



Course Syllabus

User-Centered Design

INST 362
Spring 2019

Learning Outcomes

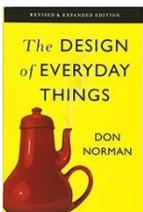
This course is an introduction to user experience and user-centered design methods in human-computer interaction (HCI). This course focuses on how HCI connects psychology, information systems, computer science, and human factors. Topics such as user needs, user behaviors, envisioning interfaces, and 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, conduct user research, design for user experience, and 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, wireframing, and paper prototypes.
- Apply data from UX evaluations to improve interfaces using an iterative and user-centered design process.

Required Resources

Course website: elms.umd.edu



The Design of Everyday Things
Norman, D.A.
2013

Prof. Stacy Surla

ssurla@umd.edu

Class:

Mondays and Wednesdays
9:45 - 11:00

Building III, Room 2225

Office Hours

11:30-12:30 Monday

Black Lion Cafe

9705 Traville Gateway Dr
Rockville, MD 20850

And by appointment

Teaching Assistant

Greta Patten

greta684@terpmail.umd.edu

Office hours TBD

Prerequisites

PSYCH 100; INST201 or
INST301¹; INST 326

Course Communication

I will send time-sensitive information to students via ELMS announcements.

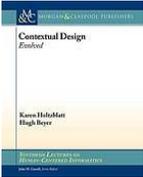
Students may contact me via email to discuss questions, absences, or accommodations.

Here is a link with helpful guidance on writing professional emails (ter.ps/email).

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



Observing the User Experience
Goodman, E., Kuniavsky, M., & Moed, A.
Second Edition (2012)



Contextual Design Evolved
Holtzblatt, Karen, & Beyer, Hugh
2014

Recommended Resource



It's our research : getting stakeholder buy-in for user experience research projects
Sharon, Tomer
2012

Any major online bookstore carries these books. Other readings and materials will be included by links in the relevant assignments.

A NOTE: We will not be reading these books cover to cover, but they discuss topics that are timeless in this profession. You can expect to refer to them throughout your studies and throughout your career. So hold onto them!

Course-Related Policies

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

- 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. Follow up with me if you have any questions.

Activities, Learning Assessments, and Expectations for Students

Before Class: Complete all listed readings before class begins each day. Lectures will be brief and will cover course material, but you'll only develop a deep enough understanding of the material for tests, assignments, projects, and discussion by completing the assigned readings. You are responsible for keeping up with readings per the schedule in the syllabus. You are responsible for setting your own reading pace to be prepared for class discussions and in-class assignments. You are responsible for knowing where we are in our class discussions.

Attendance: Your attendance will be part of your participation in this class. I expect students to come to all class meetings unless there is a university-accepted reason you cannot (e.g., illness). Much of the learning for the course and a significant amount of project work 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 in-class assignments. Come to class on time.
- Absences: If you have to miss a class due to an illness or similar reason, contact me before the class begins.

During Class: We will have lectures, discussions, and hands-on activities during class. Please bring pens, papers, and assigned reading with you. Students should participate in class discussions and welcome the participation of others.

Let's Be Creative: As you will learn in the course, the User-Centered Design process can be used to inform the design of a wide variety of artifacts – including classes! This class is an ongoing design project where we'll explore new ways to engage with the material. Therefore, there are several things I will ask of you:

- Come ready to participate.
- Be open to trying different approaches.
- Be patient with the iterative process.
- Share your ideas and thoughts about class activities – I will solicit feedback throughout the semester.

The following activities will be graded

In-Class Assignments: There will be in-class assignments to complete during most class periods. Most of these assignments have been designed to contribute to your team's User-Centered Design project. They will also allow me to help with the progress of your team project and answer your questions.

Participation: Your participation grade will reflect the amount of participation you contribute to course discussions and in-class activities, and on how you engage with and listen to others. Everyone begins the course with full in-class participation credit, and I hope all of you will retain it to the end. However, deductions will be made for shortcomings in your participation (e.g., being absent when your team needs you for an in-class activity).

Team Project: You will work in teams of 3-5 students on a semester-long User-Centered Design project. The project will involve defining a user problem to be solved, exploring user context, gathering relevant data, hypothesizing solutions, developing design prototypes, testing your hypotheses, analyzing research data, evaluating your findings, making recommendations, and presenting your results. The team project will account for 60% of your final grade.

