COMM 3545 Human-Computer Interaction & User Experience (HCI & UX)

School of Communication | Spring 2025 | Section 18627

Tues & Thurs 2:20 PM - 3:40 PM | Journalism 216

In-Person Instruction

Instructor: Dr. Nicholas Matthews

- **Email**: Matthews.345@osu.edu (**Please include COMM3545 in subject line**)

- **Office**: 3062 Derby Hall

- **Office hours**: TBA. Meetings held in Zoom by default (Link to meeting room). Office meetings require an appointment.

Course description

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 UXr (i.e., research methods used in HCI and UX) and COMM 4511: User-Centered Communication Design, which provides an introduction to UXd (i.e., the design of websites and mobile applications from a UX perspective).

Course learning goals and outcomes

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

Mode of delivery

This course will be presented face-to-face (i.e., in-person).

Required materials

Textbooks

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

2. 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: chapters from this book are denoted by a + sign in the course schedule)

PDFs. I will provide PDFs of additional readings in the files section of Carmen. Please see the final section of the syllabus for a full list of all PDF readings.

Grading Plan

Category	Percentage of final grade
Midterm exam	30%
Final exam	30%
Essays	20%
Class Participation	20%

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Grading policy & scale

I use the standard OSU grading scale. I do not round/bump grades. If this course is required for you to graduate or to avoid academic probation/expulsion, I expect you to perform at your best to avoid an undesirable outcome. Be proactive. Be professional.

	B+ 87.00-89.99%	C+ 77.00-79.99%	D+ 67.00-69.99%
A 93.00-100%	B 83.00-86.99%	C 73.00-76.99%	D 60.00-66.99%
A- 90.00-92.99%	B- 80.00-82.99%	C- 70.00-72.99%	F 0-59.99%

Course Requirements

Essays

There are three essays for this class, each of which involves applying course concepts to existing technologies. You will practice thinking through a design problem space, evaluate a piece of technology, and propose improvements to an existing technology. I will release specifics about each assignment about 2 weeks prior to each due date.

Exams

There are two exams in this course. The final is (technically) cumulative. Exams questions will be generated from the material covered in class lectures and textbook readings. The exams include multiple choice, fill in the blank, and short essay questions. I will host a review session prior to each exam.

Participation

We will often perform graded in-class activities. If you are not present in class when there is an activity, you will not receive credit for it. However, I will excuse missed activities if you email me before class begins to let me know that you need to miss class. I excuse absences due to illness, emergency, and university-recognized activities (e.g., sports, religious observance, etc.). I do not require documentation to excuse an absence. If you email me after class begins, you may still earn an excused absence, but I will apply a participation penalty (-25% penalty after class begins then -2% for each additional hour that passes).

Communication Policy

Please...

- **Do not use Canvas messages/mail**. Use Buckeye email instead. Canvas messages cannot be tracked and they erase previous messages in the email chain. As a result, Canvas messages cannot be used as evidence of communication attempts.

- **Do not send unprofessional messages**. Please include your course number, a salutation, and your full name along with a courteous message.

- **Do not send emails that require immediate attention**. Messages will be answered within 24 hours of receipt on business days (Monday - Friday) during business hours (9am - 5pm). Be professional and plan ahead.

- **Do not send emails from a non-OSU email addresses**. Only messages from OSU accounts can be tracked. Non-OSU accounts are often identified as spam.

What to do if you have a question:

- **First source**: Course message boards. It is likely that your question has already been answered on the discussion boards. Please post to the appropriate board to ensure an accurate and swift answer.

- **Second source**: The instructor. If both the message boards and your TA cannot help you, contact me at matthews.345@osu.edu or visit my office hours (see top to syllabus for office hours info)

Course-Specific Policies

Deadlines. All deadlines are in Eastern Time (ET).

English. You forfeit all possible points for assignments not written/spoken in English.

Late work. You may submit essays late. Lateness penalties increase cumulatively. Submitting work 1 second after the deadline yields a -2% point penalty. For each additional hour after the deadline, you lose an additional -2%. This means that you may submit work (technically) up to 48 hours after the due date.

Unenrollment. OSU does not recognize unenrollment as a valid excuse for missing work. If you become unenrolled from the course for any reason, it is your responsibility to contact me and establish alternative means to submit work prior to the specified deadline. If you suspect that this policy will affect you, I recommend saving the syllabus or printing it out for reference.

