Course Syllabus

User-Centered Design

INST 362
Fall 2018

Learning Outcomes

This course is an introduction to user experience, user-centered design 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 utilizing prototyping tools, with an emphasis on incorporating people in the design process from initial field observations to summative usability testing are discussed. This course will introduce you to the user-centered design process, focusing on practical methods for approaching a design problem, including how to understand users, research, design for user experience and how to evaluate user interfaces. Also discussed are appropriate uses of storytelling, sketching, and communication of design ideas within a design team and to potential users. Assignments will culminate into a single, comprehensive portfolio project. There will also be individual assignments and exams to help you better understand the user-centered design process.

After successfully completing this course you will be able to:

- Articulate important historical, current and emerging trends, critical issues, and theoretical underpinnings of User Experience design.
- Articulate and apply major user experience research methods, such as user interviews, surveys, contextual analysis, diary studies, storyboarding, experience design, persona development, task description, sketching, video scenarios, use cases, and competitive analysis.
- Demonstrate the appropriate use of UX design artifacts such as flow diagrams, wire-framing, and paper prototypes.
- Apply data from UX evaluations to improve interfaces an iterative and user-centered design.

Required Resources

Course website: **elms.umd.edu**

The UX Book: Process and guidelines for ensuring a quality user experience
Hartson, R., & Pyla, P.S.
First edition (2012)

[1]Must have completed or be currently enrolled in one of these courses

Adjunct Professor
Patrick Thornton
pthornt1@umd.edu

Class Meets
MWF
3:00pm – 3:50pm
CHM 0115

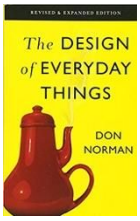
Teaching Assistant
Parth Boricha
parthboricha1@gmail.com

Prerequisites
PSYCH 100; INST201 or INST301[1]; INST 326

Course Communication
I will send time-sensitive information to students via ELMS announcements. Students may contact me via email to discuss questions, absences, or accommodations. Here is a link with helpful guidance on writing professional emails (ter.ps/email).

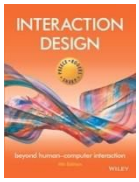
ISBN # 9780123852410

Recommended Resources



The Design of Everyday Things: Revised and expanded edition
Norman, D.A.
2013
Available online through UMD library

Observing the User Experience
Goodman, E., Kuniavsky, M., & Moed, A.
Second Edition (2012)
Available online through UMD library



Interaction Design: Beyond human-computer interaction
Preece, J., Sharp, H., & Rogers, Y.
Fourth Edition (2015)
ISBN #: 978-1-119-02075-2

Campus Policies

It is our shared responsibility to know and abide by the University of Maryland's policies that relate to all courses, which include topics like:

- Academic integrity
- Student and instructor conduct
- Accessibility and accommodations
- Attendance and excused absences
- Grades and appeals
- Copyright and intellectual property

Please visit www.ugst.umd.edu/courserelatedpolicies.html for the Office of Undergraduate Studies' full list of campus-wide policies and follow up with me if you have questions.

Activities, Learning Assessments, & Expectations for Students

Before Class: You should complete all listed readings before class begins each day. Lectures will be brief and will cover course material, but you will only develop a deep enough understanding of the material for tests, assignments, projects, and discussion through completing the assigned reading. 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.

Attendance: I expect students to come to all class meetings unless there is a university-accepted reason (e.g., illness). 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.

Class starts on time: Being late for class affects our learning experience and potentially in-class assignments. Please come to class on time. Have the materials you will need (e.g. pen, project materials) out and ready by the time class begins.

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

During Class: During class, we will have lectures, discussions, and in-class activities. Please bring pens, papers, and assigned reading with you to class. We are building a collaborative learning environment together, and students should both participate in class discussions and welcome the participation of others. A participation grade will be assigned and designated by the amount of participation each student contributes to course discussions and in-class activities.

