UF | UNIVERSITY *of* FLORIDA

Department of Computer & Information Science & Engineering

CEN 4722 – Fall 2019
User Experience Design
CSE E121
Tuesday 1.55 pm – 2.45 pm
Thursday 1.55 pm – 3.50 pm

Please add the course code in the subject line of emails sent to the instructor to ensure receipt of your emails,
e.g., "CEN4722 UXD: Email topic"

Syllabus Table of Contents

Instructor Information

- *Instructor:* Sharon Lynn Chu, Ph.D
    - *Office:* CSE building, E422
    - *Office Hours:* Email me to set up an appointment
    - *Email:* slchu@ufl.edu
    - *Personal website:* https://cise.ufl.edu/~slchu/
    - *Lab website:* http://elxlab.cise.ufl.edu/
- *Teaching Assistant:* Nikita Soni, PhD student
    - Office Hours: TBC
    - Office: TBC
    - *Email:* nsoni2@ufl.edu

Course Information

Prerequisites
None

Course Description
Catalog description. Introduces methods and tools used in User Experience Design (UXD): the early stages of software design focused on meeting user needs. Key concepts include user research, contextual design, design thinking, ideation, iterative design, prototyping, and design documentation. Projects utilize software tools used in the industry. Credits: 3.

Notes. No prior design experience is necessary for this class. This course will require students to work on a final group project designing for an industry client who will define project needs and requirements. Developers with experience in UX/UI design methods are in high demand in today's software industry, and the projects students work on in this course will strengthen their portfolio. This is the undergraduate only version of the UXD course.

Course Topics
The following topics will be covered in this course:
- User Experience Design and interaction design as a field and how it relates to Computer Science, Human-Centered Computing, and Human-Computer Interaction.
- Graphic Design for computer interfaces.
- User Experience Design techniques such as scenarios, personas, storyboards, wireframing, and information architecture.
- User Experience Design methods such as focus groups, design probes, affinity diagramming, and speed dating for UI concepts.
- Prototyping tools and techniques, both low-fidelity and high-fidelity.
- Design for small screens, responsive design.
- Design documentation

Learning Outcomes:
By the end of this course, students should be able to:
- Define the term "*user experience design*" and identify how it fits into the software development lifecycle.
- Understand key concepts in interaction design
- Critically analyze technologies in terms of the concepts of interaction design
- Conduct *exploratory* user experience design activities to understand a design space when designing a new user interaction.
- Conduct *generative* user experience design activities to creatively fill user needs when designing a new user interaction.
- Conduct *refining* user experience design activities to select and iteratively improve a design concept for a new user interaction.

- Participate effectively in *design critiques*, and be able to use this experience to be a more effective design team member.
- Design and produce an *interactive prototype* of a complete design concept to present to a client for a new user interaction.

Course Outline:

A tentative schedule for the course is shown at the end of this syllabus. The schedule is subject to change.

Class Format and Components:

Important note about class format

This class will be unlike most other classes you have taken, especially in computer science. This is not your usual "lecture, study, exam" class. A large portion of this course will depend on you engaging in **hands-on activities and discussions**. This is because learning-by-doing is the best way to understand design and its process. This means that you will have to take responsibility for your own learning and skill building. It is up to you to plan ahead, read ahead, and keep on top of the course material and project methods we cover. Use your curiosity, dig deeper, challenge yourself, have fun, and develop and use the learning style that fits you best.

Class sessions

The class will meet two times per week in one 45 mins session and one 1 hr 45 mins session, with a 15-mins break.

Course components

This course involves the following components:
- **Readings** – Read assigned papers, book chapters or online resources related to UXD
- **In-class quizzes** – Take short quizzes given in class on assigned readings and/or videos
- **Lectures** – Attend class lectures on core UXD concepts
- **Homework assignments** – Submit short assignments related to core UXD concepts
- **In-class activities** – Participate in activities conducted in class (design critiques, discussions, user tests)
- **Tests** – Take a multiple-choice midterm test and a multiple-choice end-of-semester test
- **Projects** – Individual project, Project 1 (group), Project 2 (group) (with industry clients)

Course Materials:

Material and Supply Fees

A nominal fee is collected for this course. This course makes heavy use of industry methods for designing software. Some of these methods require the use of supplies such as those listed below. These supplies will be provided when needed, thus the fee collected for this course:
- Sharpies or other permanent markers
- Post-it notes or other sticky notes
- Scratch paper of various sizes for sketching (unlined)
- Scissors
- Easel pads

Poster printing is required for the Industry Client Project (hand-sketched posters are also acceptable). Posters can be printed for a fee in the Marston Science Library, but there is often a wait on project due dates so students are advised to plan ahead. Target Copy offers faster printing for a higher fee. Posters do not have to be mounted on foam board. Students are responsible for poster printing. Fees for poster printing are **<u>not</u>** included in the fee collected for this course.

