INST 362 - USER-CENTERED DESIGN

Spring 2017
College of Information Studies
University of Maryland, College Park

Section: 0101
Meeting Days and Times: Tu Th 2:00pm - 3:15pm
Location: Room 0103 Hornbake Building South Wing
Instructor: Chiyoung Oh
E-mail: jcoh@umd.edu
Office: 4120L Hornbake Building South Wing
Office Hours: Tuesdays 3:15-4:30 PM or by appointment

Course Description

This course is an introduction to user experience (UX), user-centered design (UCD) and user interface implementation methods in human-computer interaction (HCI). This course focuses on how HCI connects psychology, information systems, computer science, and human factors. Topics such as user needs, user behaviors, envisioning interfaces, and prototyping, with an emphasis on incorporating people in the design process from initial user experience research to summative usability evaluation are discussed. This course will introduce you to the UCD process, focusing on practical methods for approaching a design problem, including how to understand users, extract design ideas, design prototypes, and evaluate prototypes/systems. Team project assignments will culminate into a single, comprehensive portfolio project. There will also be individual assignments and exams to help you better understand the UCD process.

Student Learning Outcomes

- **Upon completion of the course, students will be able to:**
  - Articulate fundamental ideas and important role of UCD in system development
  - Articulate and apply major user experience research and design methods, such as contextual inquiries, affinity diagrams, and persona development.
  - Understand how to apply data from UX evaluations to improve interfaces and interaction designs through iterative design process.

Textbooks

- **Required Texts**
  - Hartson, R., & Pyla, P. S. (2012). The UX Book: Process and guidelines for ensuring a quality user experience. Elsevier.
- **Recommended Texts**
  - Norman, D. A. (2013). *The design of everyday things: Revised and expanded edition*. Basic books. (Available online through UMD library)
  - Goodman E; Mike Kuniavsky and Andrea Moed (2012). *Observing the User Experience, 2nd Edition*. Waltham, MA: Morgan Kaufman. (Available online through UMD library)
  - Preece, J., Sharp, H., & Rogers, Y. (2015). *Interaction design: Beyond human-computer interaction*. Chichester, W. Sussex: John Wiley & Sons.

Course Activities

- **In-Class Assignments**
  There will be in-class assignments that you will be expected to complete in class during the semester. These in-class assignments have been designed to contribute to your team's UCD projects. Please refer to the course schedule.

- **Team Project**
  You will work in teams of 4-5 on a semester-long UCD project. The project will involve defining your UCD goals, researching user experience to gather data, extracting design requirements, developing design prototypes, and evaluating design prototypes. Once the user experience research is complete, you will be required to organize the UX research data and prepare them for further analysis, requirement extraction, design, and evaluation. During the semester, the in-class assignments will contribute to your team projects, and this will allow me to help with the progress of your team project and answer your questions.
    - ***Project Websites/Blogs***: In addition to your team project assignments, your team need to have an online space (of your choice) to upload the deliverable as a portfolio of your project (potentially for your future job seeking). It is recommended that you show your project websites/blogs to class in you final team presentation.

- **Individual Homework Assignments**
  There will be homework assignments that help with your learning in this course.

- **Mid-term Exam**
  A mid-term exam will be administered to test your understanding of the concepts and skills in UCD introduced in class and readings.

- **Team Presentation**
  You will be expected to present your UCD project results. The presentations should be 15 minutes in-class presentations (including 3 minute Q&A) highlighting your projects' goals, processes, procedures through the study, design outcomes, and evaluation results. You are to include your reflection on the successes and challenges throughout the procedures of your UCD project. All students viewing the presentations will be expected to complete a feedback form, based on their knowledge of user-centered design gained throughout the semester, offering their opinion about the strengths and weaknesses of the projects.

- **Final Exam**
  A final exam will be administered to test your understanding of the concepts and skills introduced throughout the course in class and readings.

Course Policies

- **Reading Assignments**

You are responsible for keeping up with readings in the book per the schedule given in the syllabus. You are responsible for setting your own reading pace to keep ahead enough to be

prepared for class discussions and in-class assignments. You are also responsible for knowing where we are in our class discussions and for finding your place in the class lecture slides.

- **The Pace of Coverage of Material in Class**
  - You are supposed to have just read the book chapter or chapters for what we're covering in class. The lecture slides cannot be a substitute for reading the book. If you have questions about parts we don't cover in class, you are welcome to ask.
  - Class time is for review, highlights, examples, explanations, and in-class assignments.

- **Due Dates and Times for Assignments**

All your homework and project assignments must be turned in by the due date/time on ELMS.

General policy in this class is that late assignments (both individual and team assignments) will be deducted 15% of its points after the due time, and an additional 10% per calendar day they are late (up to 3 days). It is at the instructor's discretion to accept late work and assign late point deduction. Because the assignments of this course accumulate for the final UCD outcome, it is crucial to follow the assignment schedule.

