

Syllabus: GD 155

Designing for Interactions

Course description _____

Advanced integration and development of interactive content for web and multimedia applications including new and upcoming technologies. Emphasis on experimentation and concept development driven by user experience and usability research. The class will introduce new innovative technologies and build user experience (UX) design research skills & methods.

It is usually expected that students will spend approximately 2 hours of study time outside of class for every one hour in class. Since this is a 3 unit class, you should expect to study an average of 6-12 hours outside of class each week.

Prerequisites _____

GD 150, GD 153, GD 157

Required Course Materials _____

There are no required course materials to purchase. Required readings and lynda.com videos will be provided in class. Students are expected to conduct their own research on innovative technologies using the library and online resources.

Course Specifics

Summary/outline of the course _____

Students will develop two self-driven projects over the course of the semester focusing on research, user experience, and development or implementation of new technology. Working with new and upcoming technologies will be important for multimedia students

INTRODUCTION TO COURSE AND INSTRUCTOR

Semester: Fall 2018

Art and Design Department

California State University, Fresno

Course Name: Designing for Interactions

Instructor Name: Dr. Laura Huisinga

Units: 3

Office Location: CA 225

Time: 3pm-5:45pm

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Location: Kremmen Education 174

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Website: <http://drlaura.fsartanddesign.org/>

Office Hours: Tuesdays 10:30-2:00

entering the industry. Understanding how to research and learn about new technologies so they can be implemented is a valued skill in the industry. This class teaches you to conduct self-driven research and figure out how to implement new technologies with self-driven projects and research reports.

Course Goals

After completing this course students will be able to:

- Conduct self-driven research to learn about a new technology and teach yourself how to implement it.
- Present your research to a team in a professional research report.
- Expand your UX research skill set building on usability research methods learned in GD 50, GD 150, and GD 153.
- Use diverse approaches and tools to solve problems.
- Be able to analyze, break down and discuss others interactive media projects.
- Use diverse approaches and tools to solve problems.

Student Learning Outcomes

GD1. To analyze, comprehend and evaluate the principles, theories, and applications of graphic design as applied to interaction design.

GD2. To demonstrate the capacity and ability to be a critical, creative visual thinker, to synthesize & apply processes, skills in the evaluation and application of graphic design.

GDO4.1 Identify, define and apply technological methods and processes in graphic design including typography, illustration, and interactive multimedia design.

Course requirements/assignments

There will be in class demos and exercises that count toward your participation grade. Actively engaging in critiques is expected and will also count toward your grade.

REMEMBER! It is better to show up to critique with unfinished work than to skip if you are unprepared.

DISCOVERe Course

This is a DISCOVERe course that incorporates the use of tablet technology both in and out of class to promote active learning. You are expected to use your tablet for course-related activities, including reading, note-taking, group discussions, polls, presentations, exams, and other classroom activities. Whether you are purchasing a tablet, leasing a tablet or using one you owned prior to taking this class, be sure to check the Minimum System Requirements Guideline in the DISCOVERe program to make sure that you have a tablet that meets the minimum specifications.

For this course, we will be utilizing the following tools and apps. Make sure you can access them from your tablet and are familiar with them. You can visit the DISCOVERe Hub (First level of Henry Madden Library) for tech support on any of these tools.

- Google Drive
- Google Docs
- Google Slides
- Google Spreadsheets
- Socrative (Student version)
- Adobe Reader
- Adobe CC apps
- P.O.P. (prototyping on paper)

Please take care of and keep your tablet safe. It is your responsibility to maintain your tablet throughout the course to fulfill the course requirements.

It is your responsibility to charge your tablet and make sure it is operational prior to each class. Most classes do not have sufficient outlets to charge your tablet during class. You must come to class with a fully charged tablet to ensure that you are able to complete all in-class activities.

Your instructor is not responsible for providing technical assistance with your tablet or apps. If you have questions about the performance of your tablet you should make use of the following resources:

Walk-in assistance: DISCOVERe Hub (HML first level)

Email: discoverehub@csufresno.edu

Phone: 559.278.1812

Web: www.fresnostate.edu/president/discovere/hub

Project Descriptions

Project 1 Analysing and testing an existing interface.

Goal: Create a UX report of your analysis, usability tests, and design recommendations to be used in a redesign or development phase.