Professionalism. You must ensure that the work you submit is correct and accessible. Submitting the wrong link, submitting to the wrong location, submitting files that are corrupt, the wrong version, the wrong format, missing components, the wrong file type, etc. is unprofessional. It is your responsibility to check the integrity of your work immediately following submission. If I cannot access your submission, you forfeit all points for your submission.

If your work is unprofessional, you may re-submit your work. If technical issues prevent you from re-submitting, you may email me your submission. If you email me work, the time that I receive your work will become the submission time used to evaluate lateness. After the deadline passes, you may re-submit work that you discover is unprofessional, but I will apply a lateness penalty to the final submission.

Artificial Intelligence (AI). You may use AI to help you understand topics, but not to replace your writing. If you use AI to inform your writing you must cite it like any other source (see guide), even if you merely paraphrase.

Please remember that AI hallucinates (i.e., it makes up content and sources), it references message boards and social media for answers, and anything you submit becomes owned by the company running the AI software. Given this, and because OSU considers the misuse of AI as academic misconduct, I encourage you to use it wisely.

More generally, consider that the typical question sent to AI can consume about 70 times more energy than the same question sent to a standard search engine. Concretely stated, a Google search uses enough power to illuminate a light bulb for 17 seconds but the same performed using AI uses enough power to illuminate the same light bulb for 20 minutes (source 1, source 2). Although AI seems like the future, using it carelessly makes our collective futures more uncertain by further straining resources.

As a final thing to consider, the more we use AI, the more pervasive and powerful it becomes. It may not seem problematic to use AI to speed up academic work, but it can make my job of evaluating your work difficult. Just imagine the opposite scenario: the professor who grades you using AI, the university who admits students using AI, or the employer who uses AI to decide whose resume to select. It can feel unfair and dehumanizing. Again, the more we use it, the more these (dystopian) scenarios become certainties. Tread carefully.

Technology issues. According to course requirements, you must have regular internet-connected access to a working computer with some form of data redundancy (e.g., One Drive). Remember that OSU's computer labs are available should you need them. Only system-level technological interruptions documented by OSU (see this page) excuse late or missing work.

If you experience a problem with OSU systems (e.g., email, Carmen, etc) not documented by OSU, you must raise a ticket with IT (see this page). If IT confirms your issue, we will recognize IT's confirmation as a valid excuse for missing work.

Grade appeals. You may send me an email to instigate a grade appeal within 1 week after the grade has been posted. An appeal is a formal process with explicit expectations. Appeals can result in an unchanged grade, a higher grade, or a lower grade. If you wish to appeal a grade, email me that you wish to appeal and then await further instructions.

Copyright disclaimer. The lectures and 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.

Course leave. If you become seriously ill or something happens to you that prevents you from participating in the course for an extended amount of time (e.g., mental illness or a friend's mental illness, taking care of an immediate family member, childbirth, etc.), you may apply for course leave. You must let the instructor know of your situation as soon as practical when you become aware of the need for leave to avoid point penalties (either the day you learn of the need or the next workday). Be proactive by letting us know asap if you think you need leave. We will not grant leave

retroactively. Course leave is similar to OSU's Family and Medical Leave (FML) and has many of the same rules ([see here for more information](#)). If you qualify for leave, we will allow you negotiate future deadlines and to make up missed work with the following point penalties:

- -0% for work due 6 days prior to notification

- -33% for work due 7-13 days prior to notification

- -66% for work due 14-20 days prior to notification

- -100% for work due > 20 days prior to notification

Discussion and communication guidelines

The following are my expectations for how we should communicate as a class. Above all, please remember to be respectful and thoughtful.

Tone and civility: Let's maintain a supportive learning community where everyone feels safe and where people can disagree amicably. The instructor and TA both work very hard to provide a positive learning experience. Please keep this in mind and remain civilized and respectful in your email and discussion board communications.

Citing your sources: When we have academic discussions, please cite your sources to back up what you say. (For the textbook or other course materials, please use APA style. For online sources, be sure to include a link).

Course technology policies

For help with your password, university e-mail, Carmen, or any other technology issues, questions, or requests, contact the OSU IT Service Desk. Standard support hours are available at https://ocio.osu.edu/help/hours, and support for urgent issues is available 24x7.