Project Website: Your team needs to have an online space (of your choice) to upload deliverables as you carry out your team project. This site will be a valuable portfolio in future job searches. You will share your team site in the class as part of 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 fully 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. The evaluations of your peers will be factored into your grade.

Team Presentation: You will present your User-Centered Design project results at the end of the semester. Your 15 minute in-class presentation should highlight your projects' goals, processes, procedures, design outcomes, and recommendations. You should include your reflections on the successes and challenges you dealt with throughout your project. All students viewing the presentations will be expected to complete a feedback form, offering their insights into the strengths and weaknesses of the projects of their peers, based on the knowledge they've gained of user-centered design gained throughout the semester.

Individual Homework Assignments: In addition to the readings, you will receive hands-on homework assignments that will help with your learning.

Individual Website/Blog: You will need to set up a website or blog where you can capture observations and discoveries based on activities that you will be assigned. This can be a very simple space, similar to a diary.

ELMS Discussion Boards: There will be a number of discussion boards where you will earn participation points.

Mid-term Exam: A mid-term exam will be administered to test your understanding of the concepts and skills in user-centered design introduced in class, readings, and your hands-on experience with your project.

Final Exam: A final exam will be administered to test your understanding of the concepts and skills introduced throughout the course.

Other important information concerning learning assessments

Late Assignments: Assignments must be posted to ELMS or uploaded to your team and/or individual website 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 reduced by 15% after 11:59pm, and an additional 10% 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 three days late will not be accepted. 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 project, it is crucial to follow the assignment schedule.

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.

Course-Specific Policies

Set electronic devices down during class meetings. Laptops, phones, and tablets present an irresistible distraction and detract from the cooperative learning environment. Researchers have found that these distractions interfere with learning and active participation for both you and those sitting around you. For that reason, put your laptops away and turn off your phones during class meetings (except when required for DSS accommodations). When a computer is needed to accomplish a class objective for the day, I will let you know.

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

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 **team assignments**, you should submit a reflection on the work your group did on the day you missed. **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.

Communicating by email. All email concerning the class should be addressed to me. I will make every effort to answer you in a timely fashion. However, it's possible there will be more than a 24 hour gap between when you send me an email and the time I respond. Help me triage my email and get back to you faster by including "INST 362 User-Centered Design" in the subject line of your email.

Office hours. I hold in-person office hours on Mondays from 11:30 - 12:30 at the Black Lion Cafe, which is near the Shady Grove campus at 9705 Traville Gateway Drive. I recommend emailing me ahead of time to arrange to meet. I'm also available to confer by phone at other times by appointment.

Showing respect. You are expected to show respect to all people and projects in class. For example, when you evaluate others' ideas or other teams' designs, show your respect for their effort and design, and then provide your comments or suggestions in a way that helps forward their work. Follow a "Yes, And" approach to interacting with your colleagues (and later on with your clients). See Bob Kulhan's explanation of this approach at <https://www.youtube.com/watch?reload=9&v=DphjhudlZis>.

Get Some Help!

You are expected to take personal responsibility for your 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've already paid for it, and **everyone needs help**... All you have to do is ask for it.

Grades

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 getting there.

All assessment scores will be posted on the course ELMS page. I'm happy to discuss any of your grades with you, and if I've made a mistake I will correct it. If you would like to review your grades, or have questions about how something was scored, please email me to schedule a time for us to talk. Any formal grade disputes must be submitted in writing and within one week of receiving the grade.

Remember that grades are indicators of your progress towards mastering the material and becoming proficient at your practice. In the end, grades are just signifiers. And while the letter seems important while you're in school, it's the mastery that will be of actual value to you in your career outside of school. Therefore, don't panic about grades.

Do the work, participate in class, engage with your instructor and fellow students, and focus on making sure you get out of this course what you've come here for.

