

# SI 699 – Mastery: User Experience & Design

Syllabus | Winter 2019

version: Jan. 9, 2019

**Class time:** Thursdays, 1–4pm | 1265 North Quad  
First class: Jan. 10, 2019

**Instructor:** Prof. Florian Schaub [fschaub@umich.edu](mailto:fschaub@umich.edu)  
office hours: Fridays, 10-12 ([book slot](#)), 4344 North Quad  
or request individual appointment via email

**Resources:** Canvas will be used for all materials, assignments and announcements.

## 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*. 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 includes the application of design theories, concepts, and principles in order to:

1. Identify and articulate a meaningful user experience challenge or problem,
2. Conduct ux research with appropriate methods to uncover user needs, document UX research results and articulate user experience requirements,
3. Developing, refining, prototyping, and validating user experience design solutions, and
4. Effectively communicating 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. For the most part, you will choose and design projects from scratch, though projects for real-world clients will be allowed as long as you meet the course requirements.

There is no prescribed project topic. Instead, you identify a meaningful challenge or problem and scope it into a project. Some potential project domains are: nutrition, fitness, health, work, education, collaboration, social life, entertainment, financial

safety/planning, smart home, internet of things, accessibility, safety, privacy, security, empathy, equity, diversity, inclusion.

This is an intentionally broad mandate and you are encouraged to consider multiple potential audiences, perspectives, scales, technologies, and social implications before pursue 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.

## Learning Objectives

You are expected to have learned the following skills in previous courses. After completing this course, you should be able to demonstrate mastery in the following ux skills:

- Describe core research and design processes in UX, and articulate their benefits and limitations in the context of a specific project.
- Apply ux concepts and methods in a user-centered design approach to address a meaningful ux problem.
- Conduct ux research with project-appropriate methods to understand needs of primary and secondary users and stakeholders, beyond on-campus interviews/surveys.
- Analyze collected data and present findings through established methods, such as affinity diagramming, personas, scenarios, user journeys, etc.
- Assess and prioritize ux requirements based on ux research.
- Iteratively design, prototype, and refine user experiences that address the identified requirements, using established prototyping techniques and tools, and producing high quality, professional artifacts, documentation, and ux specification.
- Validate developed designs and prototype(s) with project-appropriate usability and user experience evaluation techniques continuously throughout the design process.
- Effectively visualize and present design solutions and concepts in a clear and concise manner with appropriate audiovisual methods.
- Articulate and defend design rationales and decisions based on your own ux research, as well as relevant research and theory; reason about benefits and drawbacks of developed design alternatives.
- Practice peer critique effectively and constructively.
- Consider and articulate recommendations and next steps for full implementation of your solution.
- Add a successful and professional UX project to your portfolio.

## Materials

No textbook is required for this class. A useful resource, recommended by industry colleagues, is [\*Universal Methods of Design: 100 Ways to Research Complex Problems, Develop Innovative Ideas, and Design Effective Solutions\*](#) by Bella Martin and Bruce Hanington.

## Course Schedule

*Student presentations are marked in bold; submission deadlines are bold blue.*

**Note:** This syllabus is subject to change and updates. Topics and activities will be updated throughout the semester based on project/student needs and students will be updated via Canvas and in class.

- W1    **Jan 10**    Course overview & project ideation/brainstorming  
                  ! **Project pitches (due Jan 16)**
- W2    **Jan 17**    **Present project pitches & finalize teams**  
                  UX research plan and strategy development  
                  ! **Project motivation and goals (due Jan 20)**
- W3    **Jan 24**    **UX research plan & user study design (incl. materials)**  
                  Peer critiques  
                  ! **UX research plan & user study materials (due Jan 27)**
- W4    **Jan 31**    **UX research progress update & preliminary findings**  
                  Synthesizing findings in UX research
- W5    **Feb 7**    **UX research progress update & preliminary findings**  
                  Identifying & prioritizing design requirements
- W6    **Feb 14**    **UX research outcomes & UX requirements**  
                  Design ideation and concept development  
                  ! **UX research analysis/findings & UX requirements (due Feb 17)**
- W7    **Feb 21**    **Design proposals**  
                  UX prototyping & UX specification
- W8    **Feb 28**    **Design demonstration with low-fi prototype(s)**  
                  Iterative user testing and refinement  
                  ! **Initial design concept & rationale (due Mar 3)**
- Mar 7    Spring break – no class*
- W9    **Mar 14**    **Findings from user testing & mid-fi prototypes**  
                  Hi-fi prototyping
- W10    **Mar 21**    **Findings from user testing & refined prototypes**  
                  Communicating UX design & research process
- W11    **Mar 28**    **Findings from user testing & refined prototypes**