Textbooks

No textbook is required for this course. Weekly readings in the form of textbook chapters and online resources will be posted to the course website up to three weeks prior to the due date. Students will be responsible for accessing the readings and downloading any relevant links provided.

Many readings for the course will be taken from the following books. Students may choose to purchase their own copy of one or more of these textbooks to read beyond the scope of the course. This may be especially useful for students considering UX/UI careers, which make heavy use of UXD methods and concepts.

- *Interaction Design: Beyond Human-Computer Interaction*, by Rogers, Sharp, and Preece, John Wiley & Sons. ISBN-10 # 0470665769
- *The Design of Everyday Things*, by Norman, ISBN-10 # 0465050654
- The UX book: process and guidelines for ensuring a quality user experience, by Hartson, R., & Pyla, P. S. Elsevier.

Other useful books:
- Sketching User Experiences: Getting the Design Right and the Right Design, by Buxton, ISBN-10 # 0123740371
- *Sketching User Experiences: The Workbook*, by Greenberg, Carpendale, Marquardt, and Buxton, ISBN-10 # 0123819598
- Designing for Small Screens: Mobile Phones, Smart Phones, PDAs, Pocket PCs, Navigation Systems, MP3 Players, Game Consoles, by Studio 7.5, Zwick, and Schmitz, ISBN-10 # 2940373078

Software

Students are required to bring a laptop to class[1] to take the in-class quizzes and participate in both the in-class activities and project working sessions. The following free or trial software packages may be necessary to be installed by students on their laptops or used via online services over the course of the semester:

- InVision App, by InVision (http://www.invisionapp.com/)
- Axure RP Pro, by Axure Software Solutions (http://www.axure.com/)
- Balsamiq, by Balsamiq Studios (http://balsamiq.com/)

Most of this software will be made available to students for free as part of the course.

Course Grading

Course Grades

Students' performance in the course will be determined based on the table below. All individual submissions and deliverables of each component below will be graded out of 10 points. The total score for a component will be converted to account for the %s as listed below.

- In-class quizzes (lowest score dropped)   [11%]
- Mid-term and end-of-semester tests   [20%]
  - Mid-term test (8%)
  - End-of-semester test (12%)
- Homework assignments   [11%]
- Projects   [58%]
  - Project 1 (18%)
  - Project 2 (with industry clients) (40%)
- Extra credit   [2%]
  - CISE HCC Experiment pool*

This course will use the Canvas e-Learning course management system to post grades and to communicate with class members. Details about all assignments and deliverables will be made available through Canvas. Students are responsible for checking Canvas regularly to keep track of assignments and due dates.

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[1] Consistent with UF College of Engineering computer requirements: "The University of Florida requires students to have access to a computer. The College of Engineering further requires that students have access to and on-going use of a laptop/mobile computer." For more information, see http://www.eng.ufl.edu/students/career-resources/computer-requirements/

*CISE HCC Experiment Pool: The human-centered computing (HCC) research faculty in the CISE department recruit periodically throughout the semester for participants in their research studies. Students can earn up to 2% extra credit on their final course grade by participating in the studies. Each study participated in will be worth 1-2% depending on the length of the study. Participation in the studies is optional, but strongly encouraged. It provides students with a view of research into topics related to UXD. A replacement extra credit activity of a 500-word essay can be requested if students do not want to participate in the experiment pool. One essay will be worth 1% (up to 2 essays can be submitted). It is possible that no extra credit opportunities will be available this semester if no studies are recruiting for participants.

Grading Scale

Scale for overall course grade:

- 100 – 97.5: A
- 97.4 – 93.5: A
- 93.4 – 90.5: A-
- 90.4 – 87.5: B+
- 87.4 – 83.5: B
- 83.4 – 80.5: B-

- 80.4 – 77.5 : C+
- 77.4 – 73.5 : C
- 73.4 – 70.5 : C-
- 70.4 – 67.5 : D+
- 67.4 – 63.5 : D
- 63.4 – 60.5 : D-
- 60.4 – 0   : E

All final course grades will be rounded to the nearest decimal number. Canvas estimates of final course grades are not to be considered accurate until they are officially announced by the instructor. The Canvas system has a "What If" tool if you want to do your own math to verify final grades.

