

COMM 3545 Human-Computer Interaction & User Experience
Spring '20 – Last updated 1/6/20

Lecture: Journalism 216
Tuesday/Thursday 11:10-12:30am

Instructor: Dr. Kelly Garrett
3131 Derby Hall
email: garrett.258@osu.edu
Please include "Comm3545-AM" in the subject line

Office Hours: Monday 4:00 - 5:00pm + by appointment

Rationale and objectives

This course is an introduction to human-computer interaction (HCI) and user experience (UX). The goal of this class is to help you learn how to design usable interactive technologies. To that end, we will consider what constitutes good design, we will study a variety of ways to conceptualize design problems, we will examine how users' cognitive abilities and emotions influence design, and we will learn about interfaces.

The class is designed to complement Comm 3165: Evaluation & Usability Testing, which provides an introduction to research methods used in HCI and UX.

This class is worth 3 credit hours. According to OSU 3335-8-24 A-1, "One credit hour shall be assigned for each three hours per week of the average student's time, including class hours, required to earn the average grade of 'C' in this course." Thus, it is expected that you will spend an average of 9 hours per week for this course. We spend less than 3 hours in class; the remaining time should be devoted to reading, studying, and working on course assignments.

Course Objectives:

Students who successfully complete this course will be able to:

1. Explain the theoretical origins for the study of HCI/UX and their application to design
2. Apply communication concepts and theories to interactive technologies
3. Develop strategies for evaluating and designing interactive technologies
4. Provide you with the critical skills to analyze and interpret interactive technologies
5. Start developing a toolkit for understanding user experience design (UXD) and conducting UX-relevant research
6. Illustrate your understanding of these principles through practice

Required Readings:

Sharp, H., Rogers, Y., and Preece, J. (2019). Interactive Design: Beyond Human-Computer Interaction. (5th edition) West Sussex: John Wiley & Sons, Ltd. (**"ID" in schedule**)

Lidwell, W., Holden, K., & Butler, J. (2015). The pocket universal principles of design: 150 essential tools of artists, designers, developers, engineers, inventors, and makers. Beverly, MA: Rockport Publishers.

NOTE: The second book was inadvertently omitted from the bookstore's required reading list. Readings for the first few weeks will be posted on Carmen to give you time to get the book.

Other readings will be posted on CARMEN.

Copyright Disclaimer: The materials used in connection with this course may be subject to copyright protection and are only for the use of students officially enrolled in the course for the educational purposes associated with the course. Copyright law must be considered before copying, retaining, or disseminating materials outside of the course.

Policies and Expectations:

Class communication: I will post class updates, extra credit opportunities, and/or additional materials as announcements on Carmen and/or to your OSU email. Please check Carmen and read your email regularly (at least 2-3 times per week) because you are responsible for this information, just as you are responsible for information in class.

Participation is required. While sickness and unexpected emergencies arise from time to time, *regular* absence will hurt your grade. I routinely evaluate participation via in-class activities. **If you are absent on a day when there is an in-class activity, you will not receive credit for it.** It is not possible to make up missed in-class work, but everyone can miss up to two activities without penalty. I also encourage you to bring your textbook to class, so that you can consult it during appropriate in-class activities.

Written Assignments: Assignment due dates are listed in the tentative schedule, below. All assignments must be turned in to Carmen before the start of class on the day the assignment is due. Assignments should be submitted in one of the following formats: .doc, .docx, .rtf, or .odt. When there are paper formatting requirements for an assignment, they are described in the assignment description.

Late Assignments: It is your responsibility to confirm that your assignment has been successfully uploaded to Carmen. Anything submitted after that will be considered late. There will be a 15% score deduction the first day an assignment is late and an additional 15% deduction on the second day. After the second day, I will no longer accept the assignment.

Challenging a Grade: I am always willing to discuss your grades with you, but I will not do so during class time. To challenge a grade, you must wait 24 hours after the assignment is returned and then email me to make an appointment *within one week* of the assignment being returned to you. When we meet, you must present your concerns in writing and attach the graded paper, exam, or presentation. Please note that a challenge may result in grades being raised or lowered.