- W12    **Apr 4**    **Final design & hi-fi prototype demonstration**  
                  Planning implementation and realization  
                  !    **Design process & final design concept & rationale (due Apr 7)**  
                  !    **Project poster presentation at SI exposition (on Apr 8)**
- W13    **Apr 11**    **Realization plan & recommendations**  
                  !    **UX specification & realization plan (due Apr 14)**
- W14    **Apr 18**    **Final presentation incl. project video**  
                  !    **Project video (due Apr 18)**  
                  !    **Final project report (due Apr 23)**

## Assessment and Grading

You can reach 100 points in this course. Assessment in this course is primarily centered around a user experience project of your choice. You will earn points for milestones throughout the term, which will all culminate in a consistent final project report. The goal of the final report is to produce a professional and high-quality documentation of your project. The ability to articulate research findings, design rationales and design specifications in an engaging, persuasive and professional manner is a valuable skill for a UX professional. You can earn **up to 73 points for the milestones and final report** (see details on the milestones and final report below).

In addition to the milestones, you will present your progress in class each week (what you are expected to present in a given week is listed in the course schedule) and you will actively engage with the other projects. User experience design is a creative and collaborative process. The weekly class time provides an opportunity for everyone to get together and share and learn from each other's experiences, the approaches taken in the respective projects, as well as help each other achieve excellent results. You can earn **up to 15 points for active engagement and participation**.

You will further produce a video showcasing your final design and its rationale. Effectively demonstrating your design and its rationale is an important skill for a UX professional. You can earn **up to 10 points for the final product video**.

You will present a poster on your project at the UMSI exposition on April 8. This will help you develop and practice an effective elevator pitch, accompanied by poster underlining your points. You can earn **up to 2 points for the exposition poster presentation**.

The milestones structure your project's progress. The milestones are:

1. **Motivation and Project Goals** 5 pts (due Jan 20)  
Outlines the motivation for the project (what does it address, why is it relevant to address, what need is the project filling compared to competing/existing services/products), the goals of the project (what do you aim to achieve and why), the project's expected impact (who will benefit from your project and why). You also describe what the key research questions and design questions would be and outline how you plan to address them.
  
1. **UX Research Approach (incl. study materials)** 8 pts (due Jan 27)  
Describes your approach, plan and strategy for conducting the research necessary for your project (what methods and why, how will it be conducted). Most projects will require the combination of multiple methods and some kind of user testing or elicitation to gather the information necessary to define design requirements. You need to select research methods appropriate for your project, plan the actual research and recruitment, and develop the necessary study materials. This milestone is intended as an opportunity to gain feedback on your UX research approach *before* you conduct it so you can incorporate feedback and suggestions into your research activities.
  
2. **UX Research Analysis/Findings & UX Requirements** 15 pts (due Feb 17)  
Describes how you analyzed the data you collected as part of your research and documents the respective findings and outcomes from the research phase in a manner appropriate for your project. This may include results from thematic coding or affinity diagramming, personas, scenarios, user journeys, interaction maps, etc. You convey a nuanced understanding of users' needs and the context of use. You further describe the UX design requirements that derive from your research findings. You should clearly prioritize requirements based on your research insights.
  
3. **Initial Design Concept & Rationale** 8 pts (due Mar 3)  
After the exploration of at least three potential solution sketches addressing your project's design requirements, you hone in on one solution, which you demonstrate with a low-fi prototype (e.g. paper). You describe the design concept you plan to pursue, along with a justification for the proposed direction and a detailed plan for developing the design concept into a full user experience, including your plans for involving users/stakeholders in your user-centered design process.
  
4. **Final Design Concept & Rationale** 15 pts (due Apr 7)  
You iteratively develop your UX design concept from initial concept to increasingly higher fidelity prototypes, accompanied with frequent user testing and input. You create an interactive high-fidelity digital prototype to demonstrate your final design. Excellent students/teams implement their UX design with front-end coding. You describe your final design concept and its rationale, as well as document key points and insights from earlier design iterations and user testing.

5. **UX Specification, Realization Plan, Conclusion** 15 pts (due Apr 14)  
You provide a detailed specification for your UX design at a level of detail that would allow a developer to implement the developed design as intended. This should include key screens, interaction logic and UX behavior specification, interaction map and/or storyboards, additional sketches or screens, etc. You further describe a recommended plan for turning your design and prototype into an actual product, including required resources, stakeholders involved, a timeline to launch, as well as a discussion of potential challenges and how to overcome them. You should conclude with a summary of the benefits, impact and implications (both positive and negative) of your project.
  