A C- will not be a qualifying grade for critical tracking courses. In order to graduate, students must have an overall GPA and an upper-division GPA of 2.0 or better (C or better). Note: a C- average is equivalent to a GPA of 1.67, and therefore, it does not satisfy this graduation requirement. For more information on grades and grading policies, please visit: https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx

Class Attendance

Students are expected to attend all classes. While attendance is not directly graded, submissions based on in-class activities (e.g., quizzes, homeworks) will be graded and may suffer if students fail to attend classes. If a student misses a session and is unable to provide the documentation required for an excused absence, the student will need to consult with other members of the class to determine what was missed. There is no provision for making up missed class participation credit for an unexcused absence. *It is the responsibility of the student to be aware of all deadlines and submissions of the course.* Deadlines will be posted in the syllabus and announced in class.

Late Assignments

All assignments will be assessed a late penalty of -10% for each day late. After 3 days, students will receive a 0. The only exception to this rule is if students contact the instructor **in writing before the assignment due date** to make arrangements for lateness.

Group Projects and Peer Evaluation

There are 2 group projects in this course. For each project, students in the team will each be asked to choose to be the lead for one aspect of the project. However, **all** team members are expected to contribute to **every** aspect of the project. The lead for a project aspect should not be doing all the work required for that aspect. The responsibility of the lead for an aspect is simply to organize that aspect of the project and ensure that progress is being made on that aspect.

Peer evaluation will be conducted by having each team member fill in a questionnaire. Each team member will have the opportunity to indicate the amount of contribution and a description of the contribution of each member of the team to the project. Based on the description of the contribution, the instructor will assign a weight to individual team members' project score. The weight can either provide a penalty or boost to the student's project score, if so warranted.

Honor Code
The following are not allowed in this course:
- **plagiarism** (misrepresenting others' ideas as your own, can be fixed with simple citation),
- copying code,
- **social loafing** (e.g., for group work), and
- work offensive to others.

University Policies

University Honesty Policy
UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code (https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

Students Requiring Accommodations
Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, https://www.dso.ufl.edu/drc) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

Course Evaluation
Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at https://gatorevals.aa.ufl.edu/students/. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via https://ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at https://gatorevals.aa.ufl.edu/public-results/.

Americans with Disabilities Act (ADA) Policy
Students requesting classroom accommodation must first register with the Dean of Students Office. That office will provide the student with documentation that he/she must provide to the course instructor when requesting accommodation.

Commitment to a Safe and Inclusive Learning Environment
The Herbert Wertheim College of Engineering values broad diversity within our community and is committed to individual and group empowerment, inclusion, and the elimination of discrimination. It is expected that every person in this class will treat one another with dignity and respect regardless of gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and culture.

If you feel like your performance in class is being impacted by discrimination or harassment of any kind, please contact your instructor or any of the following:
• Your academic advisor or Graduate Program Coordinator
• Robin Bielling, Director of Human Resources, 352-392-0903, rbielling@eng.ufl.edu
• Curtis Taylor, Associate Dean of Student Affairs, 352-392-2177, taylor@eng.ufl.edu
• Toshikazu Nishida, Associate Dean of Academic Affairs, 352-392-0943, nishida@eng.ufl.edu

Software Use

All faculty, staff, and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

Student Privacy

There are federal laws protecting your privacy with regards to grades earned in courses and on individual assignments. For more information, please see: https://registrar.ufl.edu/ferpa.html

Mandatory Reporting

As an employee of the University of Florida and the State of Florida, your instructor is a *mandatory reporter* for all suspected or alleged violations of sexual harassment, discrimination, threats of harm to one's self or others, and UF honor code violations.

Campus Resources:

Health and Wellness
U Matter, We Care:
Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact umatter@ufl.edu so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

Counseling and Wellness Center:
http://www.counseling.ufl.edu/cwc, and 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

Sexual Discrimination, Harassment, Assault, or Violence
If you or a friend has been subjected to sexual discrimination, sexual harassment, sexual assault, or violence contact the **Office of Title IX Compliance**, located at Yon Hall Room 427, 1908 Stadium Road, (352) 273-1094, title-ix@ufl.edu

Sexual Assault Recovery Services (SARS)
Student Health Care Center, 392-1161.

