

SE 3830: Human Computer Interaction

Winter 2020-2021

Class format: Online with both synchronous and asynchronous components

Live online class: 1pm Tuesdays on MS Teams

Live online class/lab: 12pm-1:50pm Thursdays on MS Teams

Instructor

Dr. Katie Panciera

Contact

panciera@msoe.edu
612-804-6543 (cell)

Office Location & Hours

MS Teams by appointment
calendly.com/panciera



Course Description

This course is intended to provide students with a basic set of skills in the area of user interface and user interaction design. Topics include designing user interfaces to take advantage of users' prior knowledge, using engineering models of cognitive behavior to make design tradeoffs, and evaluation techniques for user interfaces. While the emphasis is on conventional graphical and Web user interfaces, examples will also be given of application of these techniques to mobile and embedded interfaces. The main objective of the course is to provide students with a minimum set of useful skills in the area of user experience and user interaction design. It is intended to support situations in which students are called upon to provide a user interface for an application and there are no other user interface design resources available. It is not designed to be the first course in a sequence of courses in this area nor is it intended to provide an overview of the field of human-computer interaction.



Student Learning Outcomes

- Understand the benefits of user interfaces that behave and can be operated in familiar ways
- Conduct a cognitive walkthrough
- Design and follow the procedures for a heuristic evaluation
- Design and quantitatively assess the procedures to carry out a usability study



Required Materials

Course supplies:

- Platt, D. (2016) [The Joy of UX](#). Addison-Wesley, Boston, ISBN: 978-0-13-427671-7
- All other materials will be available from the course Canvas site

Free online materials including:

- Mural
- Podcasts, TED Talks, YouTube videos

Basic Sketching Supplies

- Some sort of paper (Ideally printer paper, but lined paper will be ok)
- Some sort of writing utensil (Ideally a dark, heavy pen. Sharpie/black marker/heavier weight pen)



Course Assignments Outline

- **Weekly Reflections:** On a weekly basis, you will be asked to reflect on your activities, readings, and discussions to deepen your understanding and contemplate additional problems.
- **Design for Others:** This first design project will focus on designing for a specific group of users (that you may not be familiar with).
 - **Group Work:** This project will be conducted as a group. As a team, you will turn in artifacts from your process (sketches, photos, wireframes) as well as your prototypes, test plan, and a short write up about your process as a team.
 - **Individual Work:** Each individual will submit a private write up of their participation in the sprint and prototyping process as well as a reflection of how they felt about the process, what they wish had gone differently, etc.
- **Design for Fun:** This project will focus on defining a goal (FUN) and figuring out how to achieve that goal within your designs.
 - **Group Work:** This project will be conducted as a group. As a team, you will turn in artifacts from your process (sketches, photos, wireframes) as well as your prototypes, test plan, and a short write up about your process as a team.
 - **Individual Work:** Each individual will submit a private write up of their participation in the sprint and prototyping process as well as a reflection of how they felt about the process, what they wish had gone differently, etc.
- **Design for Understanding:** This individual project will focus on telling a story with data. E.g. data visualization.
- **Final Portfolio:** In lieu of a final exam, students will have to write several short pieces to convey their experience to a potential employer. This will include summaries and analyses of their major projects as well as a reflection on the course and what they learned throughout.
- **Peer Reviews:** At multiple times throughout the quarter, you will be asked to review the work of your peers. You are expected to be honest and empathetic and to give feedback that will allow your peers to create a better version of what they are working on.
- **Other Activities:** Over the course of the quarter various other small assignments will be used to deepen understanding of certain course material. These may be done on Canvas, Mural, Teams, or paper depending on the assignment.



Week by Week Outline (This is in flux)

Readings and Materials are TBD and may fluctuate based on the needs of the class.