6. **Final project report (incl. executive summary)** 7 pts (due Apr 23)  
The final report incorporates all previous milestones into a consistent document with the addition of an executive summary. However, parts from previous milestones should be updated and adjusted to produce a documentation of the final project result, not just a progression of steps. You are expected to treat the final report as a user experience in itself and create and design it accordingly. The points for this milestone will be awarded almost exclusively for professional and high-quality layout, visual design and content of the report, including the meaningful integration of graphics and figures. You will want to use professional layouting and publishing tools (e.g. Adobe InDesign) rather than Word to prepare your final report. The final report should be a high quality, highly polished and professional artifact effectively conveying your project's motivation, goals, research findings, design concept, prototype and specification, and a proposed realization plan. Think of this report as something you would want to hand to a client at the conclusion of a ux consulting project, or as a tool to seek crowdfunding or venture capital for turn your project into a real product.
  
7. **Final project video** 10 pts (due Apr 18)  
The project video should be a short video showcasing and promoting the solution you developed in your project. Think of it as a video you'd want to use as an interactive portfolio piece or the video for a crowdfunding campaign.

### **Project report as living document**

Rather than submitting separate documents for each milestone, you are encouraged to treat your final project report as a living document to which you keep adding content through the milestones and throughout the term. This will cut down on writing and formatting time at the end of the term. You are further encouraged to incorporate feedback and revise parts submitted for previous milestones.

### **Re-assessment policy**

For each milestone you can request one re-assessment, i.e., you can improve on the points you received for that milestone. You could request re-assessment of an earlier milestone alongside another milestone submission or you could request re-assessment of all or parts of

the content as part of the final report's assessment. To do so, you just add a note to a submission stating which part you'd request to be re-assessed and what changes you've made since the first assessment of that part.

User experience research and design is an iterative process and the goal of this policy is to reward the work and effort you put into achieving an excellent project outcome rather than penalizing you for getting something wrong on the first try.

### **Grades**

The final score out of 100 will be converted to a letter grade on the following scale:

A+ 98–100	A 94–97.5	A- 90–93.5
B+ 88–89.5	B 84–87.5	B- 80–83.5
C+ 77–79.5	C 73–76.5	C- 70–72.5
D+ 67–69.5	D 63–66.5	F <62.5

### **How to Succeed**

User experience research and design can be risky. Not all projects succeed. Sometimes you may go down blind alleys, struggle to find a compelling problem definition, underestimate the difficulty of a particular problem, or discover that a simple, optimal 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 and quality of your proposed solution(s)
- Thoroughness and thoughtfulness of your solutions (especially with regard to acceptability by the intended audience, appropriateness for context of use and identified requirements, usefulness, joyfulness of the user experience, aesthetics, comprehensibility of the solution, feasibility)
- Persuasiveness of your communicative materials (presentations, prototypes reports, etc.)
- Integration of insights, inspiration, empathy, and creativity
- Effective planning and prioritization
- Your ability to identify, learn from, and correct your mistakes

**Note:** To be successful, you should have a standing meeting and/or work session of AT LEAST 3 hours per week with your team (if applicable). If you are working individually, you may wish to find an accountability partner and schedule working sessions.

Do your best, trust in you and your team (if applicable), and have fun!

## **Attendance policy**

The weekly class time is an integral component of this course experience and serves to advance and enhance your projects. You are expected to attend all class sessions. You may **miss no more than one session**. Further absences will be penalized with 1 point per missed day from the active engagement component of your grade. Exceptions may be made if you inform the instructor about your absence in advance with a valid reason (e.g. family emergency, job interview)

## **Classroom Etiquette**

To create and preserve a classroom atmosphere that optimizes teaching and learning, we all share a responsibility in creating a civil and non-disruptive forum. Students are expected to conduct themselves at all times in this classroom in a manner that is positive, constructive and non-disruptive. In-class discussions and feedback should be respectful and courteous to everyone, and relevant to the topic of discussion. Open and constructive feedback and expression of viewpoints are essential for creative design.

This course works best when:

- We are all respectful of each other and each other's time and ideas,
- When we are active participants in class discussions and activities,
- When we share our experiences and perspectives as it relates to the class.

Be on time to class. Since this course is a mastery course, your expectation is to attend class on time as you would for a job. Class will begin promptly at 1pm.

## **Academic Integrity and Misconduct**

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.

## **Accommodations for Students with Disabilities**

If you think you need an accommodation for a disability, 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. As soon as you make me aware of your needs, we can work with the Services for Students with Disabilities (SSD) office to help us 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.

## **Student Mental Health and Wellbeing**

The University of Michigan is committed to advancing the mental health and wellbeing of its students, while acknowledging that a variety of issues, such as strained relationships, increased anxiety, alcohol/drug problems, and depression, directly impacts students' academic performance. If you or someone you know is feeling overwhelmed, depressed, and/or in need of support, services are available. For help, 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 (732) 764-8320 and <https://www.uhs.umich.edu/mentalhealthsvcs>, or for alcohol or drug concerns, see [www.uhs.umich.edu/aodresources](http://www.uhs.umich.edu/aodresources). For a more comprehensive listing of the broad range of mental health services available on campus, please visit: <http://umich.edu/~mhealth/>.