Let's Be Creative: With large classes it can be trickier to try out new activities and techniques that go beyond the traditional lecture. I am dedicated to trying out new activities and techniques however – so with this, there are several things I will ask of you:

- Please come ready to participate
- Please be patient with the iterative process of trying things out – we are all learning together, and some things will work better than others, we'll find our groove
- Please let me know of ideas and thoughts you have about class activities – I will solicit feedback several times throughout the semester

In Class Assignments: There will be in-class assignments that you will be expected to complete during the class period. These in-class assignments have been designed to contribute to your team's User-Centered Design projects. Please refer to the course schedule for more details. 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 reasons (e.g., being absent when your team needs you for an in-class assignment).

Team Project: You will work in teams of 3-4 students on a semester-long User-Centered Design project. The project will involve defining your User-Centered Design 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 project assignments**, your team needs 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 the class in your final team presentation.

Collaboration: You are expected to work collaboratively as teams throughout the course of the project, which spans the semester. Each assignment should be collaboratively envisioned, planned, implemented, and written up with every member contributing equally to each part. Each team member will **individually** submit a

confidential Team Member Evaluation Form to report the relative effort/contribution of each person including yourself for each major project deliverable. Evaluations will be factored into your grade.

Team Presentation: You will be expected to present your User-Centered Design 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 project. All students viewing the presentations will be expected to complete a feedback form

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.

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.

Late Assignments: All assignments must be submitted on ELMS. Assignments must be turned in by 11:59pm on the day they are due. The general policy in this class is that late assignments (both individual and team assignments) will be deducted 15% of its points after 11:59pm, and an additional 10% of its points each day they are late. Late assignments will be accepted according to this policy up to three days after the assignment due date. Assignments more than five days late will not be accepted. It is at the instructor's discretion to accept late work and assign late point deduction.

Course-Specific Policies

No computers, phones or tablet devices are permitted during our class meetings. I understand and have considered arguments for permitting laptop and tablet computers in the classroom. However, in my experience (and based on the research evidence) the reality is that they present an irresistible distraction and detract from the cooperative learning environment. Researchers have found that these distractions do in fact interfere with learning and active participation. For that reason, the use of computers and phones will not be permitted during class meetings (except when required for DSS accommodations). One exception is that computers will be used to submit in-class assignments through ELMS.

I expect you to make the responsible and respectful decision to refrain from using your cellphone in class. If you have critical communication to attend to, please excuse yourself and return when you are ready. For more information about the science behind the policy watch: http://youtu.be/WwPaw3Fx5Hk

Submitting Assignments. For this course, some of your assignments will be collected via Turnitin on our course ELMS page. I have chosen to use this tool because it can help you improve your scholarly writing and help me verify the integrity of student work. For information about Turnitin, how it works, and the feedback reports you may have access to, visit Turnitin Originality Checker for Students.

Making Up Missed In-Class Work. When you miss an **individual assignment** due to an excused absence, you may submit the assignment for full credit before the start time of the next class. For **group assignments**, you

should submit a reflection on your group's work on the day you missed and your group's project since the in-class assignment was done. **Make up exams** will only be given for excused absences that are proven by relevant paperwork (e.g., a doctor's note). In such cases, make up times should be scheduled with the instructor.

Responding to Email. 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 an assignment is due). Please put "[INST 362 User-Centered Design]" at the beginning of the subject line of your email.

Showing Respect. As a part of building a collaborative learning environment, we show 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.

Get Some Help!

You are expected to take personal responsibility for you own learning. This includes acknowledging when your performance does not match your goals and doing something about it. Everyone can benefit from some expert guidance on time management, note taking, and exam preparation, so I encourage you to consider visiting http://ter.ps/learn and schedule an appointment with an academic coach. Sharpen your communication skills (and improve your grade) by visiting http://ter.ps/writing and schedule an appointment with the campus Writing Center. Finally, if you just need someone to talk to, visit http://www.counseling.umd.edu.

Everything is free because you have already paid for it, and **everyone needs help**… all you have to do is ask for it.

Grades

Grades are not given, but earned. Your grade is determined by your performance on the learning assessments in the course and is assigned individually (not curved). If earning a particular grade is important to you, please speak with me at the beginning of the semester so that I can offer some helpful suggestions for achieving your goal.