Technology: There are a variety of class activities that require that you use a computer. You may use the labs' laptops or your own computer for these activities. This is, however, the only time that you may use these devices. When not engaged in one of these activities, all laptops should be closed. No digital note taking here, please. Furthermore, the **use of cellphones in the classroom is strictly prohibited.** This

technology is distracting to you and to your peers. If I see a cellphone in your hand, I will ask you to leave.

Classroom Civility: We want to build a classroom climate that is comfortable for everyone. In a communication class, it is especially important that we (1) display respect for all members of the classroom, including the instructor and students; (2) pay attention to and participate in all class sessions and activities; (3) avoid unnecessary disruption during class time (e.g., having private conversations, reading the newspaper, doing work for other classes, etc.); and (4) avoid racist, sexist, homophobic, or other negative language that may unnecessarily exclude members of our campus and classroom. This is not an exhaustive list of behaviors; rather, they represent the minimal standards that help make the classroom a productive learning environment for all concerned.

Punctuality: Class begins on time every day so that all scheduled discussions and activities can be completed. You are expected to be punctual. If you are late for class on a student presentation day, do not enter the classroom while one of your peers is speaking or presenting. Please wait outside until there is a break between speeches or presentations.

Academic integrity policy: Each student in this course is expected to demonstrate academic integrity and to abide by the *Code of Student Conduct* (http://studentaffairs.osu.edu/resource_csc.asp and see <http://oaa.osu.edu/coamtensuggestions.html>). *Academic misconduct* includes, but is not limited to, (1) plagiarism (using others' work without citing/crediting them), (2) fabricating information or citations, (3) facilitating acts of dishonesty by others, (4) having unauthorized possession of past exam questions, (5) submitting work previously submitted to another course or work of another person, (6) tampering with the academic work of other students, and (7) cheating on quizzes/exams. Academic misconduct on any assignment will result minimally in receiving a zero on that assignment and may also lead to further disciplinary action. **Penalty for violation of the *Code of Student Conduct* can also be extended to include failure of the course and University disciplinary action.** It is your responsibility to be aware of the rules of academic dishonesty—ignorance is not a defense. ***When in doubt, talk to me.***

Academic Misconduct: It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term "academic misconduct" includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct <http://studentlife.osu.edu/csc/>

Course Requirements:

Course readings are essential to full participation. Doing the readings and reflecting on what you've read is required for this class. My lectures, our discussions, and the in-class activities all take this for granted. To ensure that you have done the reading before class, **there will be several pop quizzes this semester.** Quizzes will be short, and all quiz material will come from the day's reading. Quizzes cannot be made up, but I will drop your two lowest scores.

Assignments. There are three assignments for this class, each of which involves applying course

concepts to existing technologies. The first two you will complete on your own; the third will be done in collaboration with a classmate. You will practice thinking through a design problem space, evaluate a piece of technology introduced during class time, assess a voice-based phone reservation system, and propose improvements to an existing technology. A more detailed summary of the requirements for each assignment can be downloaded from Carmen.

Exam. There are two exams in this course. Exams questions will be generated from the material covered in class lectures *and* textbook readings. You are responsible for all readings, even those we do not discuss in lecture. The exam may include multiple choice, matching, fill in the blank, problem solving, and/or short answer questions.

Grading:

Class participation & pop quizzes	5%
<i>Assignments</i>	
Problem-space assessment	10%
Heuristic evaluation	10%
Redesign	15%
Midterm exam	25%
Final exam	35%

Other resources:

Columbus Web Group (<http://www.meetup.com/Columbus-Web-Group/>). If you are serious about a profession in ID/IXD/UXD/HCI/etc, talking to design professional is a must. Columbus is home to several groups, including this one. The Columbus Web Group hosts periodic Meet Ups, it sponsors a mentorship program geared toward students, *and* it is co-organized by an OSU SoC alum, Sean Doran. Check it out.

