Basic Information

SI699: Mastery User Experience Research and Design
Instructor: Dr. Robin N. Brewer, rnbrew@umich.edu

Course Time and Location:
- Thursdays, 3-6pm, synchronous
- Zoom link available on Canvas

Office Hours:
- Thursdays, 1-2pm
- [Sign up via Google Calendar](#) at least 24 hours in advance
- Email Dr. Brewer for an appointment if needing an appointment outside of this time

Materials: No textbook is required for this class, however I recommend [Universal Methods of Design](#) by Martin and Hanington as a useful resource.

Mastery Courses

Mastery courses are advanced one-semester courses that require students to demonstrate command of the key theories, methods, approaches, and capabilities required for entry into a specific class of information professions. Unlike other courses with significant faculty-led structure and scaffolding, mastery courses require you to demonstrate initiative and show that you can independently design, implement, evaluate, and complete a sizable project, with faculty primarily in the role of advisor and mentor. The goal is not to teach new design, technical, or social science approaches, but help you think out of the box, beyond what is familiar and comfortable. Successful completion of a mastery course implies a level of proficiency comparable to or exceeding a well-launched employee in a field.

Course Description

This mastery course provides you the opportunity to develop and demonstrate mastery in User Experience (UX) research and design. **This course will focus on accessibility-related UX projects**, including the application of design theories, concepts, and principles in order to:

1. Identify and articulate a meaningful accessibility challenge or problem
2. Conduct UX research with appropriate methods to uncover user needs, document UX research results, and articulate user experience requirements
3. Develop, refine, prototype, and validate user experience design solutions, and
4. Effectively communicate with stakeholders.

You will have opportunities to integrate methods and theories about user experience design in this course by engaging in a whole process from identifying design issues to developing design solutions. You will work on a single project end-to-end during the semester. You will ideally work on a project in teams of 2–3 students. You can choose to create your own project topic or

engage with a real-world client with an accessibility goal, as provided by the Engagement Office. If working with a client, (1) your team must complete Ginsberg client engagement training (2) your team should schedule a regular meeting with clients, and (3) all class milestones should be shared with the client prior to the end of the semester.

All projects will need to connect to accessibility, that is, centering the experiences of people with disabilities and/or older adults. Disability is broad and includes visible and less visible disabilities such as vision impairments, hearing impairments, mobility impairments, cognitive impairments, and mental illness. Some potential project domains are: nutrition, fitness, health, work, education, collaboration, social life, entertainment, financial safety/planning, smart homes, safety, privacy, security, empathy, equity, diversity, and inclusion. This is an intentionally broad mandate and you are encouraged to consider multiple perspectives, scales, technologies, and social implications before pursuing one specific project in-depth. We will brainstorm and develop topics in the first class. You are encouraged but not required to think about potential problems and challenges, or areas of interest in advance.

Course Objectives
You will be expected to:

RESEARCH + ANALYZE
- Articulate the role of accessibility in UX research and design fields
- Understand, frame, and investigate an accessibility-related problem
- Conduct UX research with project-appropriate methods to understand the needs of disabled communities and relevant stakeholders understanding the strengths and limitations of potential approaches
- Analyze collected data and present findings through established and appropriate methods, such as affinity diagramming, personas, scenarios, user journeys, etc
- Assess and prioritize design requirements based on UX research.

DESIGN
- Fully explore the solution space based on formative research from users (primary and/or secondary)
- Identify acceptable solutions, identify pros/cons of each solution, and iteratively refine the solution
- Describe core research and design processes used in UX
- Engage in constructive peer critique
- Clearly and concisely articulate your approach to design and user experience design
- Formulate and communicate a research-supported narrative that defends your design decision

IMPLEMENT
- Implement prototypes with tools common in design including but not limited to Photoshop, Illustrator, Arduino, 3D printing, Proto.io, HTML, CSS, Sketch, Axure.

- Justify and be able to defend your research process, design process, and implementation choices

COMMUNICATE
- Complete and document a professional, portfolio-quality project using recognized experience design methods
- Effectively visualize and present design solutions and concepts in a clear and concise manner with appropriate audiovisual methods
- Articulate recommendations and next steps for full implementation of your solution.

