



User-Centered Design

INST 362
Spring 2020

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 additional 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/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 in iterative and user-centered design.
- Execute a design project from ideation to testing and iteration.
- Experience presenting design results in oral and written forms.

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.

Instructor

Ryan O'Grady

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TA

Yongle Zhang

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Class Meets

Online only

Spring Session 2020

January 27 - May 22

Office Hours

Always reachable via email

Course Communication

- Time-sensitive announcements will be posted on ELMS.
- Contact us via ELMS or by e-mail.
- We will reply to e-mails within 48 hours (not counting weekends). Generally we reply quicker, but wait 48 hours before re-sending an email.

Grades

We will grade each assignment within 7 days. Generally we will grade them much quicker.

Activities and Learning Assessments

Your final grade will be based on the following components (full details will be available on ELMS).

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
Discussion Prompts: Conversations/Responses to writing prompts.	Varies	10		10%
Interactive Learning & Reflection Assignments (ILRA): Activities with short writing assignments.	Varies	10		30%
UX Project:				40%
Project Assignment 1. Project Concept Statement	1	100	100	5%
Project Assignment 2. Contextual Inquiry	1	100	100	5%
Project Assignment 3. Contextual Analysis	1	100	100	5%
Project Assignment 4. Design – Part 1 & 2	1	100	100	5%
Project Assignment 5. Prototyping – Part 1 & 2	1	100	100	5%
Project Assignment 6. Evaluation	1	100	100	5%
Project Assignment 7. Project Presentation	1	100	100	10%
Midterm Exam	1	100	100	10%
Final Exam	1	100	100	10%

- **Discussion Prompts (10% total):** In a class that meets in person, I take attendance and host discussions—in an online only environment I post lectures and discussion prompts for students to engage in. To receive full credit for these discussions, you need to 1) engage with the prompt **and** 2) respond at least one time to classmates’ posts, though more than once is highly encouraged. You will be in groups for most discussions.
- **Interactive Learning & Reflection Assignments ILRAs (30% total):** These assignments vary and ask you to complete a “real world” activity, a reading, or a thinking exercise and then write a reflection on it.
- **UX Project (40% total):** You will work in teams on a semester-long User-Centered Design project.
 - Project Websites/Blogs: Each 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 (TME) to report the relative effort/contribution of each person including yourself for each major project deliverable. Evaluations will be factored into your grade. Receiving low scores from your team for multiple project assignments affects your total score.
 - Project Presentation: You will be expected to present your User-Centered Design project results. The presentations should be 15 minutes long highlighting your projects’ goals, processes, and procedures through the study, design outcomes, and evaluation results. This can be a video, slides, etc. You are to include your reflection on the successes and challenges throughout the procedures of your project.
- **Exams (20% total).** There are two exams (midterm and final) and each exam is worth 10% of your grade and must be taken before the end of the day on the specified Friday to receive credit, unless arrangements are made before the exam with me. Once you begin the exam, you’ll have a set amount of time to complete the entire exam. Exams comprise a mix of all course content; open until Friday midnight.
 - **Exams are open book/open note.** You are bound by the UMD honor code and will be asked to sign off to confirm you have not cheated during the exam. This includes directly talking with other students about the questions. You may use external resources (readings, lecture slides, notes, Web and Internet resources, etc.) during any exam, **but all answers must be in your own words.**

Grades

Grades are not given, but earned. Your grade is determined by your performance on the learning assessments in the course. 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 your concerns or questions. I am happy to discuss 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.

Final letter grades are assigned based on the total points earned. To be fair to everyone I have to establish clear, consistent standards, so please understand that being close to a cutoff is not the same as making the cut (89.99 vs. 90.00). It would be unethical to make exceptions for some and not others. I do not round grades up. **I will not respond to email requests for a grade bump at the end of the semester.** The cutoffs are as follows:

Final Grade Cutoffs									
+	98.00%	+	87.00%	+	77.00%	+	67.00%		
A	93.00%	B	83.00%	C	73.00%	D	63.00%	F	<60.00%
-	90.00%	-	80.00%	-	70.00%	-	60.00%		

Late Assignments

A late penalty will be applied to any assignment that is submitted late (starting one minute beyond the due date and time).

Late assignments will be graded according to the following formula:

Subtracted by one full letter grade (10 points) each day late; maximum of 3 days allowed

For example, if you turn in a 10-point assignment 1 day late, and earned a 100% on that assignment, your final grade for that assignment would be a 90 or 90%. If you turned in the same assignment 3 days late, and earned an 80%, your grade would be a 50 or 50%. Therefore, although your grade will take a serious hit if the assignment is late, **in this class it is always better to turn in an assignment late than to not do it at all.** Note that late assignments may not be graded quickly. After 3 days lateness, assignments can only receive a highest grade of 65.

Please prepare in advance so that you will not encounter technical difficulties that will result in your work receiving a late penalty. **Technical difficulties are not an excuse for late assignments — if you are having trouble submitting an assignment on Canvas, e-mail it to me before the deadline** to avoid a penalty. If you have a conflict with the due date, assignments can always be submitted early. **Generally speaking, illnesses are not an excuse for late assignments** because you will receive the assignments at least one week before they are due.

