

# CEN 5728 User Experience Design

Course Syllabus, v1.0, last revised 8/16/2019

## Course Logistics

### Meeting Times:

- Tuesdays Period 8-9 (3:00pm to 4:55pm, 115 minutes, with 15-minute break)
- Thursdays Period 9 (4:05pm to 4:55pm, 50 minutes)

### Meeting Location:

- Computer Sciences & Engineering E309 (CSE E309)

## Instructor Information

### Instructor: Lisa Anthony, PhD

- E-mail address: [lanthony@cise.ufl.edu](mailto:lanthony@cise.ufl.edu) (put 'UXD' in the subject)
- Office hours: TBD
- Office location: CSE Building, E542
- Class Web site: <http://ufciseuxd.wordpress.com/> + Canvas!

Teaching Assistant(s): TBD

## Syllabus Guide

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Really really important information in this syllabus is marked with a star. If you read nothing else, read these parts!

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## Course Information

### *Catalog Descriptions:*

- CEN 5728 – User Experience Design – Credits: 3.  
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. Software tools used in industry are used in class projects.

### *Course Overview:*

This is a graduate course that introduces students to the methods and tools used in User Experience (UX) and User Interface (UI) design. UXD focuses on the early design stages of a product's lifecycle, and aims to ensure the product will meet user needs; some example tools and methods to be covered include personas, scenarios, storyboards, focus groups, wireframing, prototyping, InVision, Axure, Balsamiq, etc.

This class will serve as an introduction to these methods; no prior design experience is necessary. In this course, students will work on group projects covering one or more of the UXD methods for products designed for today's world of ubiquitous and mobile technology. Students will also participate in a final group project designing for a real context: a local industry client will define their needs and requirements, with the end goal that the students' design will be incorporated into the client's real product. 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 course is intended to complement CAP 5100 (Human-Computer Interaction), but neither are prerequisites for each other. This course is a core course for the Human-Centered Computing PhD program, but may also be taken by other PhD, MS, and BS students. This course will be roughly synchronized with the undergraduate version of the same course: CEN 4722 User Experience Design, being taught by Dr. Sharon Chu.



### **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. I have designed this class to increase students' learning, skill, and knowledge building (most important), and foster excitement and understanding of user experience design in today's world and your lives, and get away from long lectures and rote knowledge memorization. We will do a hands-on project together in class over the course of the semester because I believe (and education research supports) that learning-by-doing is the best way to understand design.

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, select readings or other learning methods (from provided choices), 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. I will provide tools, resources, and advice to maximize your learning, but it is up to you to shape your knowledge and skills in a way that fits your future career choice and personality the best.

***Pre-requisites and Co-requisites:***

- CEN 5728: COP 3530 or equivalent.

***Course Components:***

This course involves the following components:

- Online Lectures – video lectures on core user experience design concepts.
- Readings – recent book chapters and online resources related to UXD.
- Quizzes – online in-class quizzes on the lectures and readings.
- In-Class Activities and Homeworks – group activities to introduce and practice user experience design techniques, similar to lab-style activities. Projects – 1 individual and 2 group projects covering all phases of the user experience design project lifecycle will be completed, including (1) exploring a design space, (2) generating design concepts, and (3) refining design concepts, ultimately producing an interactive prototype for an industry client.
- Critiques – in-class group critiques of the design concepts produced for each project will be conducted, including an end-of-semester public showcase of the interactive prototypes for the final project.

***Course Objectives:***

By the end of this course, students will be able to:

- Define the term “*user experience design*” and identify how it fits into the software development lifecycle.
- 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.

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## Course Materials

### ***Material and Supply Fees:***

- No fees are collected for this course.



### **Supplies Required:**

This course makes heavy use of industry methods for designing software. Students are expected to purchase supplies as needed for these methods, including:

- Sharpies or other permanent markers
- Post-it notes or other sticky notes
- Scratch paper of various sizes for sketching (unlined)
- Pencils, pens
- Ruler or straight edge
- Scissors (optional)
- Self-standing easel pads (optional)

When such supplies will be needed in class, announcements will be made at least one week in advance. Lack of preparation will harm students' class participation grade.

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.

### ***Textbooks Required:***

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 four weeks prior to the due date. Students will be responsible for accessing the readings and downloading any relevant links provided.

### ***Textbooks Recommended:***

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, ISBN-10 # 0470665769
- *The Design of Everyday Things*, by Norman, ISBN-10 # 0465050654
- *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
- Others TBD

### ***Software Required:***

Students are **required to bring a laptop to class**<sup>1</sup> 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:

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

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

### ***Additional Recommended Resources:***

- TBD

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## **Course Outline**

### ***Course Topics:***

- User Experience 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, both low-fidelity and high-fidelity.
- Design for small screens, responsive design.
- Non-GUI design (e.g., auditory interfaces, gesture interfaces).