Baseline technical skills necessary for online courses

Basic computer and web-browsing skills

Navigating Carmen

Necessary equipment

Computer: current Mac (OS X), PC (Windows 10+), or equivalent Linux desktop/laptop with high-speed internet connection

Web cam and microphone

Necessary software

To complete this class, you will need a computer that has a webcam and microphone, and that has reliable Internet access (minimum of about 5Mbps). Most, but not all, class work can be completed

using a tablet. You will also find it helpful to have access to a word processor such as Google Docs, Microsoft Word or Apple Pages. Note, OSU students have access to Microsoft Office products free of charge. To install, please visit https://osuitsm.service-now.com/selfservice/kb_view.do?sysparm_article=kb04733

Carmen

Carmen, Ohio State's Learning Management System, will be used to host materials and activities throughout this course. To access Carmen, visit carmen.osu.edu. Log in to Carmen using your name.# and password. If you have not setup a name.# and password, visit my.osu.edu.

Help guides on the use of Carmen can be found at https://resourcecenter.odee.osu.edu/carmen

This online course requires use of Carmen (Ohio State's learning management system) and other online communication and multimedia tools. If you need additional services to use these technologies, please request accommodations with your instructor. See Carmen accessibility for more.

Carmen Zoom

Office hours will be held through Ohio State's conferencing platform, Carmen Zoom. A separate guide to accessing Carmen Zoom and our office hours is posted on the course Carmen page under Files.

Students may use the audio and video functions if a webcam and microphone are available. If not, there is still a chat function within Carmen Zoom for the student to live chat with the professor or TA in the virtual office hours room.

Carmen Zoom help guide

Turnitin

Students at The Ohio State University are accountable for the integrity of the work they submit. Therefore, you should be familiar with the guidelines provided by the Committee on Academic Misconduct (COAM) and Section A of OSU's Code of Student Conduct in order to meet the academic expectations concerning appropriate documentation of sources. In addition, OSU has made Turnitin, a learning tool and plagiarism prevention system, available to instructors. For this class, you will submit your papers to Turnitin from Carmen. When grading your work, I will interpret the originality report, following Section A of OSU's Code of Student Conduct as appropriate. For more information about Turnitin, please see the vendor's guide for students. Note that submitted final papers become part of the OSU database.

Self-Service and Chat support: http://ocio.osu.edu/selfservice

Phone: 614-688-HELP (4357)

Email: 8help@osu.edu

TDD: 614-688-8743

OSU Policies

Accessibility

The university strives to maintain a healthy and accessible environment to support student learning in and out of the classroom. 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. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion.

If you are isolating while waiting for a COVID-19 test result, please let me know immediately. Those testing positive for COVID-19 should refer to the Safe and Healthy Buckeyes site for resources. Beyond five days of the required COVID-19 isolation period, I may rely on Student Life Disability Services to establish further reasonable accommodations. You can connect with them at slds@osu.edu; 614-292-3307; or slds.osu.edu

Student Academic Services

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. The site is: http://advising.osu.edu/welcome.shtml

Student Services

The Student Service Center assists with financial aid matters, tuition and fee payments. Please see their site at: http://ssc.osu.edu

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.

Diversity

The Ohio State University affirms the importance and value of diversity in the student body. Our programs and curricula reflect our multicultural society and global economy and seek to provide opportunities for students to learn more about persons who are different from them. We are committed to maintaining a community that recognizes and values the inherent worth and dignity of every person; fosters sensitivity, understanding, and mutual respect among each member of our community; and encourages each individual to strive to reach his or her own potential. Discrimination against any individual based upon protected status, which is defined

as age, color, disability, gender identity or expression, national origin, race, religion, sex, sexual orientation, or veteran status, is prohibited.

Title IX

Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at http://titleix.osu.edu or by contacting the Ohio State Title IX Coordinator at titleix@osu.edu

Mental Health

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 or someone you know are 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 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 and 24 hour emergency help is also available 24/7 by dialing 988 to reach the Suicide and Crisis Lifeline.

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 Schedule

> **Note**: "**ID**" refers to the *Sharp, Rogers, and Preece (2019) Interactive Design* book. "**EBD**" refers to the *Evil by Design* PDFs in the files section of Carmen. **Individual names with + signs** such as +IKEA effect and +Development cycle refer to the *Lidwell et al (2015) The pocket universal principles of design* book.