- **Attendance**

Your attendance will be part of your participation in this class. You are expected to attend every class. Please consider that much of the learning for the course occurs in class. You cannot participate in this learning if you are not present.

Being late for class affect our learning experience and potentially in-class assignments. Please come to class on time.

If you have to miss class due to an illness or similar reason, please contact the instructor before the class begins.

- **No Laptop/tablet/phone Use in Class** (Except for in-class team assignments and emergency)

- **No Extra Credit Work**

Students sometimes ask for some extra credit work in an attempt to bring up grades. However, extra credit work will not be given on an individual basis.

- **Responding to E-mail**

All email concerning the class should be addressed to the instructor. I will make every effort to answer your email in a timely fashion. However, you should not necessarily always expect to get an immediate reply (e.g., when it is several hours before the assignment is due). Please put "[INST362 User-Centered Design]" as part of the subject line of your email.

- **Showing Respect**

You are expected to show your respect to all people and projects in class. For example, when you evaluate others' ideas or other teams' design, show your respect for their effort and design, and then provide your comments or suggestions in a way to help improve the interaction design.

Grading

Course grades will be assigned based on your homework assignments, participation/in-class assignments, team project assignments, midterm exam, and final exam. Scores on each component will be combined to produce a single overall score for each student as follows:

Component	*Percentage*
Homework	**10%**
Participation/in-class assignments	**10%**
Team Project	**60%**
Project Assignment 1. Project Proposal Poster	5%
Project Assignment 2. Contextual inquiry and contextual analysis	15%
Project Assignment 3. Requirements Extraction	5%
Project Assignment 4. Design - Part 1 and 2	10%
Project Assignment 5. Prototyping - Part 1 and 2	10%
Project Assignment 6. Evaluation	5%
Project Assignment 7. Project Presentation	10%
Mid-term Exam	**10%**
Final Exam	**10%**

Final grades will be assigned using the following categories:

A+	97-100 pts.	C	73-76.9
A	93-96.9	C-	70-72.9
A-	90-92.9	D+	67-69.9
B+	87-89.9	D	63-66.9
B	83-86.9	D-	60-62.9
B-	80-82.9	F	less than 60
C+	77-79.9		

Course Related Policies

The University expects each student to take full responsibility for their academic work and academic progress.

As a student you have the responsibility to be familiar with and uphold the *Code of Academic Integrity* and the *Code of Conduct*, as well as for notifying your course instructors in a timely fashion regarding academic accommodations related to absences and accessibility as indicated in the Course Related Policies pages.

Link to the Course Related Policies pages: http://www.ugst.umd.edu/courserelatedpolicies.html

Academic Integrity

The University of Maryland, College Park has a nationally recognized Code of Academic Integrity, administered by the Student Honor Council. This Code sets standards for academic integrity at Maryland for all undergraduate and graduate students. As a student you are responsible for upholding these standards for this course. It is very important for you to be aware of the consequences of cheating, fabrication, facilitation, and plagiarism.
For more information on the Code of Academic Integrity or the Student Honor Council, please visit http://shc.umd.edu/SHC/Default.aspx.

Policy on Academic Misconduct

Cases of academic misconduct will be referred to the Office of Student Conduct irrespective of scope and circumstances, as required by university rules and regulations. It is crucial to understand that the instructors do not have a choice of following other courses of actions in handling these cases. There are severe consequences of academic misconduct, some of which are permanent and reflected on the student's transcript. For details about procedures governing such referrals and possible consequences for the student please visit
http://osc.umd.edu/OSC/Default.aspx.
It is very important that you complete your own assignments, and do not share any work. The best course of action to take when a student is having problems with an assignment is to contact the instructor. The instructor will be happy to work with students while they work on the assignments.

Special Needs

Students with disabilities should inform the instructor of their needs at the beginning of the semester. Please also contact the Disability Support Services (301-314-7682 or http://www.counseling.umd.edu/DSS/). DSS will make arrangements with the student and the instructor to determine and implement appropriate academic accommodations. Students encountering psychological problems that hamper their course work are referred to the Counseling Center (301-314-7651 or http://www.counseling.umd.edu/) for expert help.

Course Design Credit

Materials for this course are adapted from or inspired by course materials of Rex Hartson, Tammy Clegg, Vera Rhoads, and Beth St. Jean.

