Course Syllabus

User-Centered Design

INST 362
Spring 2020

Learning Outcomes

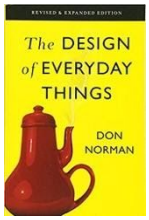
This course is an introduction to user-centered design (UCD) methods, particularly as they can be applied to the development of software and web products, but also extending to the design of non-digital products and services. This course focuses on how UCD connects psychology, information systems, computer science, and human factors. The course will introduce you to theories and practical methods for understanding, designing, and building products, which will enable you to create systems and services that work well and solve problems for people. Topics will include user research, analysis, ideation, prototyping, testing, and implementation. You will learn methods for storytelling, sketching, evaluation, critique, and communicating design ideas in a team and to clients. Assignments will culminate in a single, comprehensive portfolio project. There will also be individual assignments and exams to help you master 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-centered design.
- Apply key UCD research and analysis methods, such as user interviews, surveys, contextual analysis, storyboarding, experience design, persona development, sketching, and competitive analysis.
- Appropriately use UCD artifacts, including flow diagrams, wireframing, and paper prototypes.
- Demonstrate a full and iterative cycle of UCD activities, from problem identification through discovery, design, and delivery of a final product.

Required Resources

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



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

Prof. Stacy Surla
ssurla@umd.edu

Class:
Mondays
9:00 - 11:45
Biomedical Sciences and Engineering (BSE) building
Room 3308

Office Hours
12:00-1:00 Monday
BSE Cafe
And by appointment

Teaching Assistant
David Biel
dbiel@umd.edu
Office hours TBD

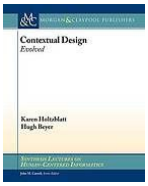
Prerequisites
PSYCH 100; INST201 or INST301[1]; INST 326

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's a link with guidance on writing professional emails (ter.ps/email).

[1]Must 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 cover topics that are timeless in this profession. You can expect to refer to these books 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 and activities before class begins each week. Lectures will be brief and will cover course material, but you'll only develop a true understanding of the material for tests, assignments, projects, and discussions if you complete the assigned readings and activities. You are responsible for keeping up with assignments per the schedule in the syllabus and being prepared for class discussions and in-class activities.

Attendance: Your attendance is 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 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.

- Team project: Be prepared to work in your team during classes. Welcome the participation of others.
- Devices down: Refrain from using your cellphone or laptop in class, other than for specified activities.

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 and make adjustments to the course throughout the semester.

The following activities will be graded

In-Class Assignments: There will be in-class assignments during most class periods. Many of these assignments have been designed to contribute to your team's UCD project. They will also allow me to support 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.

> Team 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 can be a valuable portfolio in future job searches.
>
> Collaboration: You are expected to work collaboratively in your team 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 student will **individually** submit confidential Team Member Evaluations at several points during the semester to report the relative effort and contribution of each team member, including yourself, to 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 will 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. Each student will provide feedback on their peers' presentations, offering insights into strengths and areas for improvement, based on their knowledge 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 online discussions 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. Any extra credit opportunities that arise during the semester (e.g. optional participation in UCD-related university activities) will be offered to the entire class.

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 coordinate with your team to make up the work you missed. **Make up exams** will only be given for excused absences that are proven by relevant paperwork (e.g., a doctor's note).

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. 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 12:00-1:00 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. 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 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'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	15	300	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 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 – 92.9%	-	80 – 82.9%	-	70 – 72.9%	-	60 – 62.9%		

Course Schedule

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

Week	Date	Topic 1	Topic 2	Readings/ Videos for this Class	During Class	Do Before Next Class	Assignments Due	Module/ Segment
UNDERSTAND								
1	1/27	Course Overview	The Design of Everyday Things	Design of Everyday Things Ch 1, Ch 6	Goals for this course UCD overview Class engagement expectations Team Project Preview In-class: Best Class/Worst Class In-class: What I want from course Everyday UX Fails Design Thinking User-Centered Design process In-class: Mockups Game In-class: Problems to solve	Set up an individual website/blog ("diary") Start a Design Thinking Go-Kit	1/29 Post diary URL (ELMS) 1/29 What I want from this course (diary) 1/29 Problems to solve (Padlet) 2/1 Skills Survey (Google Form) 2/1 Everyday UX fails (diary)	Module 1 Empathize
2	2/3	Problem Selection	Research Planning	Observing the User Experience Ch 1, 2, 6 It's Our Research Ch 3 (optional)	Review of Everyday UX Fails Team Assignments Research Planning/Research Memo In-class: Team problem brainstorm	Set up team website	2/8 Post team website URL (ELMS) 2/8 Post team's Problem Statement (team site) 2/8 Everyday UX Fails (diary)	
3	2/10	Contextual Design	Conducting Research 1	Observing the User Experience Ch 4 Contextual Design Evolved Ch 1-3 Context Inquiry NNg video	Contextual inquiry Research methods In-class: Interview practice In-class: Interview Guide In-class: Team project concept development	Conduct research	2/15 Contextual Inquiry Write-up 2/15 Everyday UX Fails #3 (Diary)	