All assessment scores will be posted on the course ELMS page. If you would like to review any of your grades (including the exams), or have questions about how something was scored, please email me to schedule a time for us to meet in my office.

I am happy to discuss any of your grades with you, and if I have made a mistake I will immediately correct it. Any formal grade disputes must be submitted in writing and within one week of receiving the grade.

Learning Assessments	#	Points Each	Category Total	Category Weight
Homework (HW): out-of-class assignments submitted on ELMS	Varies	10		10%
Participation/In-class Assignments: individual and group assignments and contributions to class discussions	Varies	5		10%
Team Project:				
Project Assignment 1. Concept Statement	1	10	10	5%
	1	100	100	15%

Project Assignment 2. Contextual Inquiry & Contextual Analysis	1	100	100	10%
Project Assignment 3. Requirements Extraction	1	100	100	10%
Project Assignment 4. Design – Part 1 & 2	1	100	100	10%
Project Assignment 5. Prototyping – Part 1 & 2	1	100	100	10%
Project Assignment 6. Project Presentation				
Midterm Exam	1	100	100	10%
Final Exam	1	100	100	10%

Final letter grades are assigned based on the percentage of total assessment points earned. To be fair to everyone I have to establish clear standards and apply them consistently, so please understand that being close to a cutoff is not the same this as making the cut (89.99 ≠ 90.00). It would be unethical to make exceptions for some and not others.

Final Grade Cutoffs									
+	97 - 100%	+	87 – 89.9%	+	77 – 79.9%	+	67 – 69.9%		
A	93 – 96.9%	B	83 – 86.9%	C	73 – 76.9%	D	63 – 66.9%	F	<60.0%
-	90 - 93%	-	80 – 82.9%	-	70 – 72.9%	-	60 – 62.9%		

Course Schedule

DOET = Design of Everyday Things Experience **OUE** = Observing the User **UX** = The UX Book (main book)

		Due Before Class	During our Class Meeting	Due After Class
1 Mon	8/27	-	**Introduction** Course & Project/Class Expectations/User-Centered Design In-class assignment: Experience/skills and project interests survey	
2 Wed	8/29	**DOET Ch. 1 (pp. 1-10) & Ch. 6 (pp. 217-236)**	**Design of Everyday Things** Design Thinking/User-Centered Design process	
3 Fri	8/31	-	Sit as teams! In-class Assignment: Project workshop with team (Topic Selection) with Professor Thornton	
4 Mon	9/3	-	**No class**	
5 Wed	9/5	**OUE Ch. 6 (pp. 95 – 139)**	**Universal Tools: Recruiting and Interviewing**	**Individual HW 1. Design Analysis**
6 Fri	9/7	**UX Ch. 1 (pp. 1-46)**	**Introduction to UX** In-class Assignment: Project workshop w/team (Project concept development)	
7 Mon	9/10	**UX Ch. 2 (pp. 47–60) & Ch.3 (pp. 96-98)**	**The UX Process Lifecycle Template & Concept Statement**	
8 Wed	9/12	**UX Ch. 3 (pp. 87 – 128)**	**Contextual Inquiry**	
9 Fri	9/14	-	In-class Assignment: Project workshop w/team (Detailed planning for contextual inquiry)	**Individual HW2. CITI Training Certificate**
10 Mon	9/17	-	In-class Assignment: Project proposal workshop (Bring Project 1 drafts to class!)	
11 Wed	9/19	Review UX Ch. 3 (pp. 87 – 128)	Class led by Julie **Contextual Inquiry**	**Project Assignment 1.** Concept Statement
12 Fri	9/21		**No instructor-led class – use this time to do fieldwork for Project Assignment 2**	
13 Mon	9/24	**UX Ch. 4 (pp. 129 – 160)**	**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	
14 Wed	9/26	-	**Contextual Analysis** In-class Assignment: Project workshop w/team (Contextual analysis #1)	
15 Fri	9/28	-	**Contextual Analysis** In-class Assignment: Project workshop w/team (Contextual analysis #2)	
16 Mon	10/1	**UX Ch. 5 (pp. 161 – 180)**	**Extracting Interaction Design Requirements**	
17 Wed	10/3		**No class**	**Project Assignment 2.** Contextual Inquiry and Contextual Analysis
18 Fri	10/5		Guest Instructor **Extracting Interaction Design Requirements** In-class Assignment: Requirements extraction	
19 Mon	10/8	**UX Ch. 7 (pp. 251-264)**	**Design Thinking, Ideation, and Sketching** In-class Assignment: Empathy map development	**Project Assignment 3.** Requirements Extraction
20 Wed	10/10	**UX Ch. 7 (pp. 264-297)**	**Design Thinking, Ideation, and Sketching**	
21 Fri	10/12		**Design Thinking, Ideation, and Sketching**	
22 Mon	10/15	Review UX Ch. 7 (pp. 198-251)	**Design Thinking, Ideation, and Sketching** In-class Assignment: Persona	
23 Wed	10/17	-	**Midterm review**	
24 Fri	10/19		**Midterm Exam**	
25 Mon	10/22	**UX Ch. 8 (pp. 299 – 332)**	**Mental Models and Conceptual Design** In-class Assignment: Ideation and Sketching	
26 Wed	10/24		**Mental Models and Conceptual Design**	
27 Fri	10/25		**Mental Models and Conceptual Design**	**Project Assignment 4. Design Part 1:** Persona, Ideation, Sketching
28 Mon	10/29	**UX Ch. 9 (pp. 333 – 358)**	**Design Production** In-class Assignment: Mental Models, Conceptual Designs, and Storyboards	
29 Wed	10/31	**UX Ch. 11 (pp. 391 – 426)**	**Prototyping**	
30 Fri	11/2		**Prototyping**	**Project Assignment 4. Design Part 2:** Mental