University Police Department at 392-1111 (or 9-1-1 for emergencies), or http://www.police.ufl.edu/.

Academic Resources
E-learning technical support, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu. https://lss.at.ufl.edu/help.shtml.

Career Resource Center, Reitz Union, 392-1601. Career assistance and counseling. https://www.crc.ufl.edu/.

Library Support, http://cms.uflib.ufl.edu/ask. Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring. https://teachingcenter.ufl.edu/.

Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers. https://writing.ufl.edu/writing-studio/.

Student Complaints Campus: https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf.

On-Line Students Complaints: http://www.distance.ufl.edu/student-complaint-process.

KEY:
Wk: Week
HW: Homework
◊　Project 1 (P1)
❖　Project 2 with industry client (P2)

Wk	Day/ Date	Topics	In-class Activities	In-Class Quiz	Readings /Video?	HW?	Project Deliverables
1	T 08/20	Course introduction, Syllabus overview, Industry clients introduction	Class survey	No	No	No	None
	R 08/22	Intro to UXD	IDEO video discussion	No	No	Yes (1)	None
2	T 08/27	History of UXD, Usability and User experience	None	Yes (1)	Yes (i)	No	None
	R 08/29	Usability and User experience ◊　Project 1 brief out	Interface evaluation	Yes (2)	Yes (ii)	Yes (2)	None
3	T 09/03	The user-centered design process, Design documentation, Brainstorming	None	Yes (3)	Yes (iii)	No	None
	R 09/05	Design critiques, Data collection methods (interviews)	◊　P1 critiques, Interview guide preparation	Yes (4)	Yes (iv)	Yes (3)	◊　4-slides for P1 ideas
4	T 09/10	User research	Focus statement	No	No	Yes (4)	None
	R 09/12	Interviews	Interviews	No	No	Yes (5)	None
5	T 09/17	Affinity diagramming for user needs	Affinity diagramming	Yes (5)	Yes (v)	Yes (6)	None
	R 09/19	Requirements, Personas and scenarios	Personas/scenarios	No	No	Yes (7)	None
6	T 09/24	Interaction concepts I	None	Yes (6)	Yes (vi)	No	None
	R 09/26	None	◊　P1 final critiques	No	No	Yes (8)	◊　P1 poster
7	T 10/01	Interaction concepts II	Game controller design ❖ (P2 briefs released)	Yes (7)	Yes (vii)	Yes (9)	❖ P2 selection preferences
	R 10/03	Task flows and wireframing	Wireframing	Yes (8)	Yes (viii)	Yes (10)	◊　P1 final design document
8	T 10/08	Midterm test	-	-	No	No	None
	R 10/10	Kick-off meeting with industry client (3-5pm)	P2 discussion	No	No	No	None
9	T 10/15	Graphic design for user interfaces (gestalt principles, grids and UIs)	-	Yes (9)	Yes (xi)	No	None
	R 10/17	*Karissa Raskin (City of Gainesville)*		No	No	No	❖Plan for data collection

Week	Day/Date	Topic	Activity	Col5	Col6	Col7	Deliverable
10	T 10/22	Low-fidelity prototyping	Lo-fi prototyping	No	No	Yes (11)	None
	R 10/24	Paper prototyping user testing	Simulated user tests	No	No	Yes (12)	❖ P2 affinity diagram, artifacts
11	T 10/29	Dynamic prototyping	InVision demo		No	Yes (13)	
	R 10/31	Paper prototyping user testing	❖ P2 paper prototype user tests		No	No	❖ P2 paper prototype
12	T 11/05	Mid-point critique with clients (2-4pm) - Reitz	❖ P2 review and discussion		No	No	None
	R 11/07	Interactive prototype user testing lecture					
13	T 11/12	Interactive prototype user testing	❖ P2 user testing		No	No	❖ P2 dynamic prototype
	R 11/14	Interactive prototype User testing	❖ P2 user testing		No	No	❖ P2 dynamic prototype
14	T 11/19	Design documentation reminder, Review for end-of-semester quiz	❖ P2 working session		No	No	None
	R 11/21	P2 peer critiques	❖ P2 presentations		No	No	❖ All P2 materials
15	T 11/26	End-of-semester test	-	-	No	No	None
	R 11/28	THANKSGIVING (no class)					
16	T 12/03	❖ P2 final showcase - Reitz			No	No	❖ All updated P2 materials
	R 12/05	READING DAY (no class)					