

# UX 241H: Easy By Design

Winter 2020/2021

Class format: Online with both synchronous and asynchronous components

Live online meetings: 3pm Tuesdays and Thursdays on MS Teams

## Instructor

Dr. Katie Panciera

## Contact

[panciera@msoe.edu](mailto:panciera@msoe.edu)  
612-804-6543 (cell)

## Office Location & Hours

MS Teams by appointment  
[calendly.com/panciera](https://calendly.com/panciera)



## Course Description

This course introduces students to the foundations of design thinking as a human-centered approach to solving complex problems in the physical and digital worlds. The course will draw on the design thinking theory and best practices developed and popularized by Stanford Design School and a global design company IDEO. Through case studies of successful technical, healthcare, and social innovations, students will explore how design thinking can lead to better design and business solutions.

The course will run as a design thinking studio where students will work on hands-on, real life projects that benefit the local and global community. Special emphasis is placed on leveraging design thinking frameworks to understand, appreciate, and mobilize the power of space for individuals and communities. This course is designed with the MSOE honors program students in mind but is open to any MSOE students who want to deepen their understanding of human-centered design and its ability to influence and change individuals, teams, organizations, places, and communities.



## Student Learning Outcomes

- Become proficient in key steps, strategies, and best practices of design thinking
- Understand how design thinking drives innovation and change across disciplines and industries
- Leverage design thinking to catalyze the power of place and to create a lasting impact in that place
- Apply design thinking to unlock their creative potential
- Implement design thinking in individual and group projects
- Adopt a design thinking mindset
- Communicate a design thinking process to stakeholders



## Required Materials

### Course supplies:

- LEGO Serious Play Starter Kit \$36.99 (<https://www.lego.com/en-us/product/starter-kit-2000414>)

### Free online materials including:

- TED Talks, Podcasts from Radiotopia and NPR, Abstract (YouTube made by Netflix), Mural and more

### Optional materials:

- Some projects in this course can be completed with Legos, art supplies, a pile of recycling, or even Minecraft. If you wish to purchase supplies in addition to the LEGO kit above, you can, but if you choose not to, that will not impact your grade. However, you may have to get creative with materials.



## Course Assignments Outline

- **Weekly Reflections:** On a weekly basis, you will be asked to reflect on their activities, readings, and discussions to deepen their understanding and contemplate additional problems.
- **Sprint 1:** Topics are TBD
  - **Group Work:** Sprint 1 and subsequent prototyping will be conducted as a group. As a team, you will turn in artifacts from your sprint process (sketches, photos, interview script, interview findings) 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.
- **Sprint 2:** Topics are TBD
  - **Group Work:** Sprint 2 will be conducted as a group but the prototyping will be conducted individually. As such, as a team you will turn in artifacts from your sprint process (sketches, photos, interview script, interview findings) as a group.
  - **Individual work:** Your individual work for Sprint 2 will include the write up of your process and reflection on the process in addition to prototypes.
- **Presentation:** Each Sprint 1 team will have time to present their Sprint 1 materials. This will serve to help me assess communication skills around design thinking as well as allowing them to share work they are proud of with their classmates, broadening the reach of their ideas.
- **Student 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 both their major projects as well as a rationale for the latter project and a reflection on the course and what they learned throughout.
- **Activities and Participation:** 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 Qualtrics depending on the assignment. Examples of these include:
  - Sketching exercises
  - Prototyping exercises
  - Small group summaries of Design Thinking philosophies



## Week by Week Schedule

Readings and Materials are TBD and may fluctuate based on the needs of the class, especially as we decide on the topics for the sprints.

WEEK	TOPIC	DUE
1	<b>Introductions &amp; Impact of Design Thinking</b> Live class: Syllabus and Introductions Live class: Small Group Formation and Sketching	First Day Survey  Introduction