Requirements:

- Find an existing interface that you use or find interesting.
- Analyze the interface summarize your analysis of the UI, IA, and goals.
 - UI: visual hierarchy, color scheme, typography, ease of use, and appeal.
 - IA: Navigational flow, and content structure
 - Goals: What is the app helping the user to achieve?
- Define the user: based on your analysis who would use this interface?
Research one user base, what information can you gather about their preferences and habits?
- Build a persona with goals for one of your user bases.
- Build two scenario's for the use of the app.
- Develop a protocol, task list and exit survey for your user test.
- Find users and Test!

Create a report of your process and findings. (Have content from all seven steps. Including your initial analysis, experimental data, and an analysis of your data. Add sketches, diagrams, photos or screenshots of relevant content.

Deliverables:

Google classroom: The report will be a finished PDF including your initial analysis, experimental data, and an analysis of your data. Turned in on google classroom. Please pay attention to layout, typography, and hierarchy of your report.

Project 2: Designing for technology using user experience methods.

Goal: To explore and new innovative technologies, conduct research and learn how to develop for your chosen technology using user experience methods.

Requirements:

- Initial research: investigate at least two different types of innovative technology. Pick from the following *or suggest another* (Progressive Web App [PWA], Natural User Interface [NUI], Physical Web using a Bluetooth low energy beacon, Augmented Reality [AR] using Aurasma or other AR app,)
- Develop a project proposal: include your chosen technology, UX and usability methods you will use, What you plan to create, and how you plan to present it with checkpoint dates to show progress.
- conduct initial UX/usability research
- develop personas and scenario/storyboards
- Design the User Interface
- conduct UX/usability research
- Iterations of design and development
- process book: Include all major steps of your project to explain your design process. (Initial research, project proposal, UX/Usability protocol/data analysis, personas, scenarios/storyboards, any Sketches/wireframes or prototypes, user interface designs, Iterations of design/development and final product.

Deliverables:

Project proposal, process book, and all deliverables laid out in your project proposal

Project 3: Mini exploration research presentation on new tech

Goal: Refine your research and presentation skills and learn about new technology.

Requirements:

- Read 7 tech trends for 2017 and pick a technology category to research
 1. IoT and Smart Home Tech.
 2. AR and VR.
 3. Machine Learning.
 4. Automation.
 5. Humanized Big Data. (visual, empathetic, qualitative)
 6. Physical-Digital Integrations.
 7. Everything On-Demand.
- Give an overall description and definitions of your tech trend

- What sort of products/services will be a result of this tech trend (existing products and future products)
- What are some design consideration for these types of products/services
- what are some ethical concerns designers need to keep in mind with this technology?
- What are some of the pros and cons of this technology?

Deliverables: Present your research in a slide presentation format and turn in the PDFs of your slides on google classroom.

Project 4: Design for innovative technologies

Goal: To explore new innovative technologies, conduct research and learn how to develop for your chosen technology using user experience methods. Resulting in a 5 min video about your design and submitting it to the HCI 2019 Student Design competition. <http://2019.hci.international/studentdesign.html>

Requirements:

- Initial research: Pick a technology area to design for. Then research different applications of products or services to narrow down what you want to create. 1.IoT and Smart Home Tech. 2.AR and VR. 3. Machine Learning. 4.Automation. 5.Humanized Big Data. (visual, empathetic, qualitative) 6.Physical-Digital Integrations. 7.Everything On-Demand. 8.Wearables
- Develop a project proposal: include your chosen technology, UX and usability methods you will use, What you plan to create, and how you plan to present it with checkpoint dates to show progress.
- conduct initial UX/usability research
- develop personas and scenario/storyboards
- Design the User Interface
- conduct UX/usability research
- Iterations of design and development
- process book: Include all major steps of your project to explain your design process. (Initial research, project proposal, UX/Usability protocol/data analysis, personas, scenarios/storyboards, any Sketches/wireframes or prototypes, user interface designs, Iterations of design/development and final product.)
- Develop up to a 5-minute video clip in MP4 format that presents your design idea, including statements and elaboration of the objective, method, innovation, and outcome.
- Submit to HCI Student Design Competition

Deliverables:

Project proposal, process book, and all deliverables laid out in your project proposal. 5min video explaining your design for HCI2018 competition. Submit HCI 2019 Student Design competition. <http://2019.hci.international/studentdesign.html>

Grading Policy

Grades will be based on the completion of the assignments, the execution of the design objectives, and the documentation in electronic process notebooks. Your grade for each project is based on the project description requirements as well as the syllabus. Please be sure to address any questions with the requirements with your instructor right away.
 A= 90%-100%, B= 80%-89%, C= 70%-79%, D= 60%-69% F= Below 60%