| WEEK | TOPIC (Materials should be consumed by the Tuesday of the following week) | DUE |
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| <p>1</p> | <p>Introductions & Empathy Building Live class: Introductions to each other and to UX (vs. UI) Live lab: Brainstorming Exercise</p> <p>Read: Learning to See Read: Platt Introduction Watch: What is UI vs. UX Design? A Practical Example in Under 6 Minutes Read: Platt Chapter 2 Read: Platt Chapter 7</p> <p>Watch: Visual Design Principles Watch: UX Design: Task Analysis Read: How to Sketch for Better Mobile Experiences</p> <p>EXTRA CREDIT: Thursday Evening 6pm Sketching: The Visual Thinking Power by Mike Rhode</p> | <p>First Day Survey (Dec 3)</p> <p>Good/Bad Design Activity (Dec 3)</p> <p>Reflection 1</p> |
| <p>2</p> | <p>Needfinding and Task Analysis Live class: Task Analysis & Heuristics Live lab: Visual Design & Exercises</p> <p>Listen/Read: How to love criticism</p> | <p>Reflection 2</p> |
| <p>3</p> | <p>Security and Privacy Live Class: TBD Live Lab: Security and Privacy</p> <p>Read: Platt Chapter 1 Read: Platt Chapter 3</p> <p>Listen: Your Choice of 99% Invisible Episode Episode 387: The Worst Video Game Ever Episode 377: How to Pick a Pepper Episode 374: Unsure Footing Episode 373: The Kirkbride Plan Episode 371: Dead Cars Episode 308: Curb Cuts Episode 304: Gander International Airport</p> | <p>Draft due</p> <p>Peer Reviews</p> <p>Design for Understanding due</p> |
| <p>4</p> | <p>People and Personas Live Class: Personas Live Lab: Design for Fun Brainstorming & Kickoff</p> <p>Read: Platt Chapter 3 Read: Platt Chapter 4 Interview Show/Podcast</p> <p>Read Choosing the Right Metrics for User Experience Read What metrics and KPIs do the experts use to measure UX effectiveness?</p> | <p>Reflection 4</p> |

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| | <p>User Testing Videos</p> <p><i>Optional: Sign up to test Google Products:</i> https://userresearch.google.com/ You don't have to complete the full survey to be in their database. Compensation usually starts around \$60 USD.</p> <p>Other Readings TBD</p> | |
| 5 | <p>Interviewing, Metrics, & Prototyping Live class: User Testing & Metrics Live lab: Prototyping</p> <p>Other Readings TBD</p> | <p>Reflection 5</p> <p>Peer Reviews</p> |
| 6 | <p>Metrics, Demos, and Testing Live class: Design for Fun Demos Live lab: User Testing</p> <p>Read: Accessibility by the Interaction Design Foundation Read: Accessibility by the Web Fundamentals team Watch: Xbox Adaptive Controller Video Watch: DeafSpace Video Watch: Rethink what Inclusive Design Means</p> <p>Other Readings TBD</p> <p>EXTRA CREDIT: Tuesday Evening 6pm Information Architecture Talk</p> | <p>Design for Fun Due (Jan. 21)</p> <p>Design for Fun Reflection Due (Jan. 22)</p> |
| 7 | <p>Accessibility & Inclusive Design Live class: Accessibility Live lab: Design for Others Kickoff</p> <p>Read A Beginner's Guide to Information Architecture for UX Designers</p> <p>Other Readings TBD</p> | <p>Reflection 7</p> |
| 8 | <p>Writing for Humans & Information Architecture Live class: Displaying Information Live lab: Project Work</p> <p>Browse the site darkpatterns.org Watch: Dark Patterns: User Interfaces Designed to Trick People</p> <p>Other Readings TBD</p> | <p>Reflection 8</p> <p>Peer Reviews</p> |
| 9 | <p>Demos and Dark Patterns Live class: Demos Live lab: Dark Patterns & Project Work</p> | <p>Reflection 9</p> |

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| | Other Readings TBD | |
| 10 | <p>Wrap Up Live class: Hiring & Persuasion Live lab: Course Evals, UX Engineering Talk</p> <p>Read: Making Do When You Don't Know What to Make</p> | <p>Design for Others Due (Feb. 18)</p> <p>Design for Others Reflection Due (Feb. 19)</p> <p>Final Portfolio Due (Feb. 24)</p> |
| 11 | Exam Week | Final Portfolio Due (Feb. 24) |



Grading Policies

Participation and Attendance

This course is all about people and your engagement is critical. During the live class we'll be doing exercises and learning about new methods. Due to this, 10% of your grade is for activities and participation.

Participation can look like:

- **Showing up to live classes**
- Actively engaging in live classes
- Actively engaging in online discussion
- Actively engaging in group projects
- Demonstrating awareness of the course materials (e.g. Canvas readings) in class
- **Turning your camera on during synchronous classes**

If you cannot attend class (or will be significantly late), please let me know BEFORE class starts. I know that sometimes life gets in the way with sickness, interviews, and can take that into account when grading if you have given me advance notice. Communication is KEY to ensuring that I know that you are engaged and learning.