Course Schedule / Readings / Assignments

Session	Topic	Readings	Due
1 1/26 (Thu)	Introduction / Course & Project / Class Expectations / User-Centered Design [In-class Assignment: Experience/skills and project interests survey]		
2 1/31 (Tue)	The Design of Everyday Things / Design Thinking / User-Centered Design process Sit as teams! [In-class Assignment: Project workshop w/ team (Topic selection)]	*The design of everyday things: Revised and expanded edition* *– Chapter 1 (pp. 1-10) & Chapter 6 (pp. 217-236)*	
3 2/2 (Thu)	Universal Tools: Recruiting & Interviewing	*Observing the User Experience* *- Chapter 6. Universal Tools: Recruiting and Interviewing (pp. 95-139)*	Due Friday 2/3 midnight: [Individual HW1. Design Analysis]
4 2/7 (Tue)	Introduction to UX & the UX Process Lifecycle Template [In-class Assignment: Project workshop w/ team (Project concept development)]	*The UX Book* *– Chapter 1 (pp. 1-46), Chapter 2 (pp. 47-60)*	
5 2/9 (Thu)	Contextual Inquiry [Guest Lecture]	*Contextual Design: Evolved* *– Chapter 3 & 4 (pp. 11-51)*	
6 2/14 (Tue)	Contextual Inquiry [In-class Assignment: Project workshop w/ team (Detailed planning for contextual inquiry)]	*The UX Book* *– Chapter 3 (pp. 87-128)*	Due Tuesday 2/14 midnight: [Individual HW2. CITI training certificate]

7 2/16 (Thu)	Contextual Inquiry [In-class Assignment: Project proposal poster presentation (Bring your posters to class!)]	*The UX Book* *– Chapter 3 (pp. 87-128)*	Due Friday 2/17 midnight: [Project Assignment 1. Project Proposal Poster]
8 2/21 (Tue)	Contextual Analysis [In-class Assignment: Project workshop w/ team (Checking the Progress)] What and how your team's doing on Project Assignment 2. CI and CA	*The UX Book* *– Chapter 4 (pp. 129-160)*	
9 2/23 (Thu)	Contextual Analysis [In-class Assignment: Project workshop w/ team (Contextual analysis #1)]	*The UX Book* *– Chapter 4 (pp. 129-160)*	Due Friday 2/24 midnight: [Individual HW3. Reflection on UCD and your team project]
10 2/28 (Tue)	Contextual Analysis [In-class Assignment: Project workshop w/ team (Contextual analysis #2)]	*The UX Book* *– Chapter 4 (pp. 129-160)*	
11 3/2 (Thu)	Extracting Interaction Design Requirements	*The UX Book* *– Chapter 5 (pp. 161-180)*	Due Friday 3/3 midnight: [Project Assignment 2. Contextual inquiry and contextual analysis]
12 3/7 (Tue)	Extracting Interaction Design Requirements [In-class Assignment: Requirements extraction]	*The UX Book* *– Chapter 5 (pp. 161-180)*	
13 3/9 (Thu)	Design Thinking, Ideation, and Sketching [In-class Assignment: Persona development]	*The UX Book* *– Chapter 7 (pp. 251-298)*	Due Friday 3/10 midnight: [Project Assignment 3. Requirements Extraction]

14 3/14 (Tue)	Design Thinking, Ideation, and Sketching Midterm Review	*The UX Book* *– Chapter 7 (pp. 251-298)*	
15 3/16 (Thu)	**MIDTERM EXAM**		
3/21 (Tue)	**Spring Break**		
3/23 (Thu)	**Spring Break**		
16 3/28 (Tue)	Mental Models and Conceptual Design [In-class Assignment: Ideation and Sketching]	*The UX Book* *– Chapter 8 (pp. 299-332)*	
17 3/30 (Thu)	Design Production	*The UX Book* *– Chapter 9 (pp. 333-358)*	Due Friday 3/31 midnight: [Project Assignment 4. Design - Part 1: Persona, Ideation, Sketching]
18 4/4 (Tue)	Design Production [In-class Assignment: Storyboards and Wireframes]	*The UX Book* *– Chapter 9 (pp. 333-358)*	
19 4/6 (Thu)	Prototyping [In-class Assignment: Paper Prototyping]	*The UX Book* *– Chapter 11 (pp. 391-426)*	Due Friday 4/7 midnight: [Project Assignment 4. Design - Part 2: Storyboard and Sample Wireframe Screen]
20 4/11 (Tue)	Prototyping [In-class Assignment: Paper Prototyping and Testing]	*The UX Book* *– Chapter 11 (pp. 391-426)*	

21 4/13 (Thu)	UX Evaluation	*The UX Book* *– Chapter 12 (pp. 427-466)*	Due 4/13 BEFORE CLASS: [Project Assignment 5. Prototyping – Part 1: Your team's paper prototypes (photos taken) and the paper prototyping test results]
22 4/18 (Tue)	UX Evaluation	*The UX Book* *– Chapter 12 (pp. 427-466)*	
23 4/20 (Thu)	Rapid UX Evaluation	*The UX Book* *– Chapter 13 (pp. 467-502)*	Due Friday 4/21 midnight: [Project Assignment 5. Prototyping – Part 2: Design low-fidelity wireframes] Update your design based on the test results and design low-fidelity wireframes for all the screens and/or widgets of your scope.
24 4/25 (Tue)	Rapid UX Evaluation [In-class Assignment: Evaluation of Other Teams' Prototype]	*The UX Book* *– Chapter 13 (pp. 467-502)*	Due 4/25 BEFORE CLASS: Bring all your design materials to class (No ELMS uploads needed). Print and bring all of your team's design materials including low-fidelity wireframes, project proposal posters, tasks description, persona, sketches, and storyboards for the in-class assignment.