Weekly assignments = 10%

Class attendance & participation (including assigned presentations) = 20%

Projects = 70%

Key		Grading Rubric Labels
[-NI-]	[NEEDS IMPROVEMENT]	Missing requirements, or major parts of the project. Lack of effort.
[-S-]	[SATISFACTORY]	Technically fulfilling at least 90% of requirements but lacking elaboration or depth to your concept and work.
[-G-]	[GOOD]	Fulfilling all requirements and deliverables providing thoughtful depth to your concept, and showing the use of UX principles and Design principles throughout your process and final product.
[-E-]	[EXCELLENT]	Going beyond the requirements, creating a concept of depth and complexity, demonstrating a consistent use of UX principles and design principles thought project and process book.

General Grading Rubric for Projects

[NI] [-S] [-G] [-E]:	Completion of the assignment
[NI] [-S] [-G] [-E]:	Execution of the design objectives
[NI] [-S] [-G] [-E]:	Documentation in electronic process notebook

Due Date	Assignment	Points/Percent
9/10	Project 1: UX testing and data analysis project	15%
10/10	Project 2: Self-driven project for research and development of new technology	20%
10/17	Project 3: Exploration research presentation on new tech	10%
12/10	Project 4: Self-driven project for research and development of new technology	25%

** Refer to the class website or google classroom for updated and accurate due dates.*

Course Policies & Safety Issues

Late work and make-up work policy.

Assignments are due at the beginning of class, turning an assignment in during the middle of the class will be considered late work. Late work will be docked 10% and must be turned in within 5 days. Occasionally extenuating circumstances may change this policy (See University Unplanned Absences Policy 232 above); please contact me if you think there will be an issue with a due date.

Technical issues (*computer dying, hard drive crash, lost jump drive etc.*) will not be accepted as a reason for late work. Always have a plan B. Your work should be backed up in at least one other location. Dropbox, Box or Google Drive are excellent places to store and backup work.

It is usually expected that students will spend approximately 2 hours of study time outside of class for every one hour in class. Since this is a 3 unit class, you should expect to study an average of 6-12 hours outside of class each week.

Attendance policy:

Attendance is required. If you plan to miss class, please contact your instructor for your assignment before the absence. If you miss due to unexpected reasons, it is your responsibility to get your assignment from a classmate so that you are prepared for the following class. Please see the following University Policy regarding absences.
POLICY ON STUDENT ABSENCES (University Level Policy 232)

A student's first responsibility is to attend class and learn. The University expects students to attend all classes for which they are enrolled.

Authorizing Student Absence Unplanned student absences

Unplanned student absences should be authorized when the student has a short-term serious and compelling medical condition or when a death or serious illness in the immediate family (i.e., parent, spouse, sibling or child) prevents attending class. The student is responsible for contacting the instructor as soon as possible after the missed class period and for providing documentation of the reason for the absence upon returning to class. In the event, the student absence is authorized and make-up work is allowed, missed papers, tests and/or homework assignments should be made up as soon as practicable.

Students with extensive absences should recognize the consequences of missing class on both their learning and grade. When a student is absent for an extended time period, a viable make-up plan may not be feasible. In these circumstances, other actions such as dropping the class or withdrawing from the University may be appropriate. Absences for University-sponsored activities In creating a schedule for a semester when a student can anticipate increased demands on his/her time, the student must judiciously schedule courses.

Student absences for University-sponsored activities should be authorized only when: (1) the event is sponsored by the University; (2) the student represents the University at the event; and (3) the student provides written documentation of points one and two to the instructor at least two weeks prior to the event. In anticipation of authorized absences due to University-sponsored activities students may submit their work to the instructor prior to the absence. This includes papers, tests, and/or homework assignments.

This timeline is waived for the first two weeks of instruction in any academic term. 232 Policy on Student Absences August 23, 2004,; 232 - 2

Adding and Dropping Classes:

Students are responsible for understanding the policies and procedures about the adding/dropping of classes, academic renewals, etc. Students can find more information on adding and dropping at

<http://www.fresnostate.edu/studentaffairs/classschedule/registration/add-drop.html>.

University Policies and services:

For information on the University's policy regarding cheating and plagiarism, refer to the Class Schedule (Legal Notices on Cheating and Plagiarism) or the University Catalog (Policies and Regulations).