4	2/17	Conducting Research 2	Heuristic Evaluation	Observing the User Experience Ch. 8, Ch. 9 Finding Participants for User Research, Gov.UK Service Manual Getting Guerrilla With It, Unger and Warfel Heuristic Evaluations and Expert Reviews, Usability.gov How to Conduct a Heuristic Evaluation, Nielsen Norman Group	Heuristic evaluation In-class: Discuss research findings	Conduct research	2/22 Research Memo (team site) 2/22 Anonymous Peer Reviews #1 (ELMS) 2/22 Research process and artifacts (team site) 2/22 Heuristic Evaluation of volunteer website (ELMS)	
5	2/24	Modeling	Analysis	Contextual Design Evolved Ch. 4 Observing the User Experience Ch 14, Ch 17 Some Basics of Statistical Analysis (Readings folder)	Models for Designing and Communicating In-class: Research Worked/Hard/Different In-class: Team initial findings In-class: Group research discussion In-class: Team draft personas In-class: Team draft scenarios Analysis - Statistics - Ethnographic Analysis - Affinity Diagramming In-class: Team Affinity Diagram	Complete initial affinity mapping and analysis	2/29 Post Personas (team site) 2/29 Post Affinity Diagram (team site) 2/29 Post Scenarios (team site)	Module 2 Define
6	3/2	Ethical Design	Sketchnoting	Ethnographic Data Analysis, Rae Wicked Ethics, Fenn & Hobbs Four Ethical Issues of the Information Age, Mason The Sketchnote Handbook, Mike Rohde. Chapter 4	Designing for Difference - Accessibility - Diversity - Ethics and UX In-class: Discussion Design Thinking, Ideation, and Sketching In-class: Sketchnote	Sketchnote a lecture	3/7 Designing for Difference Discussion (ELMS) 3/7 Post your sketch (diary)	

				American Health Care (4 napkin explanation), Dan Roam How to make a sketchnote, Agata Jakuszko	This Lecture In-class: Sketching exercises			
7	3/9		MIDTERM EXAM			Complete research findings report	3/14 Retrospective (diary) 3/14 Research Findings/ Analysis Report (ELMS)	
	3/15	- 3/22	SPRING BREAK					
EXPLORE								
8	3/23	Brainstorming Hypotheses	Brainstorming Solutions	None	Design Thinking, Ideation, and Sketching In-class: "We Believe" Statement In-class: Reverse Assumptions Team 10+10 Design Thinking	Complete hypothesis and solution statements	3/28 "We Believe" Statement (team site) 3/28 10+10 (team site)	Module 3 Brainstorm and Prototype
9	3/30	Prototyping 1	Prototyping 2	Sketching and Paper Prototyping, Google for Startups UX Prototypes Nielsen Norman Group Rapid Prototyping Google Glass	Prototyping In-class: Make-a-thon testable prototype		4/4 Quiz: Rapid Prototyping (ELMS) 4/4 Make-a-thon Process and Products (team site) 4/4 Retrospective #2 (diary)	
10	4/6	Usability Testing	Accessibility	Usability testing with 5 users Nielsen Norman Group (3 videos) WCAG Quick Guide (video) Diverse Abilities and Barriers (video) Disability Sensitivity Training (video)	Usability Testing In-class: Team refine testable prototype In-class: Team User Test Plan	Test prototype with users	4/10 Prototype User Test Plan (team site) 4/10 Peer Reviews #2 (ELMS)	Module 4 Test
11	4/13	No Class - Continue Research			NO CLASS	Test prototype with users	4/18 Artifacts, process, and outcomes of prototype and testing (team site)	

MAKE								
12	4/20	Content Strategy and Working in UX	Communicating Results	Rachel Lovinger, Content Modelling: A Master Skill Hane/Atherton, Designing Future-Friendly Content OTUX, Ch. 17 (pp. 479-530) IOR, Ch. 5 (pp. 149-207) (optional) Lightning Talks handout	Content Strategy In-class: Content Strategy Exercise Communicating Results In-class: Presentation organization	Assemble materials for Project Presentation	4/25 Content Strategy (team site)	Module 5 Implement
13	4/27	Evaluation and Critique	Presentation Organization	McDaniel Design Criticism and the Creative Process Berkun How to Run a Design Critique Treehouse Blog, The Art of the Design Critique How to Create a UX Design Portfolio Create a Killer UX Portfolio	Evaluation and Critique In-class: Presentation organization In-class: Team plan for Design Critique In-class: Prepare finalized team site	Assemble materials for Project Presentation	5/2 Team presentation - ALL teams' work is due (ELMS)	
14	5/4	Project Presentations	Project Presentations		Project Presentations 1	Cross-Team Evaluations	5/9 Cross-Team Evaluations (ELMS)	
15	5/11	Project Presentations	Exam Study Session		Project Presentations 2 In-class: Retrospective Final Exam practice session	Cross-Team Evaluations	5/16 Finalize team site (team site) 5/16 Cross-Team Evaluations (ELMS) 5/16 Peer Reviews #3	
	5/18	Date TBD	FINAL EXAM					

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 will be made to the course schedule, deadlines, and assignments based on the duration of the closing and the specific dates missed.