25 4/27 (Thu)	Reporting	*The UX Book* *– Chapter 17 (pp. 593-610)*	Due 4/27 BEFORE CLASS: [Project Assignment 6. Evaluation – Evaluation of Other Teams' Prototype] Upload the evaluation result on ELMS and also SEND IT TO THE TEAM that designed the prototype.
26 5/2 (Tue)	Wrapping up UX Evaluation [In-class Assignment: Team Project Workshop]	*The UX Book* *– Chapter 18 (pp. 611-618)*	
27 5/4 (Thu)	**Project Presentations 1**		Due 5/4 BEFORE CLASS: [Project Assignment 7. Project Presentation] All teams' presentation slides must be submitted by this due time. No other deliverables. You will give presentations for your projects in class.
28 5/9 (Tue)	**Project Presentations 2**		
29 5/11 (Thu)	**Project Presentations 3** Final Review		Due Friday midnight: [Individual HW4. Reflection on your overall experience in UCD]
30 5/17 (Wed)	**FINAL EXAM**		

- This schedule is for planning purposes and subject to change with advance notice.
- See the syllabus on ELMS/Canvas for the most current information and updates.
- For your successful learning from this course, you will need to have strong commitment to reading the assigned texts, building a good teamwork, and developing professionalism throughout the process.

Assignments

1. Homework (Individual)

Homework due dates are in the course schedule. It's your job to know when you should be working on one and when they are due. Please find the details for each assignment in the Assignment section on our ELMS course space.

2. In-class Assignments

There will be team-based in-class assignments almost every week throughout the semester. Everyone begins the course with full in-class participation credit, and I hope all of you will retain it to the end. However, deductions can be made from an individual's in-class participation credit for various shortcomings (e.g., being absent when your team needs you for an in-class assignment).

3. Team Project Assignments

The major work (and major credit) component for this class is the semester team-oriented project. It involves defining, analyzing, specifying, designing, prototyping, and evaluating interaction designs. Although this course does not cover all types of concepts, knowledge, and skills of user-centered design, the purpose of the project is to give you an exposure to UCD processes involved in developing a significant user interaction design.

This is a team project. All development activities, including writing the deliverables, are team activities. All team members are to participate in all development activities. Do **not** go too far in the direction of dividing the overall process among the team members. Even though this might seem like a more efficient way to proceed, this leads to a kind of specialization that poses a barrier to each person learning the overall process.

As a representative, one member of each team can submit the project assignment in the assignment section on our ELMS course space. But all members of your team need to submit your Team Member Evaluation form before each project assignment is due in the Assignment section on our ELMS course space.

Please find the details for each assignment in the Assignment section on our ELMS course space.

1) The project grading process

Teams will be operating under somewhat varying conditions, reflecting various real-world development situations. Therefore, expectations for different teams will vary, as will the bases for grading project deliverables, so this is not about comparing the final products or deliverables across teams. The emphasis in this class is on learning the process, and your project deliverables will be graded with that perspective.

Grades are based on overall quality. Please remember that, beyond any comments for your assignments, the grades are based on *overall* perceived and relative quality of your assignments.

2) Team member evaluations

Each member of the team is expected to contribute equally to each part of the project. It is possible that one of the most difficult parts of the project assignments is working well together in

a group. Be aware of possible group problems and be ready to solve them. Don't make the mistake of taking this aspect for granted or waiting for it to fix itself; you have too much at stake.

Sometimes, despite our best efforts, some team members end up not pulling their fair share of the weight. To identify such problems early on and to ensure that each team member is given a project grade reflecting individual contributions, an individual Team Member Evaluation is part of the deliverable for each project assignment. Each of you must **individually** turn in the **confidential** Team Member Evaluation Form as a required deliverable to report the relative effort/contribution of each person (including yourself) on each part of the team project.

This Team Member Evaluation Form is not optional. Be professional and give a careful rating. The ratings on these forms will be used as weightings to convert team project grades into individual student project grades. The team is given a grade for each part of the project assignments.

You need to submit your team member evaluation forms on the Assignments section on ELMS by the time each Project Assignment is DUE. For Team Member Evaluation Forms, please see the Assignments section on our ELMS course space.