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<sup>1</sup> 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/>

***Tentative Schedule: subject to change***

*\* indicates HW is due in 2 weeks instead of the normal 1 week*

Week	Day	Dates	Topics	Class Prep	Quiz?	Home work	Projects & Milestones
1	T	08/20	Syllabus, Course Introduction [break] Industry Approaches to UXD: IDEO Deep Dive Video				
	R	08/22	Anatomy of a Deep Dive & Introduction to Design Thinking	video			
2	T	08/27	Designing for Interaction: Affordances, Controls, Constraints (part 1: physical design) <b>+In-Class Activity: Design Scavenger Hunt</b>	video	yes	HW1	* Add/Drop Ends 8/26 * Practice Quiz due 8/27 before class
	R	08/29	Designing for Interaction: Affordances, Controls, Constraints (part 2: software design)				* Individual Project out
3	T	09/03	<i>Individual Project Q&amp;A</i> Brainstorming Techniques & Affinity Diagrams	video	yes	HW2	* in-class hands-on project begins (HWs)
	R	09/05	Lecture & Q&A: Communicating Design: Design Rationale, Documents, and Posters				* submit in-class project Design Doc link
4	T	09/10	Preparing for User Research: Focus Groups, Interviews, Design Probes	video	yes	HW3	
	R	09/12	<b>In-Class Activity: Simulated Focus Group</b>				
5	T	09/17	<b>In-Class Activity: Data Analysis</b>			HW4	
	R	09/19	How to Critique <b>Individual Project: In-Class Peer 1st Critique</b>				* Individual Project first draft due
6	T	09/24	User Needs & Personas	video	yes	HW5*	
	R	09/26	<b>Individual Project: In-Class Peer 2nd Critique</b>				* Individual Project final due
7	T	10/01	Scenarios & Storyboards	video	yes	HW6	* Industry Client Project out
	R	10/03	<i>Industry Client Project Q&amp;A (&amp; design licensing)</i>				* Industry Client Project groups out 10/4
8	T	10/08	<i>In-Class Working Session (Industry Client Project)</i>				
	R	10/10	<i>In-Class Activity: Industry Client Project: Client Kick-off Meetings [note: 3-5pm]</i>				* sign up in advance for HW12 groups

9	T	10/15	Information Architecture & Wireframing: Techniques & Tools	video	yes	HW7		
	R	10/17	Graphic Design for User Interfaces (Grids & UIs)	video	yes			
10	T	10/22	User Testing & Think-Alouds	video	yes	HW8		
	R	10/24	<b>Industry Project: In-Class Peer 1st Critique</b>					
11	T	10/29	Low-Fidelity Prototyping, Techniques & Tools	video	yes	HW9*		
	R	10/31	<i>In-Class Working Session (Industry Client Project)</i> -or- <i>Guest Lecture: Karissa Raskin (City of Gainesville)</i>					
12	T	11/05	<b>Industry Client Project: Mid-Point Client Showcase [note: 2-4pm]</b>				<b>* Industry Client Project mid-point poster due</b>	
	R	11/07	<i>In-Class Working Session (Industry Client Project)</i>					
13	T	11/12	Interactive Prototyping, Techniques & Tools	video	yes	HW10		
	R	11/14	Lecture & Q&A: Video Sketches					
14	T	11/19	<i>In-Class Working Session (Industry Client Project)</i>					
	R	11/21	<b>Industry Project: In-Class Peer 2nd Critique</b>					
15	T	11/26	<i>In-Class Working Session (Industry Client Project)</i>				<b>* UF Course Evaluations open 11/26</b>	
	R	11/28	<b>NO CLASS – THANKSGIVING</b>					
16	T	12/03	<b>Industry Client Project: Final Public Showcase [note: 2-4pm]</b>				<b>* Industry Client Project final deliverables due</b>	
	R	12/05	<b>READING DAY – NO CLASS</b>				<b>* UF Course Evaluations close 12/06</b>	
17	T	12/10	<b>7:30 AM to 9:30 AM Final Exam Period – NO EXAM</b>					
18	W	12/18	<b>Final grades available on ISIS – not before. Please do not email the instructor/TA asking for grades.</b>					



## Grading

The following items will contribute to students' grades in this course:

- Individual Project 20%
- Industry Client Project 40%
  - i. *Mid-Point* 15%
  - ii. *Final* 25%
- Video/Reading Quizzes 15% [lowest 2 out of 10 dropped]
- In-Class Small Group Homeworks 15% [lowest 3 of 10 dropped]
- Peer Evaluation for In-Class Work 10%
- Extra Credit opportunities:
  - i. CISE HCC Experiment Pool<sup>1</sup> 2%
- *No mid-term or final exams*

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.