If you know you will not be able to meet an assignment deadline, contact me **before** the due date to explain why you will need to submit the assignment late; these will be evaluated on a case-by-case basis.

Exam Policy

If you **need to miss any of the two scheduled Friday exams** because of outside circumstances (e.g., a religious holiday, military duties, work/athletic team travel), you must email me **by Wednesday, February 12th** to reschedule your exam time. If you are sick on an exam day, you must provide me with a doctor's note to be excused ([see the UMD policies on absences](#)) and should email me before the exam time to let me know you're sick. If you miss an exam due to other circumstances, you will not be able to make up the exam.

Collaboration, Class Discussions, and Academic Integrity in INST 362

Any individually graded assessments must be completed independently. You are welcome (and highly encouraged) to study and discuss the course material with your peers, but providing or receiving exam answers or letting someone else contribute to your writing assignment constitutes academic dishonesty. Penalties for academic dishonesty can include a 0 on the assignment or an automatic failure and "XF" on your transcript. Class discussions require effort—you must read the document titled "Guidelines for Online Discussions" on ELMS.

Exams are open-book. This means that you may consult the readings or your notes (but not another person) as you take an exam.

Accommodations

Students with disabilities should inform me 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 you and me to determine and implement appropriate academic accommodations. Inclusion is one of the iSchool's core values, and I have attempted to make all materials and assignments accessible to people with varying abilities. However, if there is something else I can do to make the class more accessible please schedule a time to talk with me. This will benefit not only yourself but also my future students.

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> to 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.

Names/Pronouns and Self Identifications

The University of Maryland recognizes the importance of a diverse student body, and we are committed to fostering equitable classroom environments. I invite you, if you wish, to tell us how you want to be referred to both in terms of your name and your pronouns (he/him, she/her, they/them, etc.). The pronouns someone indicates are not necessarily indicative of their gender identity. Visit trans.umd.edu to learn more.

Additionally, how you identify in terms of your gender, race, class, sexuality, religion, and dis/ability, among all aspects of your identity, is your choice whether to disclose (e.g., should it come up in classroom conversation about our experiences and perspectives) and should be self-identified, not presumed or imposed. I will do my best to address and refer to all students accordingly, and I ask you to do the same for all of your fellow Terps.

Students in Need

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. For more information on UMD's Student Services, see <http://www.studentaffairs.umd.edu/student-life>

If you or someone you know feels unsafe, the university has resources (see list below). Read more about hate-based crimes here: https://ocrsm.umd.edu/files/Hate_Bias_FAQs_final.pdf

Name	Phone	Website
University Counseling Center	301-314-7651	www.counseling.umd.edu
University Health Center and Mental Health Services	301-314-8180	www.health.umd.edu
University of Maryland Chaplains		thestamp.umd.edu/memorial_chapel/chaplains
Office of Civil Rights and Sexual Misconduct	301-405-1142	www.ocrsm.umd.edu

Tips for a Successful Semester

1. Come to class (online discussions/lectures) prepared. This includes completing any assignments and readings *before* class and/or discussions. This also includes preparing effectively for the exams.
2. Take assignments seriously. Take watching lectures and responding to any prompts seriously. Alone, each of these types of assignments aren't worth many points but the missed points really do start to add up if you fail to complete assignments, plus it is excellent practice for the project and for course exams.
3. Struggling to keep up with all the reading? Check out [How to Read a Book](#), which provides highly useful advice on reading quickly without losing comprehension.
4. Struggling with classes in general? Talk to me, friends, family, and/or the counseling center. I will work with you to help you succeed. I'd much rather hear from you earlier rather than later. For example, it's better to email me ahead of the time (days, a week—not minutes or hours) something is due to tell me you are sick, have a personal emergency, etc., rather than waiting until the last minute or until after an assignment is due.
5. Engage in class discussions, activities, and assignments. Ask questions. Share your opinions. Be open to others' viewpoints, even if they're different than your own. This class is a place and a space for you to interact with your peers on all the topics assigned in class.
6. Have a question? Email me anytime. Make sure to include the course number (INST362) in the subject line to ensure I see it. I will respond within 48 hours (not counting weekends). Do **not** email me multiple times if I have not responded and fewer than 48 hours have passed. After that time, please send me a reminder email, as I am just as human as you and sometimes something will slip through my radar or attention.
7. Know your rights as an undergraduate student at UMD: [UMD Policies for Undergraduate Students](#)
8. Have fun!

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

SCHEDULE OF CONTENT

NOTE: These are a preliminary listing of readings. These may change and the final set of assigned lectures, readings, and assignments will be those listed in ELMS-Canvas.

