



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 using an iterative and user-centered design process.

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)
ISBN # 9780123852410

Prof. Ge Gao

gegao@umd.edu

Class

Location ITV 1111
Monday 11:00-11:50am
Wednesday 11:00-11:50am
Friday. 11:00-11:50am

Office Hours

Open by appointment
Hornbake South, Rm 2123A
Monday 2:00-3:00pm

Teaching Assistants

Daniel Pauw
dpauw@umd.edu

Prerequisites

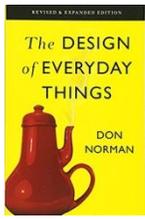
PSYCH 100; INST201 or INST301¹; INST 326

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

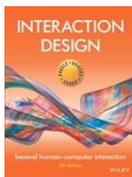
Recommended Resources



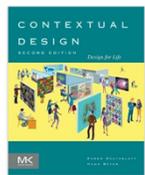
The Design of Everyday Things: Revised and Expanded Edition
Norman, D.A.
2013
Available online through UMD library



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)
Available in print through UMD library



Contextual Design, Second Edition: Design for Life
(Interactive Technologies)
Holtzblatt, K. & Beyer, H.
Second Edition (2017)
Available online through UMD library

University Policies & Resources

As a student, you have the responsibility to be familiar with and uphold the Code of Academic Integrity and the Code of Conduct. You also have the responsibility to notify your course instructors in a timely fashion regarding academic accommodations related to absences and accessibility, as indicated below.

As a student, you have the right to know the expectations set by University Policy. The University of Maryland values the diversity of its student body and is committed to providing a classroom atmosphere that encourages the equitable participation of all students.

The University policies outlined at [this link](#) are particularly relevant to your experience in academic courses. Topics that are addressed within these various policies include academic integrity, student and instructor conduct, accessibility and accommodations, attendance and excused absences, grades and appeals, copyright and intellectual property.

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 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 potentially in-class assignments. Please come to class on time.

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. Students should 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: - 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! As such, you can view this class as an on-going design project as I try and figure out new and better ways to have you engage with the material. 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 – 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 shortcoming (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, gathering user experience 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, based on their knowledge of user-centered design gained throughout the semester, offering their opinion about the strengths and weaknesses of the projects.

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 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

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 both you and those sitting around you. For that reason, the use of computers and phones will not be permitted during class meetings (except when required for DSS accommodations). If a computer is needed to accomplish a class objective for the day I will provide it or give you advanced notice to bring one with you. Feel free to reach out to me if you wish to discuss this policy further.

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. 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.

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		5%
Participation/In-class Assignments: individual and group assignments and contributions to class discussions	Varies	5		15%
Team Project:				60%
Project Assignment 1. Project Concept Statement	1	10	10	5%
Project Assignment 2. Contextual Inquiry & Analysis	1	100	100	10%
Project Assignment 3. Design – Part 1 & 2	1	100	100	10%
Project Assignment 4. Prototyping – Part 1 & 2	1	100	100	10%
Project Assignment 5. Evaluation	1	100	100	5%
Project Assignment 6. Project Presentation	1	100	100	10%
Project Website	1	100	100	10%
Midterm Exam	1	100	100	10%
Final Exam	1	100	100	10%
Total Points:				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%
-	90 - 93%	-	80 – 82.9%	-	70 – 72.9%	-	60 – 62.9%
						F	<60.0%

Course Schedule

UX = The UX Book. DOET = Design of Everyday Things. CDE = Contextual Design Evolved. OTUX = Observing the User Experience

TIMELINE AND MATERIALS		ACTIVITIES AND IN-CLASS DUE ASSIGNMENTS	BEFORE-CLASS DUE ASSIGNMENTS
Class 1 Jan 28, Monday		Overview Course & Project/Class Expectations/User-Centered Design <u>In-class assignment:</u> Experience/skills and project interests survey	
Class 2 Jan 30, Wednesday	DOET Ch. 1, pp. 1-10 Ch. 6, pp. 217-236	Design of Everyday Things Design Thinking/User-Centered Design process	
Class 3 Feb 01, Friday		Project Workshop Sit as teams! <u>In-class assignment:</u> Team & topic selection	
Class 4 Feb 04, Monday	OTUX Ch. 6, pp. 95-139	Universal Tools Recruiting and Interviewing	Individual HW 1. Design Analysis
Class 5 Feb 06, Wednesday	UX Ch. 2, pp. 47-60 Ch. 3, pp. 96-98	Introduction to UX The UX Process Lifecycle Template	
Class 6 Feb 08, Friday		Project Workshop Sit as teams! <u>In-class activity:</u> Concept development	
Class 7 Feb 11, Monday	UX Ch. 3, pp. 87- 128	Contextual Inquiry and analysis Ways to Know Your Users Better	Project Assignment 1. Concept Statement
Class 8 Feb 13, Wednesday		Contextual Inquiry and analysis Ways to Know Your Users Better	Individual HW2. CITI Training
Class 9 Feb 15, Friday		Project Workshop Sit as teams! <u>In-class assignment:</u> Project proposal and team website presentation	
Class 10 Feb 18, Monday	UX Ch. 4, pp. 129-160	Contextual Inquiry and analysis Things to Learn from the Context	
Class 11 Feb 20, Wednesday		Contextual Inquiry and analysis Things to Learn from the Context	
Class 12 Feb 22, Friday		Project Workshop Sit as teams! <u>In-class activity:</u> Contextual inquiry and contextual analysis	
Class 13 Feb 25, Monday	UX Ch. 5, pp. 161-180	Extracting Interaction Design Requirements	