Grading and Milestones

In graduate school, grading is (or ought to be) a secondary motivation. I hope you are motivated not by the hope of getting an "A" but because you want to cultivate your skills as a designer and researcher and you recognize this class provides you opportunities to do precisely that. I will use grading to provide feedback that helps you improve your work rather than summative feedback (feedback that tells you how you did).

In alignment with the iterative thought process, your group can request up to three re-assessments on milestones throughout the semester. To do so, send an email to the instructor to notify a regrade is being initiated, resubmit the assignment on Canvas, add a note to the submission detailing what has changed. All regrade requests and changes must be submitted within one week of the posted grade.

Your grade for this course will be out of 100 points and will be determined based on:

- Milestones (90 points)
  - Research
    - MS1: Project Pitches and Selection (5 points)
    - MS2: Research Goals and Plan (10 points)
    - MS3: Research Findings and Design Requirements (10 points)
  - Design
    - MS4: Prototype and Evaluation Plan (10 points)
    - MS5: Evaluation Findings (5 points)
    - MS6: Final Design (10 points)
  - Communication
    - MS7: Video (10 points)
    - MS8: Peer/self Assessment (10 points)
    - MS9: Report (20 points)
- Class attendance and participation (10 points)

Course Logistics

How to Succeed

User experience research and design is a risky business. Not all projects succeed. Sometimes teams struggle to find a compelling problem definition, underestimate the difficulty of a particular problem, or discover that a simple, best solution for a chosen problem already exists. Because there are circumstances beyond your control and understandable miscalculations, I will be looking at a number of criteria to assess your performance on the project. While specific milestones may name more specific, narrow criteria, in general I will be looking for evidence of the following throughout all your efforts:

- Mastery of the methods covered during your time at UMSI
- Your ability to derive insight from the methods
- Your ability to derive insight and inspiration from existing research and your research findings
- Creativity of your proposed solution(s)
- Thoroughness and thoughtfulness of your solutions
- Persuasiveness of your communicative materials (presentations, web content, demos)
- Integration of insights, inspiration, empathy, and creativity
- Effective planning and prioritization
- Your ability to identify, learn from, and correct your mistakes
- Do your best, trust in you and your team (if applicable), and have fun

Attendance and Participation

Attendance is required to ensure success with course milestones and sufficient engagement with key accessibility concepts. Given the unpredictability of a virtual semester in a pandemic, you may miss up to two class sessions without penalty. One point will be deducted from your participation grade for every class missed after two sessions unless there is an extenuating circumstance that you discussed with the instructor prior to the class session.

In most class sessions, you will have time to work in your groups and/or receive feedback from the instructor. As such, class attendance also helps you be a good teammate (and may help your peer assessment grade at the end of the semester). If you need to miss a class session, you are responsible for finding out what you missed in class by referring to the syllabus and asking your groupmates.

Because three-hour Zoom lectures are not the most efficient for learning, you are expected to actively participate by asking and/or answering questions posed by Dr. Brewer and being an active participant in any small group activities. This participation can happen verbally, within the Zoom chat window, or with other tools depending on the class activity (e.g. Google Drive, Sli.do). If there is something that limits your participation, please email the instructor immediately so that any troubleshooting can take place, if possible.

Timeliness and late policies

Timeliness is critical in professional settings. Managers and clients don't like to pay for work that's turned in late, and they aren't interested in hearing about why something is late. Start early and manage your projects so that you have plenty of time at the end to deal with unexpected surprises. Also, many of our in-class assignments involve getting instructor and peer feedback. For this reason, you must finish assigned work on time. Your grade on milestones will decline one full grade for each day it is late, unless I explicitly approve the delay in advance.

Additionally, I expect everyone to conduct themselves in a professional manner during class. That includes showing up to class on time. It also means treating others with respect, even if you disagree with them.

Accommodations

For anyone needing an accommodation to make the class work better for your needs, please let me know at your earliest convenience. Some aspects of this course, the assignments, the in-class activities, and the way the course is usually taught may be modified to facilitate your participation and progress.

