Recommended Prep: Students should have basic familiarity with web development and/or graphic design using a digital layout tool. However, you can easily pick up these skills by allowing yourself extra time to do the assignments and by paying close attention to the homework critiques in class.

This course is foundational and appropriate for students with backgrounds in a wide variety of fields, including any engineering discipline, and other fields including business, cinematic arts, communications, and design.

For a few of the assignments, the tool that we will be using only runs on OSX. If you do not own an Apple computer, please plan on using machines available on campus (labs/libraries).

Course Objectives:

The course objectives are to provide:

- An overview of the discipline of user experience design including an introduction to the principles of information architecture, interaction design, and user research.
- An understanding of how to conduct strategy informed by both traditional and contemporary business approaches such as “Blue Ocean Strategy” and “Lean Startup”.
- An understanding of how to validate your assumptions about your end-user’s needs through customer discovery techniques, user interviews and design experiments.
- A comprehensive view of the necessary tools and techniques to enact a successful User Experience strategy for a digital product through hands-on weekly assignments and class critiques.
- The analytical abilities required for students to be able to confidently articulate their impressions of technological advancements that affect how people communicate, shop, earn money, and entertain themselves using digital products and services.

Methods of Teaching:

Class will include a weekly lecture and in-class discussion or exercise, studio critique, or peer reviews. The materials presented in readings, videos, and lectures are intended to assist you in completing the homework assignments.

Throughout the course, students will be work both independently and in teams to develop a single comprehensive prototype and visual presentation (“pitch deck”) that will demonstrate both creative and strategic-thinking capabilities.

Students will be required to complete all homework assignments, which should average between three to four hours each to complete. A computer with access to the Internet is required to do all of the assignments.

Grading Schema:

Homework Assignments:	50%
Participation:	15%
Quiz:	10%
Final Project:	15%
Final Presentation:	10%
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Total	100%

Grades will range from A through F. The following is the breakdown for grading:

94 - 100 = A	74 - 76 = C
90 - 93 = A -	70 - 73 = C-
87 - 89 = B+	67 - 69 = D+
84 - 86 = B	64 - 66 = D
80 - 83 = B-	60 - 63 = D-
77 - 79 = C+	Below 60 is an F

The graded coursework will consist of five components:

1. **CLASS PARTICIPATION** – Class participation is based on attendance and engagement in informed discussions, student assignment critiques or class exercises. Students are expected to arrive to class each day and stay for the entire class in order for it to be counted. The only accepted reasons for missing classes are (1) having a medical reason such as being contagious with a flu or a condition that renders you immobile (2) a death in your immediate family. In either case, documented proof will be required. You may miss up to one class and still be

eligible to earn an “A” assuming you successfully complete all the assignments, the final project, participate in class and give an amazing final presentation. If you want to earn 15% in this category, be certain that you sit toward the front of the classroom, give feedback to at least one assignment every week, and NEVER use your mobile phone during class.

2. **WEEKLY HOMEWORK (14 assignments)** - A set of exercises will be assigned. Each student is expected to submit the completed assignment on blackboard each week. Homework is due by midnight of the evening prior to day that the class meets. All homework assignments will receive up to 2 points. If you turn it in late you lose a point. If you turn it in and you have not followed the directions, you also can lose a point. Students may only work in groups to complete the user research assignments. NO assignments will be accepted late. An incomplete grade will be granted only under the conditions specified in the student handbook, *SCAMPUS*, which is available online, <http://scampus.usc.edu>.

3. **QUIZ** - There also will be one multiple choice quiz on the book “Lean Entrepreneur” to make certain that students understand Lean Startup principles. You must score at least 70% or above to pass. You will have a 2nd chance to take the quiz the following week if you are not satisfied with your first score. The quiz counts toward 10% of your course grade.

4. **FINAL PROJECT** - Each student will submit a final visual presentation (in PDF format) along with their digital product prototype. It is due on the same day of the final presentation. This project will be a refined version of all the homework assignments ordered to tell a compelling story about their process, what they learned, and the benefits of their core user experience expressed in the prototype. The final presentation can be created using a presentation tool such as PowerPoint or Keynote. The prototype demo can be created using Justinmind or a similar rapid prototyping tool. Students will be graded based on creativity, ingenuity, and ability to apply class teachings.

5. **FINAL PRESENTATION**– In the last week of class, students will present their 7-8-minute visual presentation including the prototype to the class. They will be graded on oral presentation skills such as eye contact, enthusiasm, and storytelling skills. If your presentation goes over and under by one-minute, it will affect your grade. So rehearse, rehearse, rehearse!

Class Communication:

Blackboard at USC will be used for class communication and homework assignment uploading. We will also have a Slack channel so that students can easily communicate with each other and the TA with quick questions/feedback.

Books, Readings, Videos:

All books will be available to purchase at the USC bookstore or online from Amazon or O'Reilly Media. All articles and videos will be available at no charge and distributed via links from Blackboard.

Required Reading (Abbreviated titles are used in class schedule):

UX Strategy: How to Devise Innovative Digital Products that People Want. Jaime Levy. O'Reilly Media, 2015 (**UXS**)

<http://amzn.to/1faeybu> (English version) or

<http://tinyurl.com/zhb5adt> (Simplified Chinese translation)

http://books.gotop.com.tw/v_A461# (Traditional Chinese translation)

<http://amzn.to/1tySGyM> (Japanese translation)

<https://tinyurl.com/y7lfxbre> (Polish translation)

<https://tinyurl.com/yau834tb> (Russian translation)

<http://www.yes24.com/24/goods/61409985> (Korean translation)

The Lean Entrepreneur: How Visionaries Create Products, Innovate with New Ventures, and Disrupt Markets, 2016 2nd Edition (**TLE**)

<http://amzn.to/2rPklTQ>

Recommended Reading:

Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers. Alexander Osterwalder and Yves Pigneur. Wiley, 2010 (**BMC**)

<http://amzn.to/1UFwwmu>

Class Conduct:

This is a no-screens class. Please keep your mobile devices and laptops in your bags. Consider taking notes on paper or into the course textbook since the lectures closely follow it. Breaking this rule will negatively impact your participation score.