Interaction Design Associations of Central Ohio. IXDA is a global professional association (<https://ixda.org/>), and we are fortunate to have an active regional chapter right here in Columbus (<https://www.meetup.com/Columbus-IxDA-Group/>). The group sponsors numerous regular monthly events—I've heard great things about Chat n' Pancakes; it serves as a clearinghouse for news about the field; and the national group's website features a job board that lists jobs in Columbus, and across the country.

Student Academic Services (<http://advising.osu.edu/>). Arts and Sciences Advising and Academic Services' website provides support for student academic success. Information on advising issues such as tutoring, transfer credits, academic standing, and contact information for Arts and Sciences advisors can be obtained through this website.

Walter E. Dennis Learning Center (<http://dennislearningcenter.osu.edu/>). This is a free service available to all OSU students, and it has a proven track record of helping students succeed in college. Need a new study strategy? Better time management skills? This is the place to go.

The Writing Center (<http://cstw.osu.edu/writing-center>). This may be the last time in your life that you have easily accessible, free help available for your writing skills—use it. Being a good writer will give you an advantage in every walk of life, and if you are a Communication major, it is expected.

Strunk & White's *The Elements of Style*. If you are uncertain of what constitutes good writing, this classic book is very straightforward and extremely helpful. Find it at a used bookstore or on Amazon for less than \$5. It's well worth the investment.

PLEASE TAKE CARE OF YOURSELF (Mental Health Statement):

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. The Ohio State University offers services to assist you with addressing these and other concerns you may be experiencing.

If you are or someone you know is suffering from any of the aforementioned conditions, you can learn more about the broad range of confidential mental health services available on campus via the Office of Student Life's Counseling and Consultation Service (CCS) by visiting <http://ccs.osu.edu> or calling 614-292-5766. CCS is located on the 4th Floor of the Younkin Success Center and 10th Floor of Lincoln Tower. You can reach an on-call counselor when CCS is closed at 614-292-5766.

If you are thinking of harming yourself or need a safe, non-judgmental place to talk, or if you are worried about someone else and need advice about what to do, 24 hour emergency help is also available through the Suicide Prevention Hotline (Columbus: 614-221-5445 / National: 800-273-8255); or text (4hope to 741741); or at suicidepreventionlifeline.org

Accessibility accommodations for students with disabilities

The University strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please let me know immediately so that we can privately discuss options. You are also welcome to register with Student Life Disability Services to establish reasonable accommodations. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. SLDS contact information: slds@osu.edu; 614-292-3307; 098 Baker Hall, 113 W. 12th Avenue.

Tentative Course Schedule

Date	Topics	Readings	Assignment
T 1/7	Introduction Syllabus, overview of course material	Dunning-Kruger effect; IKEA effect; syllabus	
Th 1/9	What is HCI?	ID ch. 1; Accessibility	
T 1/14	Conceptualizing design	ID ch. 3	
Th 1/16	Conceptualizing design <i>Hands-on evaluation #1</i>	Saffer, 2005	
T 1/21	Design principles	Norman, ch. 1; Affordance; Visibility	
Th 1/23	Design principles	Form Follows Function; Mapping; Consistency	
T 1/28	Design principles	Accessibility; Constraints; Feedback; Forgiveness; Hick's Law; Signal-to-Noise	
Th 1/30	Interfaces	ID ch. 7	Problem-space assessment
T 2/4	Interfaces	Schneiderman et al. (pp. 224-232)	
Th 2/6	Theories <i>Hands-on evaluation #2</i>	Nass & Yen, ch. 2; Framing	
T 2/11	Theories	EBD (pp. 69-74; 204-210); Classical Conditioning; Operant Conditioning; Performance Load	
Th 2/13	Users: Cognition	ID ch. 4	
T 2/18	Users: Cognition	Depth of Processing; Entry Point; Five Hat Racks; Garbage In, Garbage Out; Horror Vacui; Legibility; Mnemonic Device; Recognition over Recall	
Th 2/20	Users: Cognition	EBD (pp. 41-50); Chunking; Interference Effects; Rosetta Stone; Serial Position Effects; Stickiness; Von Restorff Effect	Heuristic evaluation
T 2/25	Users: Affect	ID ch. 5; Shneiderman et al. (pp. 406-411); Biophilia Effect; Black, Blue, Green, Red, White, Yellow Effect; Errors; Mere Exposure Effect; Performance vs. Preference; Wabi Sabi	
Th 2/27	Users: Affect	Shneiderman et al. (pp. 416-421); Khatchadourian, 2015; Aesthetic-Usability Effect; Contour Bias; Cognitive Dissonance; Threat Detection	
T 3/3	Users: Individual motivations	EBD (pp. 145-161); Flow; Gamification; Supernormal Stimulus	
Th 3/5	MIDTERM EXAM		
T 3/10	No Class	Spring Break	
Th 3/12	No Class	Spring Break	