WEEK	TOPIC	REQUIRED READINGS/ASSIGNMENTS DUE
1 1/27 – 2/2	Course Intro, Design Thinking and the User-Centered Design Process, Introduction to UX	<ul style="list-style-type: none"> • Read/Review Course Syllabus, Assignments, and Project Guidelines • The Design of Everyday Things by D.A. Norman, 2013: Ch. 1 (pp. 1-10) & Ch. 6 (pp. 217-236) • UX Book Ch. 1 sec. 1.1-1.3 (pp. 1-23) • DUE: WK#1 Lecture; ILRA #01 Class Intro; ILRA #02 Design Analysis; 01 Discussion Brainstorming Topic Ideas
2 2/3 – 2/9	Design Portfolios, Planning Interviews and Observations, Team and Topic Formation	<ul style="list-style-type: none"> • UX Book Ch. 3 sec 3.2 (pp. 87–98) • Participant Observation Field Guide • Informal Interviewing in Participant Observation • Conducting an Interview with Empathy • DUE: WK#2 Lecture; ILRA #03 CITI Training Certificate; ILRA #04 Interview Preparation; 02 Discussion Forming Groups
3 2/10 – 2/16	Contextual Inquiry, Understanding Disability and Cultural Norms; Project 1 Check-in	<ul style="list-style-type: none"> • Pill Bottle Case Study • <i>Disability Simulations - What Does the Research Say?</i> • Disability Sensitivity Training Video • Time to work on Project 1: Contextual Inquiry in project groups • DUE: WK#3 Lecture; ILRA #05 Case Study; 03 Discussion Web Accessibility; ILRA #06 Project Check-in #1; Extra Credit Assignment
4 2/17 – 2/23	Contextual Analysis	<ul style="list-style-type: none"> • UX Book Ch. 4.1 – 4.3 (pp. 129-144) • UX Book Ch. 4.4 (pp. 144-157) • DUE: WK#4 Lecture; Project #1: Contextual Inquiry; TME P1
5 2/24 – 3/1	Extracting Interaction Design Requirements	<ul style="list-style-type: none"> • UX Book Ch. 5 (pp. 161-180) • Affinity Diagramming • DUE: WK#5 Lecture; ILRA, Discussion, Project Check-in as assigned
6 3/2 – 3/8	Design Thinking, Ideation, and Sketching	<ul style="list-style-type: none"> • UX Book Ch. 7 (pp. 251-298) • DUE: WK#6 Lecture; ILRA, Discussion, Project Check-in as assigned; Project #2: Contextual Analysis; TME P2
7 3/9 – 3/13	MIDTERM	<ul style="list-style-type: none"> • DUE: WK#7 Lecture; Project #3: Concept Statement Midterm Exam online Friday 3/13
3/14 – 3/22		SPRING BREAK; NO WORK DUE

<p>8 3/23 – 3/29</p>	<p>Mental Models, Conceptual Design, and Personas</p>	<ul style="list-style-type: none"> • UX Book Ch. 8.1-8.3 (pp. 299-316) • UX Book Ch. 8.4-8.7 (pp. 316-332) • DUE: WK#8 Lecture; ILRA, Discussion, Project Check-in as assigned
<p>9 3/30 – 4/5</p>	<p>Design Production</p>	<ul style="list-style-type: none"> • UX Book Ch. 9 (pp. 333-358) • DUE: WK#9 Lecture; ILRA, Discussion, Project Check-in as assigned; Project #4 Part 1: Personas, Ideation, Sketching TME P4.1
<p>10 4/6 – 4/12</p>	<p>Prototyping</p>	<ul style="list-style-type: none"> • UX Book Ch. 11 (pp. 391-426) • DUE: WK#10 Lecture; ILRA, Discussion, Project Check-in as assigned; Project #4 Part 2: Mental Models, Conceptual Design, and Storyboards; TME P4.2
<p>11 4/13 – 4/19</p>	<p>Digital Prototyping, Wireframes, and UX Evaluation</p>	<ul style="list-style-type: none"> • UX Book Ch. 12 (pp. 427-466) • DUE: WK#11 Lecture; ILRA, Discussion, Project Check-in as assigned; Project #5 Prototyping Part 1: Paper Prototyping & Test Results; TME P5.1
<p>12 4/20 – 4/26</p>	<p>Rapid UX Evaluation</p>	<ul style="list-style-type: none"> • UX Book Ch. 13 (pp. 467–502) • DUE: WK#12 Lecture; ILRA, Discussion, Project Check-in as assigned; Project #5 Prototyping Part 2: Design of Low-fidelity Wireframes; TME P5.2
<p>13 4/27 – 5/3</p>	<p>Evaluation Reporting and Wrapping up UX Evaluation</p>	<ul style="list-style-type: none"> • UX Book Ch. 17 (pp. 593–610) and Ch. 18 (pp. 611–618) • DUE: WK#13 Lecture; ILRA, Discussion, Project Check-in as assigned; Project #6: Evaluation; TME P6
<p>14 5/4 – 5/10</p>	<p>Final Project Presentations Due</p>	<ul style="list-style-type: none"> • DUE: Project #7: Final Presentation; TME P7
<p>15 5/11 – 5/15</p>	<p>Study + Final Exam</p>	<ul style="list-style-type: none"> • DUE: Final Exam online Friday 5/15