Assessments	Number	Points	Weight
Homework: individual out-of-class assignments	5	50	5%
Participation/In-class Assignments: individual and group assignments and contributions to class discussions	30	150	15%
Team Project: individual and team assignments to produce team project outputs			
Project Assignment 1. Project Concept/Research Memo	1	100	10%
Project Assignment 2. Research Findings & Analysis	1	100	10%
Project Assignment 3. Design – (multiple parts)	1	100	10%
Project Assignment 4. Prototyping – (multiple parts)	1	100	10%
Project Assignment 5. Cross-Team Evaluations	1	50	5%
Project Assignment 6. Project Presentation	1	100	10%
Project Assignment 7. Project Website	1	50	5%
Midterm Exam	1	100	10%
Final Exam	1	100	10%
TOTAL		1000	100%

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 \neq 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 – 92.9%	-	80 – 82.9%	-	70 – 72.9%	-	60 – 62.9%		

Course Schedule

DOET = Design of Everyday Things

OTUX = Observing the User Experience

IOR = It's Our Research

CDE = Contextual Design Evolved

Note: This is a tentative schedule, and subject to change as necessary. Monitor the course ELMS page for current deadlines.

Class	Date	Read/Watch Before Class	During Class	Do Before Next Class	Assignments Due (11:59pm)
UNDERSTAND					
1 Mon	1/28		Introduction to Course Overview of UCD Overview of Design Thinking Class engagement expectations Team Project Preview In-class: Best Class/Worst Class In-class: What I want from course	Set up individual website/blog ("diary") Start a Design Thinking Go-Kit	1/28 Post diary URL (ELMS) What I want from this course (Diary)
2 Wed	1/30	DOET Ch. 1 (pp. 1-10) Ch. 6 (pp. 217 – 236)	Design of Everyday Things Everyday UX Fails Design Thinking User-Centered Design process In-class: Mockups Game In-class: Problems to solve		1/30 Problems to solve (Padlet) Skills Survey (Google Form) 2/2 Everyday UX fails (diary)
3 Mon	2/4	IOR: Ch. 3 (67-98) (optional) OTUX Ch. 1, Ch. 2 (pp. 3-19) Ch. 6 (pp. 95 – 139)	Review of Class Everyday Fails Research Planning/Research Memo Research Methods: Interviews Team Assignments In-class: Team project brainstorm		

4 Wed	2/6	OTUX: Ch. 4 (47-72)	<p>Research Planning/Research Memo</p> <p>Project Concept</p> <p>"We Believe" Hypothesis Statement</p> <p>In-class: Discuss Nano usability results</p> <p>In-class: Team project concept development</p>	<p>Set up team website ("project site")</p> <p>Conduct Nano usability test</p>	<p>2/9 Post project URL (ELMS)</p> <p>Results of Nano Usability (diary)</p> <p>Everyday UX fails (diary)</p>
5 Mon	2/11	<p>CDE Ch. 1, Ch. 2, Ch. 3 (pp. 1-20)</p> <p>Field Studies Nielsen Norman Group</p>	<p>Everyday Fails</p> <p>Research Methods</p> <ul style="list-style-type: none"> - Field Studies/Contextual Inquiry - Guerilla User Testing <p>In-class: Team finalize Project Concept and Research Memo</p>		<p>2/11 Project Concept/Research Memo (project site)</p>
6 Wed	2/13	OTUX Ch. 8, Ch. 9 (pp. 179-242)	<p>Research Methods</p> <p>Analysis Methods</p> <ul style="list-style-type: none"> - Qualitative and quantitative - Expert review - Consolidation and ideation <p>In-class: Team select methods, detailed planning for research</p>	Conduct research	<p>2/16 Everyday UX fails (diary)</p>
7 Mon	2/18		<p>Everyday Fails</p> <p>Research Check-in</p> <p>In-class: Team initial findings</p> <p>In-class: Group research discussion</p>	Conduct research	<p>2/18 Research process artifacts (project site)</p>
8 Wed	2/20	OTUX Ch. 17 (pp. 479-530)	<p>Models for Designing and Communication</p> <ul style="list-style-type: none"> - Personas - Scenarios - Mental Models - Affinity Diagrams - Ecosystem Diagrams - Content Models <p>Research Check-in</p> <p>In-class: Team draft personas</p>	Conduct research	<p>2/23 Personas (project site)</p>