Date	Topics	Readings	Assignment
T 3/17	Users: Social	ID ch. 5; Immersion	
Th 3/19	Users: Social <i>Hands-on evaluation #3</i>	EBD (pp. 5-18); Shneiderman et al. (pp. 412-415); Anthropomorphism; Attractiveness Bias; Crowd Intelligence; Expectation Effects; Face-ism; Uncanny Valley	
T 3/24	Persuasive design	EBD (pp. 22-31); Harris, 2016; Nudge; Priming; Zeigarnik effect	
Th 3/26	Persuasive design	EBD (pp. 84-101; 182-194); Reciprocity; Scarcity; Shaping; Veblen Effect	
T 3/31	Design process	ID ch. 2; Confirmation Bias; Design by Committee; Development Cycle; Iteration; MAYA; Selection Bias; Sunk Cost Effect	
Th 4/2	No lecture	Watch "Story of the Ribbon" from 18m-1h12m (link on Carmen)	Complete worksheet during class time
T 4/7	Needs & requirements	ID ch. 11	
Th 4/9	Prototyping	ID ch. 12; Back of the Dresser; Prototyping; Satisficing	Redesign
T 4/14	Prototyping	TBD; Convergence; Scaling Fallacy	
Th 4/16	HCI applications	TBD	
M 4/27 FINAL EXAM @ 10-11:45AM			

References for reading not included in textbooks (all available on Carmen)

- Harris, T. (2016). How technology hijacks people's minds: From a magician and Google's design ethicist. *Medium*. Available at: <https://journal.thriveglobal.com/how-technology-hijacks-peoples-minds-from-a-magician-and-google-s-design-ethicist-56d62ef5edf3>
- Khatchadourian, R. (2015, Jan 19). We Know How You Feel. *The New Yorker*, 90(44).
- Nass, C., & Yen, C. (2010). *The man who lied to his laptop: What we can learn about ourselves from our machines*. New York, NY: Penguin.
- Nodder, C. (2013). *Evil by design: Interaction design to lead us into temptation*. New York, NY: Wiley & Sons.
- Norman, D. A. (1988). *The psychology of everyday things*. New York, NY: Basic Books.
- Saffer, D. (2005). *The Role of Metaphor in Interaction Design*. (Master of Design in Interaction Design), Carnegie Mellon University, Retrieved from http://www.odannyboy.com/portfolio/thesis/saffer_thesis_paper.pdf
- Schell, J. (2014). *The art of game design: A book of lenses*. Boca Raton, FL: CRC Press.
- Shneiderman, B., Plaisant, C., Cohen, M. S., Jacobs, S. M., & Elmqvist, N. (2017). *Designing the user interface: Strategies for effective human-computer interaction* (6th ed.). New York, NY: Pearson.
- Teehan, G. (2016). Reactions: not everything in life is likable. *Medium*. Available at: <https://medium.com/facebook-design/reactions-not-everything-in-life-is-likable-5c403de72a3f#hx56prn14>