Attendance

As mentioned above, you are expected to attend class. I calculate a tardy as missing $\frac{1}{3}$ of a class. If you miss more than 40% of classes (via tardies and/or absences), **you will receive a 0 for the 10% of your grade that is participation and attendance.**

Assignment Due Dates

Late assignments will automatically be docked one half grade (5% off the total points possible) per day late and are only accepted up to one week beyond the original due date. After that, a grade of zero (0) will be given. Finishing an assignment is not an excuse to miss class.

The majority of assignments will be due on a specific day and time each week, TBA in the first week of the class. If there is a different deadline, you will be informed.

Grading

Follows standard MSOE grading scale: A, AB, B, BC, C, CD, D, F

For this course, your grade will be determined as follows:

- Weekly reflections: 10%
- Participation and attendance: 10%
- Peer Reviews: 5%
- Final Exam: 10%
- Design for Others: 15%
- Design for Fun: 20%
- Design for Wellbeing: 25%
- Other Activities: 5%

Grading Philosophy

Design classes are quite different from the typical SE class. While you will have a list of requirements, you are expected to go beyond bare requirements to create something that is easy and compelling to use. To assist you with that you will have some tools to use:

- **Design Document Rubric:** Most of your assignments will use a standard posted rubric to determine how well your work was executed. In part, I will be looking to see if you are applying the concepts we've learned in class to this assignment. If your project is functional, but breaks many established rules we've discussed, that is not a successful project.
- **Peer Evaluation:** Peers provide a great deal of input in industry and this course will help you learn to critique others in a constructive way. We will be critiquing each other's work throughout the semester using the framing of I Like, I Wish, What if from Stanford's design school.
- **Group Work:** I know that group work can be challenging, so after each group project, you'll submit a brief reflection and assessment of your and your classmates' work. At the end of the semester these may be used to reweight the group portion of your grade. This means that if you aren't contributing your grade is likely to go down but if you are the ONLY contributor on a team, I will recognize that effort.

Extra Credit

Extra credit may be offered by the professor periodically during the quarter. It will be offered to the entire class and no later than Friday of Week 9.

Communication Policies

Respect

All class communications should be professional and respectful. Unprofessional communications (verbal or written), will not receive a response. This includes, but is not limited to: racism, sexism, transphobia, homophobia, aggressive language (with or without profanity), slander, inappropriate topics, etc. This applies not only to communications with myself but with your fellow students as well. If you feel that a classmate is not being respectful, please let them know or talk to me.

I will try to call issues out when I see them, but may miss some. My goal is for this class to be a safe, inclusive environment for all. Please let me know if you do not feel that this is the case.

Electronic Communication

In general, email or MS Teams are the best ways to contact me as I am working from home. I will try to return email within 24 hours on weekdays. I will check email once between 5pm and 8:30pm every weeknight and once a day on weekends. Expect a slower response during evenings and weekends than during the workday.

I expect you to check Canvas regularly for readings, assignments, grades, and announcements. Their app is supposedly useful.

Phone Communication

I have listed my cell phone number above. Please respect that this is my personal phone number and use it only if you need to reach me immediately. My phone is off from 10pm to 7am, so you will not get through at that time. Texts usually get quicker responses than phone calls.

When In Doubt

If you think maybe you have a question or find yourself guessing at my intended meaning, please reach out and ask the question or for clarification. Chances are you aren't the only one. In addition, communication is critical for online work. If you are sick and have to miss class, please let me know. If you're starting to spiral into anxiety, let me know (in addition to talking to the Wellness Center). If I don't know, I can't help.

BE VOCAL

While I taught this course last spring, this is still somewhat new and I guarantee I will make mistakes. Please be vocal. Tell me if things aren't working for you. Let me know when assignments are confusing. I also appreciate suggestions for how to improve things, but it's up to you to share those with me. I want this to be a good class, but I need your help!

Current Circumstances

Personal Wellbeing

I am your professor, but first and foremost, I am a human. If you do not have a home, food, or childcare or are caring for someone who is sick or are sick yourself, please let me know. I may not be able to help directly, but I can try to connect you to others who can. This will also allow me to understand why you may have additional difficulties turning in work, participating in your group, etc.

Internet Access

I will post all assignments on Canvas and use Canvas and Teams for the majority of the coursework. If for some reason you lose internet access during the quarter please let me know so that I can be flexible. There is a Canvas App, but if your computer has to go to IT or you have other problems, please let me know. I don't want you programming a website from your phone.

Empathy

This is a weird period for all of us and requires empathy and compassion. While I am willing to be flexible on occasion, I will be more understanding if you have a good track record in the class. If you've turned

nothing in all quarter, have not responded to my emails or early alerts, and at the end of the quarter want to turn everything in all at once, that is not ok. However, if you have been communicative and have been a good teammate, I will be more understanding with delays that were not caused by you. Procrastination is never a valid excuse to turn things in late.