9 Mon	2/25	CDE Ch. 4 (pp. 21-51) OTUX Ch. 14 (pp. 423-451) Some Basics of Statistical Analysis handout	Analysis - Qualitative and quantitative - Expert review - Consolidation and ideation "Extracting Interaction Design Requirements" In-class: Team Affinity Diagram	Complete research Conduct analysis	2/25 Affinity Diagram (project site) Retrospective (diary)
10 Wed	2/27		Analysis Check-in In-class: Team analysis In-class: Team hypothesis assertions	Complete analysis	3/2 Research findings analysis (project site)
11 Mon	3/4	Readings TBD	Ethical Design - Accessibility - Diversity		
12 Wed	3/6	Hobbs/Fenn Wicked Ethics	Ethical Design continued - Wicked Problems In-class: Group Scenario Creation Tool for Ethical Design		3/6 Retrospective (diary)
13 Mon	3/11		MIDTERM EXAM		
EXPLORE					
14 Wed	3/13	Readings TBD	Design Thinking, Ideation, and Sketching Recap - Personas - Scenarios - Mental Models - Affinity Diagrams - Ecosystem Diagrams Sketchnoting In-class: Team 10+10 Design Thinking	Sketchnote a lecture	3/16 Sketchnotes (diary)
<i>Spring Break - 3/16 - 3/22</i>					
15 Mon	3/25	Readings TBD	Design Thinking, Ideation, and Sketching		3/25 Sketching exercises (diary)

			Warm up to sketching In-class: Sketching exercises		
16 Wed	3/27	Resmini Cross Channel Ecosystems Stanford d.School DT Bootcamp Cross-channel Heuristic	Design Thinking, Ideation, and Sketching Ecosystem Diagrams Journey Mapping In-class: Ecosystem Diagram		3/30 Ecosystem Diagram (project site)
17 Mon	4/1	Indi Young Mental Models	Design Thinking, Ideation, and Sketching Mental Models Scenarios In-class: Mental Modelling Team Activity		4/1 Mental Model (project site)
18 Wed	4/3	Lovinger, Content Modelling Hane/Atherton, Designing Future-Friendly Content	Design Thinking, Ideation, and Sketching Content Models In-class: Content Model Exercise		4/6 Content Model (diary)
19 Mon	4/8	Presenting low-fidelity prototypes Nielsen Norman Group UX Prototypes Nielsen Norman Group	Prototyping Recap - 10+10 - "We Believe" Statement In-class: Make-a-thon testable prototype		4/8 Make-a-thon Process and Products (project site)
20 Wed	4/10		Prototyping In-class: Team refine testable prototype In-class: Team User Test Plan	Test prototype with users	4/10 Retrospective (diary)
MAKE					
21 Mon	4/15	McDaniel Design Criticism and the Creative Process Berkun How to Run a Design Critique Treehouse Blog, The Art of the Design Critique	Iteration - User Testing - Peer Design Criticism - Implementation In-class: Group discussion of prototype testing In-class: Team plan for Design Critique		4/15 Artifacts, process, and outcomes of prototype and testing (project site)

22 Wed	4/17	Heuristic Evaluation handout	Test, Iterate, Design Heuristic Evaluation Cross-Channel Heuristic	Conduct Heuristic Evaluation	4/20 Heuristic Evaluation (ELMS)
23 Mon	4/22		UX Evaluation/Design Critique 1 In-class: Evaluation of Other Teams' Prototypes	Assemble materials for Design Critique	
24 Wed	4/24		UX Evaluation/Design Critique 2 In-class: Evaluation of Other Teams' Prototypes		4/27 Cross-Team Evaluations
25 Mon	4/29	OTUX, Ch. 17 (pp. 479-530) IOR, Ch. 5 (pp. 149-207) (optional) Lightning Talks handout	Communicating Results In-class: Presentation organization		
26 Wed	5/1		Communicating Results In-class: Presentation organization		
27 Mon	5/6		Communicating Results In-class: Presentation organization		5/6 Team presentation (project site) ALL teams' work is due
28 Wed	5/8		Project Presentations 1		
29 Mon	5/13		Project Presentations 2 In-class: Retrospective		5/15 Finalize project site
30 TBD	5/16-2 2 TBD		Final Exam (10:30 – 12:30)		

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.