<sup>1</sup> **CISE HCC Experiment Pool:** As part of this course, you are eligible to earn extra credit by participating in up to 2 CISE human-subjects research studies. Each study participated in will be worth 1-2%, and students can earn up to 2% extra credit on their final course grade. Participation in human-subjects studies will be handled by the CISE department's Research Participant System which can be accessed at <https://ufl-cise.sona-systems.com>. To view and sign up for a study, log in to the system using your GatorLink username and password. Once you have successfully logged in, you will be able to see a list of studies with available timeslots. If there are no studies listed, there are currently no opportunities to participate, and you should check back later. Since the system works on a first-come basis, it is recommended you do not wait until the end of semester when the number of timeslots is limited.

If you schedule an appointment for a study, it is your responsibility to show up or cancel at least 24 hours before the appointment. Multiple unexcused absences will lock you out of the system. In addition, it is your responsibility to assign earned credits to the correct course. At the end of the semester, your instructor will be provided a history of your participation for grading purposes. For assistance with the Research Participation System, please view the Frequently Asked Questions located at [https://ufl-cise.sona-systems.com/faq\\_view.aspx](https://ufl-cise.sona-systems.com/faq_view.aspx).

Participation in studies is optional, but strongly encouraged. A replacement extra credit activity of a 500-word essay on a real-world example of very good or very bad user experience design (with justification as to why it's good or bad based on concepts from the class) 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. In this case, essays will not be accepted.

Please note: no partial credit will be awarded for extra credit submissions.

### **Grading Scale:**

- 100-92 A, 91-90 A-
- 89-88 B+, 87-82 B, 81-80 B-
- 79-78 C+, 77-72 C, 71-70 C-
- 69-68 D+, 67-62 D, 61-60 D-
- 59-0 E



All final course grades will be rounded to the nearest whole number. Canvas estimates of final course grades are not to be considered accurate until I announce it. I recommend you do your own math to verify final grades. The Canvas system has a “What If” tool.

This course will use the Canvas e-Learning course management system to post grades and to communicate with class members. If you have a question about the course that other students could benefit from hearing the answer, please post to the appropriate discussion thread on Canvas rather than sending individual emails to the instructor/TA.

***Grading Scale Note:***

Graduate students need an overall GPA of 3.00 truncated and a 3.00 truncated GPA in their major (and in the minor, if a minor is declared) at graduation. For more information on grades and grading policies, please visit:

<http://gradcatalog.ufl.edu/content.php?catoid=4&navoid=907#grades>

***Honor Code & Collaboration:***

High level questions, syntax topics, and algorithms can be discussed amongst each other and amongst the groups. Not allowed in this course include the following:

- 1) **plagiarism** (misrepresenting others’ ideas as your own, can be fixed with simple citation),
- 2) **copying code**,
- 3) **social loafing** (e.g., for group work), and
- 4) **work offensive to others.**

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## Course Policies



### ***Late Assignments:***

All assignments (including projects) 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.



### ***Attendance:***

Attendance will not be graded. Engagement in class discussions and activities is graded, however, so if students must miss class, the instructor recommends increasing participation on the other days. If a student is sick or will be absent for a significant period of time, please contact the instructor to work out a way to catch up. **Attendance and participation is required for all project critiques and showcase days.** If a student cannot attend, make-up work may be required at the instructor's discretion.

### ***Make-ups:***

Students who contact the professor **before the due date** with appropriate requests for extension and/or makeup assignments will be given an additional amount of time to make up late assignments equal to the time lost due to the unforeseen circumstance.

### ***Incompletes:***

Incompletes will be granted for only the most extreme circumstances, e.g. medical or family reasons. To be considered for an incomplete, the student **must** 1) let the professor know at in advance that they are seeking an incomplete, and 2) provide documentation to support the request.

Requirements for class attendance and make-up exams, assignments, and other work are consistent with university policies that can be found at:

<http://gradcatalog.ufl.edu/content.php?catoid=10&navoid=2020#attendance>

### ***Classroom Expectations:***

To be courteous to your fellow students, please:

- Turn all cell phone ringers to silent and step outside to take calls.
- Turn off all audible notifications on laptops and phones.
- Refrain from texting during class.
- Use laptops only for taking notes or looking up relevant information (no Facebook, YouTube, Twitter, etc.).

### ***Guest Lectures:***

In this course, guest lecturers may be invited to present material related to their research or work, and how it relates to the course material. These are experts in their fields and are taking time out of their busy schedules to share their knowledge with you. Please respect their time and attend the guest lectures as you would any other meeting of the course.

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## University Policies and Resources

### *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/>.

### *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.



### ***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](mailto:rbielling@eng.ufl.edu)
- Curtis Taylor, Associate Dean of Student Affairs, 352-392-2177, [taylor@eng.ufl.edu](mailto:taylor@eng.ufl.edu)
- Toshikazu Nishida, Associate Dean of Academic Affairs, 352-392-0943, [nishida@eng.ufl.edu](mailto: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](mailto: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](mailto: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](https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf).

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