				Models, Conceptual Design, and Storyboards
31 Mon	11/5	Review UX Ch. 11 (pp.391-426)	**Prototyping**	
32 Wed	11/7	-	**Prototyping** In-class Assignment: Paper Prototyping and Testing	**BEFORE CLASS:** Prepare and bring prototypes to class
33 Fri	11/9	**UX Ch. 12 (pp. 427 – 466)**	**UX Evaluation**	**Project Assignment 5. Prototyping – Part 1:** Your team's paper prototypes and the paper prototyping test results
34 Mon	11/11	-	**UX Evaluation**	
35 Wed	11/14	**UX Ch. 13 (pp. 467 – 502)**	**Rapid UX Evaluation**	
36 Fri	11/16	-	In-class Assignment: Evaluation of Other Teams' Prototype	**Project Assignment 5. Prototyping – Part 2:** Design low-fidelity wireframes Update design based on the test results and design low-fidelity wireframes for all the screens and/or widgets of your scope. **BEFORE CLASS:** Print and bring your team's complete set of low-fidelity wireframes and tasks description for the in-class assignment
37 Mon	11/19	Review UX Ch. 13 (pp.467-502)	**Rapid UX Evaluation**	
38 Wed	11/21		**Thanksgiving Break**	
39 Fri	11/23		**Thanksgiving Break**	
40 Mon	11/26	**UX Ch. 17 (pp. 593 – 610)**	**Reporting and Wrapping up UX Evaluation**	

41 Wed	11/28	**Ch. 18 (pp. 611 – 618)**	**Reporting and Wrapping up UX Evaluation** In-class Assignment: UX Evaluation report	
42 Fri	1130		**Project Presentations 1**	**Project Assignment 6. Project Presentation** All teams' presentation slides must be submitted by this due date. You will give presentations for your projects in class.
43 Mon	12/3		**Project Presentations 2**	
44 Wed	12/5		**Project Presentations 3** Final Review	**Individual HW3. Reflection**
45 Fri	12/7		**No class**	
46 Fri	12/14		**Final Exam**	**1:30-3:30 PM**

Note: This is a tentative schedule, and subject to change as necessary – monitor the course ELMS page for current deadlines. In the unlikely event of a prolonged university closing, or an extended absence from the university, adjustments to the course schedule, deadlines, and assignments will be made based on the duration of the closing and the specific dates missed.