Class 14 Feb 27, Wednesday		Extracting Interaction Design Requirements	
Class 15 Mar 01, Friday		Project Workshop Sit as teams! <u>In-class activity:</u> Requirements extraction	
Class 16 Mar 04, Monday	UX Ch. 7, pp. 251-298	Design Thinking, Ideation, and Sketching Persona	Project Assignment 2. CI and CA
Class 17 Mar 06, Wednesday		Design Thinking, Ideation, and Sketching Empathy Map	
Class 18 Mar 08, Friday		Project Workshop Sit as teams! <u>In-class assignment:</u> Project status update presentation (context and requirements)	
Class 19 Mar 11, Monday		Spotlight on UX Research/Researchers	
Class 20 Mar 13, Wednesday		Midterm Review	
Class 21 Mar 15, Friday		Midterm Exam	
SPRING BREAK WEEK, MAR 17-24			
Class 22 Mar 25, Monday	UX Ch. 8, pp. 299-332	Mental Models and Conceptual Design Designers vs. Users	
Class 23 Mar 27, Wednesday		Mental Models and Conceptual Design Designers vs. Users	
Class 24 Mar 29, Friday		Project Workshop Sit as teams! <u>In-class activity:</u> Persona, ideation, and sketching	
Class 25 Apr 01, Monday		Spotlight on UX Research/Researchers	Individual HW3. Mini Project
Class 26 Apr 03, Wednesday	UX Ch. 9, pp. 333-358	Design Production Storyboards and Wireframes	
Class 27 Apr 05, Friday		Project Workshop Sit as teams! <u>In-class activity:</u> Storyboard and wireframes	
Class 28 Apr 08, Monday	UX Ch.11, pp. 391-426	Prototyping Paper prototyping	Project Assignment 3. Design
Class 29 Apr 10, Wednesday		Prototyping 3D prototyping	
Class 30 Apr 12, Friday		Project Workshop Sit as teams!	

		<u>In-class activity</u> : Paper prototyping and testing	
Class 31 Apr 15, Monday		Prototyping WoZ prototyping	Individual HW4. Reflection 1
Class 32 Apr 17, Wednesday		Spotlight on UX Research/Researchers	
Class 33 Apr 19, Friday		Project Workshop Sit as teams! <u>In-class assignment</u> : Project status update presentation (storyboard and prototyping)	
Class 34 Apr 22, Monday	UX Ch.12, pp. 427-466	UX Evaluation Methods and Reflections	Project Assignment 4. Prototype
Class 35 Apr 24, Wednesday		UX Evaluation Methods and Reflections	
Class 36 Apr 26, Friday		Project Workshop Sit as teams! <u>In-class activity</u> : Evaluation on your prototype	
Class 37 Apr 29, Monday		Field Trip	Project Assignment 5. Evaluation
Class 38 May 01, Wednesday		Spotlight on UX Research/Researchers	
Class 39 May 03, Friday		Project Workshop Sit as teams! <u>In-class assignment</u> : Project status update presentation (plan for design iterations)	
Class 40 May 06, Monday		Tips on Effective Presentation	
Class 41 May 08, Wednesday		Project Presentation Day 1/2	Project Assignment 6. Presentation Slides
Class 42 May 10, Friday		Project Presentation Day 2/2	
Class 43 May 13, Monday		Final Review	Individual HW5. Reflection 2
FINAL EXAM WEEK, MAY 16-22 OUR TENTATIVE FINAL EXAM DAY, MAY 18, SATURDAY, 8:00-10:00AM			

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.