Similarly, I may have times in the quarter where things on my end start falling apart and I get your assignments back late or have to reschedule meetings. (I also have a 4 year old in "virtual school" who may disrupt things on occasion.) Please be understanding of this as I am understanding of your situations.

Communication is key.

Resources

Mental and Physical Health

If you find yourself struggling with your mental or physical health this quarter, please feel free to approach me. I try to be flexible and accommodating. You can also receive assistance from The Wellness Center for Advising, Counseling, Health, & Accessibility Needs in Kern 250, 414-277-7590, or wellness@msoe.edu **Counseling can be done online.**

Virtual Drop In Hours

Drop in hours (office hours) are designed for you to ask questions (related to class or not) and get help as well as to have another sounding board or faculty connection. By talking to me, you're helping me get to know you which may allow you to get industry connections, find scholarships, or discover jobs you didn't know existed.

If you have a specific question/concern, please email me or send me a message on Teams and we can find a time to have a quick video call. I am online most days from 10:00ish to 4:30ish. You can also use calendly.com/panciera to schedule a 15 minute appointment with me.

Student Accessibility Services

For students with documented disabilities, chronic medical conditions or mental health concerns; MSOE provides services to make reasonable accommodations available. If you are a student who requires or anticipates the need for accommodations, please contact Student Accessibility Services Office at 414-277-7281, by email at moureau@msoe.edu, or in person at Kern 250 to discuss appropriate accommodations and eligibility requirements.

Raider Success Coaches

To help all students be successful in this course, struggling students will be required to meet with a Raider Success Coach throughout the quarter. These meetings will focus on strategies for academic success. Students will be notified if they need to meet with a Raider Success Coach via email by either myself or Dr. Nadya Shalamova.

Academic Assistance

The Raider Center for Academic Success (RCAS) is available virtually and in person. In addition to 1:1 tutoring for some classes, they also offer writing assistance. Please take advantage of this if you are not a strong writer as communication skills are important to succeed in this class.

University Policies

Nondiscrimination Statement

Milwaukee School of Engineering admits students of any race, color, national and ethnic origin to all the rights, privileges, programs and activities generally accorded, or made available, to students at the university. It does not discriminate on the basis of race, color, national and ethnic origin, religion, age, gender, sexual orientation, marital status or disability in administration of its educational policies, admission policies, scholarship and loan programs, and athletic and other institutionally administered programs. MSOE also maintains its long-standing policy as an Equal Opportunity/Affirmative Action Employer of male and female personnel for its faculty and administrative staff.

Academic Integrity

Academic integrity means that any work you hand in as your own is truly your own and that it represents work developed by you. The consequences for handing in the work of someone else as your own will result in a failing grade for the semester for both you and the person who gave you the file or worksheet. Don't share your electronic files with your friends.

As a course requiring teamwork, collaboration will be necessary to complete assignments, but individuals will be responsible for handing in their own work.

See more detail: <https://msoe.app.box.com/s/4c8k9jx8zso5ezybxmszr6zmc73zgoox>

Sexual Misconduct

Sexual misconduct will not be tolerated at MSOE.

See more detail: <https://msoe.app.box.com/s/o7c2rz2jdweq47trbhrzukeyecwxxb3x>

COVID-19

MSOE is committed to the health, safety, and well-being of all members of our community. In an effort to maintain such an environment, as well as to prevent further spread of COVID-19, students, faculty, staff and guests of the university must wear a facial covering when they are inside university buildings and when they are outdoors on campus and social distancing of at least six feet is not possible.

- Failure to wear a facial covering in class or laboratory will result in your faculty member requiring you to leave class and not return until you have secured a facial covering for yourself.
- Failure to comply with your faculty member's instructions will result in immediate action from the Office of the Dean of Students.
- Failure to comply with this policy will be handled according to the Student Code of Conduct and may result in sanctions, up to and including expulsion.
- The university strongly encourages all students to keep an extra and clean facial covering on their person at all times and strongly discourages students from borrowing and lending others their facial coverings.

If you suspect you are ill, have symptoms of COVID-19, or have possibly been exposed to COVID-19, please contact the Dean of Students Office at deanofstudents@msoe.edu for guidance on testing and self-isolation procedures. Please do not physically come to campus if you are ill or suspect you may be ill. MSOE is committed to your education and will work with you to provide a virtual educational experience until you are cleared to return to campus.