Students with Disabilities:

Upon identifying themselves to the instructor and the university, students with disabilities will receive reasonable accommodation for learning and evaluation. For more information, contact Services to Students with Disabilities in the Henry Madden Library, Room 1202 (278-2811).

Honor Code:

"Members of the Fresno State academic community adhere to principles of academic integrity and mutual respect while engaged in university work and related activities."

You should:

- understand or seek clarification about expectations for academic integrity in this course (including no cheating, plagiarism and inappropriate collaboration)
- neither given nor received unauthorized aid on examinations or other coursework that is used by the instructor as the basis of grading.
- take responsibility to monitor academic dishonesty in any form and to report it to the instructor or other appropriate officials for action.
- Instructors may require students to sign a statement at the end of all exams and assignments that "I have done my own work and have neither given nor received unauthorized assistance on this work."

Cheating and Plagiarism:

Cheating is the actual or attempted practice of fraudulent or deceptive acts for the purpose of improving one's grade or obtaining course credit; such acts also include assisting another student to do so. Typically, such acts occur in relation to examinations. However, it is the intent of this definition that the term 'cheating' not be limited to examination situations only, but that it include any and all actions by a student that are intended to gain an unearned academic advantage by fraudulent or deceptive means.

Plagiarism is a specific form of cheating which consists of the misuse of the published and/or unpublished works of others by misrepresenting the material (i.e., their intellectual property) so used as one's own work. Penalties for cheating and plagiarism range from a 0 or F on a particular assignment, through an F for the course, to expulsion from the university. For more information on the University's policy regarding cheating and plagiarism, refer to the Class Schedule (Legal Notices on Cheating and Plagiarism) or the University Catalog (Policies and Regulations).

Computers:

"At California State University, Fresno, computers and communications links to remote resources are recognized as being integral to the education and research experience. Every student is required to have his/her own computer or have other personal access to a workstation (including a modem and a printer) with all the recommended software. The minimum and recommended standards for the workstations and software, which may vary by academic major, are updated periodically and are available from Information

Technology Services (<http://www.fresnostate.edu/technology>) or the University Bookstore (<http://www.kennelbookstore.com>). In the curriculum and class assignments, students are presumed to have 24-hour access to a computer workstation and the necessary communication links to the University's information resources."

Disruptive Classroom Behavior:

"The classroom is a special environment in which students and faculty come together to promote learning and growth. It is essential to this learning environment that respect for the rights of others seeking to learn, respect for the professionalism of the instructor, and the general goals of academic freedom are maintained. Differences of viewpoint or concerns should be expressed in terms which are supportive of the learning process, creating an environment in which students and faculty may learn to reason with clarity and compassion, to share of themselves without losing their identities, and to develop an understanding of the community in which they live. Student conduct which disrupts the learning process shall not be tolerated and may lead to disciplinary action and/or removal from class."

Copyright Policy:

Copyright laws and fair use policies protect the rights of those who have produced the material. The copy in this course has been provided for private study, scholarship, or research. Other uses may require permission from the copyright holder. The user of this work is responsible for adhering to the copyright law of the U.S. (Title 17, U.S. Code). To help you familiarize yourself with copyright and fair use policies, the University encourages you to visit its Copyright Web Page <https://library.fresnostate.edu/about/policies/copyright-policy>

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For free tutoring on campus, contact the Learning Center (<http://fresnostate.edu/studentaffairs/lrc>) in the Collection Level (basement level) of the Henry Madden Library. You can reach them by phone at 559.278.3052. Our campus has developed SupportNet (<http://fresnostate.edu/studentaffairs/lrc/supportnet>) to connect students with specific campus resources promoting academic success. Students may be

referred to it if you believe they need the services provided by SupportNet to succeed in your course.

Subject to Change Statement

This syllabus and schedule are subject to change in the event of extenuating circumstances.

STUDENT HANDBOOK

Information on student rights, responsibilities, academic honesty, etc., can be found on the Fresno State Student Handbook web page. The web page is located at: <http://www.fresnostate.edu/studentaffairs/division/general/studenthandbook/>.