Class Structure & Schedule:

Class sequence, dates, topics and guest speakers are subject to change as the semester proceeds. Any major revisions will be promptly announced in class and/or by email.

	Topics/Activities	Readings & Homework	Deliverables Due
Wk 1 8/26	Review of Syllabus & Past Student Projects. Class introductions. What is UX Design.	Reading: UXS Ch 1& 2 - HW 1: Write 3 Customer/Problem Hypothesis Statements.	
Wk 2 9/2	HOLIDAY – LABOR DAY – NO CLASS The Four Tenets of UX Strategy. Online video lecture link can be found on blackboard.	Reading: UXS Ch 2 & 3 - HW 2: Create a Provisional Persona and Customer Discovery Plan-of-Action.	HW 1
Wk 3 9/9	Validating the Value Proposition. Validation Board video. Class/Group Exercise - Create a Provisional Persona.	Reading: UXS Ch 3, TLE Ch 1 - HW 3: Write Screener/Interview questions. Conduct Customer Validation Interviews & Create Findings Slides, Update Persona based on validated findings	HW 2
Wk 4 9/16	Customer Discovery. Problem Interviews.	Reading: UXS Ch 4, TLE Ch 2 - HW 4: Identifying Your Competition and conduct the Market Research	HW 3
Wk 5 9/23	Conducting Competitive Research. Identifying your Direct and Indirect Competitors. Review of UX Strategy Toolkit	Reading: UXS Ch 4, TLE Ch 2 - HW 4: Identifying Your Competition and conduct the Market Research	HW 4
Wk 6 9/30	Conducting Competitive Analysis. Writing a Findings Brief.	Reading: UXS Ch 5, TLE Ch 3 - HW 5: (two parts): Competitive Analysis & Findings Slides	HW 5
Wk 7 10/7	Storyboarding Value Innovation. Designing Key Experiences.	Reading: UXS Ch 6, TLE Ch 4 - HW 6: Storyboard Key Experiences using Sketch.	HW 6
Wk 8 10/14	Creating Prototypes for Running Experiments.	Reading: UXS Ch 7, TLE Ch 5 - HW 7: Create a Prototype for Testing the Value Innovation and Business Model.	HW 7
Wk 9 10/21	Planning a Qualitative Guerrilla User Research Field Study. Finalizing the solution prototype and writing up the interview questions. Students will be paired up in teams	Reading: UXS Ch 8, TLE Ch 6 - HW 8: Participant Recruitment Ad, Script Interview & Demo	HW 8
Wk 10 10/28	Conducting solution prototype interviews.	Reading: UXS Ch 8, TLE Ch 7 - HW 9: Conduct Field Studies with your partner & create a Finding's Brief including updated protototype screens.	HW 9
Wk 11 11/4	Value Propositions and Landing Page Experiments (Creating the Landing/Facebook Page) - LEAN ENTRPRENUER QUIZ!!	Reading: UXS Ch 9 - HW 10: Designing a Landing Page.	HW 10
Wk 12 11/11	Value Propositions and Landing Page Experiments (Updating the Landing/Facebook Page and Ad Campaign)	Reading: UXS Ch 9 - HW 11: Finalizing Landing Page & Creating Facebook Ads	HW 11
Wk 13 11/18	Running Facebook Campaign to Landing Page (Experiment 1) – Part 3 (Running a Test Campaign and Lessons Learned).	Reading: UXS Ch 9 - HW 12: Run Value Prop Landing Page, Ad Campaign, and Create Findings Slide(s) explaining what you learned and next steps.	HW 12
Wk 14 11/25	Running Final Facebook Campaign to Landing Page and doubling your metrics (Experiment 2)	Reading: UXS Ch 9 - HW 13: Run Online Ad Campaign Again and Analyze your Results.	HW 13
Wk 15 12/2	Designing for Conversion. The Funnel Matrix Tool. OR NEW LECTURE: Rapid Journey Mapping	Reading: UXS Ch 10 and 11, HW 14: Funnel Matrix Exercise. Refine Final Projects. Create and	HW 14

		Rehearse Presentations..	
Wk 16 12/9 or 12/16	Final Presentations (please note we will take a vote during Class 2 on if we want to end the class on the Study Day vs Exam Day. Stay tuned.	Enjoy your Winter Recess!	Final Project

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 me as early in the semester as possible. Your letter must be specific as to the nature of any accommodations granted. DSP is located in STU 301 and is open 8:30 am to 5:30 pm, Monday through Friday. The telephone number for DSP is (213) 740-0776.

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-sa-ctions>. 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://adminopsnet.usc.edu/department/department-public-safety>. This is important for the safety of the 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 <http://sarc.usc.edu> describes reporting options and other resources.

Support Systems

A number of USC’s schools provide support for students who need help with scholarly writing. Check with your advisor or program staff to find out more. Students whose primary language is not English should check with the *American Language Institute* <http://dornsife.usc.edu/ali>, which sponsors courses and workshops specifically for international graduate students. *The Office of Disability Services and Programs* http://sait.usc.edu/academicsupport/centerprograms/dsp/home_index.html provides

certification for students with disabilities and helps arrange the relevant accommodations. If an officially declared emergency makes travel to campus infeasible, *USC Emergency Information* <http://emergency.usc.edu> will provide safety and other updates, including ways in which instruction will be continued by means of blackboard, teleconferencing, and other technology.