Week	Dates	Topics & *Readings in bullets*	Activities & Deadlines
1	Tues 1/7	**Introduction** • *Syllabus*	•
	Thur 1/9	**What is HCI?** • *ID (Ch. 1)* • *+Development cycle* • *+Flexibility tradeoffs* • *+Iteration* • *+Dunning-Kruger effect* • *+IKEA effect*	**Syllabus Quiz**

2	Tues 1/14	**What is HCI? (Continued)**	
	Thur 1/16	**Usability goals & Affordances** • *Norman (Ch. 1)* • *UX Planet: Affordances* • *+Affordance* • *+Constraint* • *+Errors* • *+Forgiveness* • *+Form follows function* • *+Mental model* • *+Visibility*	•

3	Tues 1/21	**Usability goals & Affordances (Continued)**	
	Thur 1/23	**Problem-space activity**	**Problem-space activity**
4	Tues 1/28	**Usability goals & Affordances (Continued)**	
	Thurs 1/30	**The Design Process** • *ID (Ch. 2)* • *+Confirmation* • *+Consistency* • *+Factor of Safety* • *+Mapping*	•

5	Tues 2/4	**The Design Process (Continued)** **&** **Design Principles: Complexity** • *Norman (Ch. 2)* • *+80/20 Rule* • *+Control* • *+Hick's Law* • *+Hierarchy* • *+Iconic Representation* • *+Progressive Disclosure* • *+Signal-to-Noise Ratio*	•
	Thur 2/6	**Design Principles: Complexity (continued)**	**Problem-Space Assessment Due Friday before 11:59PM**

6	Tues 2/11	**Conceptualizing Design** - *ID (Ch. 3)*	-
	Thur 2/13	**Interfaces & Interaction** - *ID (Ch. 7)*	-
7	Tues 2/18	**Interfaces & Interaction (Continued)**	
	Thur 2/20	**REVIEW**	**EXAM REVIEW**

8	Tues 2/25	**MIDTERM EXAM (In-Person)**	**MIDTERM EXAM**
	Thur 2/27	**Heuristic Evaluation activity**	**Heuristic Evaluation activity**
9	Tues 3/4	**Users: Cognition I** • *EBD (pp. 69-74 & 204-210)* • *+Classical Conditioning* • *+Operant Conditioning*	•
	Thur 3/6	**Users: Cognition II** • ID (Ch. 4) • *+Performance Load* • *+Depth of Processing* • *+Entry Point* • *+Horror vacui* • *+Legibility*	

10	Tues 3/11	Spring Break (no class)	**SPRING BREAK**
	Thur 3/13	Spring Break (no class)	**SPRING BREAK**
11	Tues 3/18	**Users: Cognition II (continued)**	
	Thur 3/20	**Users: Cognition III** • *EBD (pp. 41-50)* • *+Chunking* • *+Interference effects* • *+Serial position effects* • *+Stickiness* • *+Von Restorff effect*	**Heuristic Evaluation Due Friday before 11:59PM**

12	Tues 3/25	**Users: Cognition III (continued)**	
	Thur 3/27	**Redesign Activity**	**Redesign Activity**
13	Tues 4/1	**Users: Affect** • *ID (Ch. 6)* • *+Aesthetic-usability effect* • *+Biophilia effect* • *+Contour bias* • *+Mere exposure effect* • *+Performance vs. preference* • *+Wabi Sabi*	
	Thur 4/3	**Users: Affect (continued)**	

14	Tues 4/8	**Prototyping** • *ID (p. 421-434, 447-453)*	•
	Thur 4/10	Review	**Redesign Due Friday before 11:59PM**
15	Tues 4/15	Guest Lecture (tentative date)	
	Thur 4/17	Final Exam	
Finals Week	4/23 to 4/29	There is no final exam exam during finals week for this course	

Course reading list

Buolamwini, J. (2016). How I'm fighting bias in algorithms. Talk for TEDxBeaconstreet. Link to source

Harris, T. (2016). How technology is hijacking your mind: From a magician and Google's design ethicist. *Medium*. Link to source

Nodder, C. (2013). *Evil by design: Interaction design to lead us into temptation*. Wiley & Sons.

Norman, D. A. (1988). *The psychology of everyday things*. Basic Books.

Plattner, H. (2020). *An introduction to design thinking: Process guide*. Stanford University

Schell, J. (2014). *The art of game design: A book of lenses*. 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.). Pearson.

Teehan, G. (2016). Reactions: not everything in life is likable. Medium. Link to source