	<p><a href="#">Read: What is Design Thinking and Why is it so Popular?</a>  <a href="#">Read: The Youth Mental Health Center of the Future</a>  <a href="#">Read: A Girls-Only Space to Get Trusted Advice on Life, Love, and Sex</a>  <a href="#">Watch: The Explainer: Design Thinking</a>  <a href="#">Watch: GE Children's MRIs</a></p> <p>Listen: Your Choice of 99% Invisible Episode  <a href="#">Episode 387: The Worst Video Game Ever</a>  <a href="#">Episode 377: How to Pick a Pepper</a>  <a href="#">Episode 374: Unsure Footing</a>  <a href="#">Episode 373: The Kirkbride Plan</a>  <a href="#">Episode 371: Dead Cars</a>  <a href="#">Episode 308: Curb Cuts</a>  <a href="#">Episode 304: Gander International Airport</a></p> <p>EXTRA CREDIT: Thursday Evening 6pm  <a href="#">Sketching: The Visual Thinking Power by Mike Rhode</a></p>	<p>Reflection 1</p>
2	<p><b>Design Thinking Process</b>  Live class: Process &amp; Sprints  Live class: Three Design Thinking Examples</p> <p><a href="#">Read: How to understand problems</a>  <a href="#">Read: How to define problems</a>  <a href="#">Read: Service Design 101</a>  Watch: <a href="#">Abstract: Tinker Hatfield</a>  Listen: <a href="#">Hidden Brain: Panic in the Streets (TW: Pandemics)</a></p>	<p>Summaries of DT Philosophies</p> <p>Reflection 2</p>
3	<p><b>Design Thinking Toolkit: Research</b>  Live Class: Research: Interviews &amp; Analysis  Live Class: Sprint Group Planning</p> <p>In sprint groups draft an interview script and conduct your interviews.  Write a test plan for your prototypes.</p> <p>Read: <a href="#">Art of the User Interview</a>  <a href="#">Read: A Comprehensive Guide to UX Research</a>  <a href="#">Read: A Day in the Life of a Design Researcher</a>  <a href="#">Read: To Make Sense of Messy Research, Get Visual</a>  <a href="#">Read: Design Research From Interview to Insights</a></p>	<p>Reflection 3</p> <p>Interview Script Draft</p> <p>Winter Break Prep</p>
4	<p><b>Design Thinking Toolkit: Bringing Ideas to Life</b>  Live Class: Sketching (using Mockups Deck), Prototyping, and Sprint Preparations  Live Class: Sprint Groups</p> <p>Read: <a href="#">Why Everyone Should Prototype, not just designers</a></p>	<p>Reflection 4</p> <p>Sketching Exercise</p> <p>Winter Break Project</p>
5	<p><b>Sprint 1</b>  Live class: Sprint Day 1  Live class: Group check ins</p> <p>In your groups, use Mural and/or Teams to conduct a team sprint</p>	<p>Reflection 5</p>

	<p>based on what you've learned and the materials from Dr. Panciera. The sprintmaster should contact Dr. Panciera if clarifications are needed at any point throughout the week. Remember to document the process.</p> <p>Listen/Read: <a href="#">How to love criticism</a></p>	
<b>6</b>	<p><b>Sprint 1: Prototyping and Critique</b> Live class: Group check ins</p> <p>Teams should be working on building prototypes, testing the prototypes, and iterating on said prototypes. Remember to document the process.</p> <p>Materials TBD</p>	Reflection 6
<b>7</b>	<p><b>Sprint 1: Reflection</b> Live class: Group Critique sessions (in parallel)</p> <p>As an individual, reflect on Sprint 1 and complete the individual assignments.</p> <p>As a team, finalize your Sprint 1 materials and prepare your week 8 presentation.</p> <p>Materials TBD</p>	Reflection 7  Sprint 1 Materials
<b>8</b>	<p><b>Presentations</b> Live class: Sprint 1 presentations</p> <p>As a group, present your Sprint 1 process and outcomes to your peers. The rest of the week should be spent prepping for Sprint 2, including conducting and analyzing user interviews.</p> <p>Materials TBD</p>	Reflection 8  Presentation
<b>9</b>	<p><b>Sprint 2</b> Live class: Group check ins</p> <p>In your groups, use Mural and/or Teams to conduct a team sprint based on what you've learned and the materials from Dr. Panciera. The sprintmaster should contact Dr. Panciera if clarifications are needed at any point throughout the week. Remember to document the process.</p> <p>Materials TBD</p>	Reflection 9
<b>10</b>	<p><b>Sprint 2: Prototyping and Critique</b> Live class: Group Critique sessions (in parallel)</p> <p>Individuals should be working on building and iterating on prototypes. Remember to document the process. Complete your individual write ups and submit them.</p> <p>As a team, finalize your Sprint 2 materials for submission.</p>	Sprint 2 Materials (Due beginning of Week 11)

	Materials TBD	
11	Exam Week	Final Portfolio



## 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, learning about new methods, and critiquing the work of others. 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 the same day and time of the week, TBD by 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:

- Activities: 10%
- Attendance and participation: 10%
- Reflections: 10%
- Critiques & Peer Reviews: 5%

Sprint 1 Group Deliverables: 15%  
Sprint 1 Individual Deliverables: 5%  
Sprint 2 Group Deliverables: 5%  
Sprint 2 Individual Deliverables: 15%  
Group Presentation: 10%  
Final Portfolio: 15%

## **Grading Philosophy**

This class may be quite different from what you're used to at MSOE. While you will have a list of requirements, the emphasis here is on the process, not necessarily the end product.

## **Group Work**

I know that group work can be challenging, so you'll submit a brief individual reflection and assessment of your and your classmates' work for Sprint 1. These may be used to reweight a 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 your group meetings, please let your group (and 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.

## 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](mailto: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](https://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](mailto: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 handling 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/o7c2rz2jdweq47rbhrzukeyecwxxb3x>

## **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](mailto: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.