If you think you need an accommodation for a disability, please let the instructor know at your earliest convenience. Some aspects of this course, the assignments, the in-class activities, and the way the course is taught may be modified to facilitate your participation and progress. I may recommend working with the Services for Students with Disabilities (SSD) office at the beginning of the semester, if necessary, to help determine appropriate academic accommodations. SSD (734-763-3000; http://ssd.umich.edu) typically recommends accommodations through a Verified Individualized Services and Accommodations (VISA) form. Any information you provide is private and confidential and will be treated as such.

If you need to miss class due to observing a religious holiday, please contact me at least one week in advance by email to discuss any make-up assignments.

Feeling overwhelmed, depressed, and/or in need of support? There is help for that. You can contact Counseling and Psychological Services (CAPS) at (734) 764-8312 and https://caps.umich.edu/ during and after hours, on weekends and holidays, or through its counselors physically located in schools on both North and Central Campus. You may also consult University Health Service (UHS) at (734) 764-8320 and https://www.uhs.umich.edu/mentalhealthsvcs, or for alcohol or drug concerns, see www.uhs.umich.edu/aodresources.

Since many students are remote during fall 2020, CAPS COVID-19 Support features SilverCloud, an online, self-guided, interactive mental health resource that provides cognitive behavioral interventions.For a listing of other mental health resources available on and off campus, visit: http://umich.edu/~mhealth/

Academic Integrity

Unless otherwise specified in an assignment all submitted work must be your own, original work, or in the case of group assignments, original work of your group. Any excerpts, statements, or phrases from the work of others must be clearly identified as a quotation, and a proper citation provided. Any violation of the School's policy on Academic and Professional Integrity (stated in the Master's and Doctoral Student Handbooks) will result in serious penalties, which might range from failing an assignment, to failing a course, to being expelled from the program. Violations of academic and professional integrity will be reported to UMSI Student Affairs. Consequences impacting assignment or course grades are determined by the faculty instructor; additional sanctions may be imposed by the assistant dean for academic and student affairs.

Course Schedule

Note: The 'Do Before Class' column will be updated as the semester progresses, including adding relevant readings

Week	Topic/goals	Do Before Class	Assignments
1 1/21	Course + Accessibility Overview	Read "I am just terrified of my future" — Epistemic Violence in Disability Related Technology Research	MS1-pt 1: Project pitches (due 1/27)
2 1/28	Project and client pitches	Add idea pitches to slides Read We Did It Right, But It Was Still Wrong: Toward Assets-Based Design - A framework for sustainable impact and Discussion sections	MS1-pt2: Project selection (due 1/29)
3 2/4	Research goals and methods	Add research goals draft to slides Read Design Pedagogies: "There's Something Wrong with This System!" - principles 1-10 Read Choosing the Right UX Research Method and When to Use Which User-Experience Research Methods Optional: read definition of Design Justice	
4 2/11	Research materials Guest Lecture:	Add research plan draft to slides Start to implement research plan, specifically recruitment	MS2: Research Goals and Plan (due 2/17)

	Dr. Sarah D'Angelo, Google		
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2/18 | Ethical data collection

Guest Lecture: *Dr. Jofish Kaye* | Read [Design and Diversity?: Speculations on What Could Go Wrong](#) | MS3: Research findings and requirements (due 2/24) |
| 6

2/25 | Data analysis and design requirements | Add research findings, design requirements, and prototype ideas to slides | MS4: Prototype and Evaluation Plan (due 3/3) |
| 7

3/4 | Prototyping

Guest Lecture: *Dr. Abdullah Ali,* Amazon | Add updated prototype and evaluation plan to slides | |
| 8

3/11 | WELLNESS DAY - NO CLASS | | |
| 9

3/18 | Evaluation + remote research

Guest Lecture: *Dr. Jerry Robinson,* Google | Add evaluation progress to slides | MS5: Evaluation Findings (due 3/24) |
| 10

3/25 | Design

Guest Lecture: *Dr. Denae Ford Robinson,* Microsoft Research | | |
| 11

4/1 | Communicating Research and Design

Dr. Haley | Add project pitch to slides

[Watch Pocket Production series](#) | MS6: Final Design (due 4/7) |

	MacLeod, Facebook		
12 4/8	Future Work and Impact		MS7: Video (due 4/14)
13 4/15	Final Presentations and Reflection		MS8: Peer/self assessment (due 4/16)
Final reports (MS9) due: Friday, April 16th			