Course Calendar

For an up to date, course calendar of daily activities, homework, resources, due dates and presentations see our class web site www.laurahuisinga-design.com/GD155

Tentative Course Schedule

Fall 2018 (Monday, Wednesday, Courses)

Date	Topic	Reading Assignment
Mon., Aug 27	Presentation: Introduction to new and upcoming technologies. In class activity: UX design	Watch Lynda video Read tech related article
Wed., Aug 29	Presentation: UX Design Methods. In class activity: UX design	Read the overview of potential technologies to use in your projects *See link on website
Mon., Sept 3	HOLIDAY – Labor Day	NO HW
Wed., Sept. 5	Presentation: UX (usability research) & introduce project 1 In class activity: Usability research	Watch Lynda video Read tech related article
Mon., Sept. 10	Work on P1 In class activity: Ideation	Watch Lynda video Read tech related article
Wed., Sept. 12	Presentation: UX testing & data analysis	Watch Lynda video Read tech related article

	In class activity: Project 1 work time	
Mon., Sept 17	<p>Presentation: Introduce Project 2: Self driven project for research and development of new technology.</p> <p>In class activity: Ideation exercises, research exercises</p>	Project 1 due
Wed., Sept 19	<p>Presentation: UX, new tech demo</p> <p>In class activity: Project 2 research.</p>	<p>Watch Lynda video</p> <p>Read tech related article</p>
Mon., Sept 24	<p>Presentation: UX, new tech demo</p> <p>In class activity: (research phase)</p>	<p>Watch Lynda video</p> <p>Read tech related article</p>
Wed., Sept 26	<p>Presentation: UX, new tech demo</p> <p>In class activity: P2 (research phase) Series of development test based on research for P2, present research and development plan to class</p>	Research report and development plan DUE
Mon., Oct 1	<p>Presentation: UX</p> <p>In class activity: P2 (usability, UX phase)</p>	Current Event tech related article
Wed., Oct 3	<p>Presentation: UX, new tech demo</p> <p>In class activity: P2 (usability, UX phase)</p>	<p>Watch Lynda video</p> <p>Read tech related article</p>
Mon., Oct 8	<p>Presentation: UX, new tech demo</p> <p>In class activity: P2 (design & development phase), progress critique</p>	<p>Watch Lynda video</p> <p>Read tech related article</p>
Wed., Oct 10	<p>Presentation: UX, new tech demo</p> <p>In class activity: P2 (design & development phase)</p>	<p>Watch Lynda video</p> <p>Read tech related article</p>
Mon., Oct 15	<p>Presentation: UX, new tech demo</p>	<p>Watch Lynda video</p> <p>Read tech related article</p>

	In class activity: Project 2 (development phase) Final critique	
Wed., Oct 17	REMOTE CLASS	
Mon., Oct 22	Present Project 2	Project 2 DUE
Wed., Oct 24	Presentation: Intro P3 In class activity: Project 3: Mini exploration research presentation on new tech work time	P3 research
Mon., Oct 29	Presentation: Students present P3 In class activity:	Project 3 DUE No HW
	Presentation: Intro Project 4: Self-driven project for research and development of new technology In class activity:	Watch Lynda video Read tech related article
Wed., Oct 31	REMOTE CLASS	
Mon., Nov 5	Presentation: UX, new tech demo In class activity: P4 (research phase)	Current Event tech related article
Wed., Nov 7	Presentation: UX, new tech demo In class activity: Present P4 research and development plan (research phase)	Watch Lynda video Read tech related article
Mon., Nov 12	Veterans Day Holiday – No Class	No New HW
Wed., Nov 14	Presentation: UX, new tech demo In class activity: P4 (usability, UX phase)	
Mon., Nov 19	REMOTE CLASS In class activity: P4 (design & dev phase)	Current Event tech related article

Wed., Nov 21	HOLIDAY – Thanksgiving Recess	No New HW
Mon., Nov 26	Presentation: UX, new tech demo In class activity: P4 (design & dev phase), Small group critique	Current Event tech related article
Wed., Nov 28	Presentation: UX, new tech demo In class activity: P4 (development phase)	
Mon., Dec 3	Presentation: UX, new tech demo In class activity: P4 (development phase) Small group critique	Watch Lynda video Read tech related article
Wed., Dec 5	Presentation: UX, new tech demo In class activity: P4 (development phase) Small group critique	Watch Lynda video Read tech related article
Mon., Dec 10	Final Critique Final Project work time	
Wed., Dec 12	Last Day of Instruction	Turn in final P4 Process Documentation

Finals week	Days	Dates
Final Exam Preparation & Faculty Consultation Days:	Thursday and Friday	Dec 13th- 14th
Final Semester Examinations	Monday-	Dec 17th-20th
Final Exam in this course= Present P4	Monday	Dec 17 3:30P-5:30P