

# SI 699-3 : User-Centered Agile Development

## Course Syllabus

Winter 2020 Semester  
University of Michigan School of Information

*This syllabus is all potentially subject to change over the course of the semester. Any substantial changes to it will also be announced.*

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## Instructor

**Instructor:** Mark W. Newman, Professor SI & CSE

**Email:** mwnewman@umich.edu

**Office:** 4370 North Quad (near the couch)

**Office Hours:** TBD

## Course Description

This is a mastery course for students interested in pursuing a career in software development with a UX focus. Students will work in groups of 4-6 on a semester-long project, integrating UX research and design methods with agile software development, with the goal of producing a Minimally Viable Prototype at the end.

## Course goals

As a Mastery Course, the goals of the course are best described in terms of demonstrating mastery, rather than in terms of learning goals. In this course, you are expected to demonstrate mastery in the following areas:

### UX Research

- Selecting appropriate methods to answer key questions
- Designing and executing studies
- Extracting meaningful results from studies
- Using study results to guide design

### UX Design

- Demonstrating knowledge of good design principles and practices
- Choosing design/prototyping methods appropriate to the current design stage
- Aligning design with user needs
- Being thorough (when appropriate)

### Software Development

- General programming ability
- Good enough mastery of collaboration tools (e.g., GitHub)
- Familiarity with basic software design approaches
- Ability to find, master, and incorporate diverse tools, libraries, and frameworks as needed
- Ability to problem solve and handle adversity

### Communication and Teamwork

- Basics of project management and collaboration
- Giving respectful and constructive feedback
- Accepting responsibility, following through on commitments, communicating clearly
- Effective verbal, written, and visual communication

### Other

- Creativity, insight, and critical thinking
- Effort and commitment
- Self-discipline, time management, reliability
- Flexibility, adaptivity, and responsiveness to feedback

### Ability to Acquire New Knowledge and Skills

- Ability to apply Agile concepts and practices to application design
- Ability to learn and adapt to new ways of doing things

Note that you won't be expected to have fully mastered all of these skills at the beginning of the course. My assumption is that you've been exposed to all of this (except for the topics under "Ability to Acquire New Knowledge and Skills") and have developed these skills to some extent but that you won't be entirely solid in all of them. I will do my best to guide you through the application of these skills and, in the process, hopefully help you solidify the knowledge and abilities that you already have.

## Course Schedule

Please refer to the [course schedule](#).

## Assessment

You won't get any letter grades until the end of the course (when you will get one letter grade). An "A" means that you have demonstrated an adequate level of mastery in all of the categories above for someone who is about to launch a career in UX-focused software development. A lower grade means that you lack mastery in one or more categories, and a lower grade will be accompanied by recommendations for what you need to do to improve in those areas. My starting assumption is that you will all get an A, and that's what you have right now. If you aren't on track to get an A, the feedback mechanisms listed here should alert you to this and give you clear steps that you can take to correct whatever is wrong. If you're not sure where you stand, you can feel free to ask me. There will be three mechanisms for giving and receiving feedback in this course:

**Peer Assessment:** Your peers will provide feedback to you and you to them. After Sprints 1-3 milestone, I will solicit feedback from your peers in all of the above categories. This will happen at least twice before the end of the course (probably more), and again at the end of the course. If the feedback is unremarkable, you may not hear about it from me. If there are concerns, I will discuss them with you (and, potentially, your team if appropriate). Negative feedback that is well-received and acted upon will not have a negative impact on your grade. Defensiveness, avoidance, obstinance, undermining, or any other behavior that may harm the ability of the group to work effectively could result in lower marks.

**Instructor Assessment:** After each milestone, I will review all peer feedback and consider my own observations. If there are particular issues that need to be discussed, I will suggest that you meet with me to make a plan for addressing them.

**Self-Assessment:** At the end of the course, you will provide an assessment of your own mastery in each of the categories above, providing evidence from your work in the course where possible, as well as descriptions of any actions taken to improve your mastery and their results.

## Required prerequisites

SI 501, 506+507 or 508, 539, 582, 588, 622, and 664 or 669. Any of these can be replaced with the corresponding waiver.

## Beneficial prior courses and experience

SI 612, 606, 694, 529, 631

## Exceptions to prerequisites

The purpose of the prerequisites is to make sure that you have the software development and UX skills required to succeed in this course. In some cases you may be able to provide evidence that you have the required background through other means, in which case an exception to the prerequisites may be granted. For the course to count as your Mastery Course for the MSI program, however, all prerequisites must have been completed or a formal exception process needs to be followed with the registrar's office.

## Textbook and Required Resources

We will read sections from two books, both of which are available electronically through the U-M Library.

- [Agile User Experience Design: A Practitioner's Guide to Making it Work](#) by Diana Brown (Morgan Kaufmann, 2013)
- [Agile Foundations: Principles, Practices, and Frameworks](#) by Peter Measey and Radtac (BCS, 2015)

We will read a few articles available on the World Wide Web as well.

## Class Meetings

**Time and Place:** Tuesdays and Thursdays 1-4, G580 Dentistry. All students are expected to be available during these times, though after the first two weeks you will be working with a group that only meets for a subset of these times.

**Duration of Course:** Every Tu/Th from Jan. 9 - Apr. 21 (inclusive), with the exception of Mar. 3&5 (Spring Break).

**End of Course:** Tuesday, April 21 is the final class meeting, and your physical presence will not be required for this course after that date. There is no final exam. Some class work will have a due date after April 21, but this can be completed remotely.

## Communication

### Email

Contact me directly by email if you have any concerns. We may use other methods for group communication, such as Slack. This will be determined by the group as a whole.

## Office Hours

I will hold regular office hours, with the option to pre-book 15-minute meeting slots during my office hours. Details will be added soon.

## Academic Integrity & Collaboration

All work in this course is conducted as part of a team. You are encouraged to work with your teammates on all aspects of your project. You are also encouraged to seek out third-party solutions and examples that are relevant to the problem you are trying to solve. If you use any code from elsewhere, you must indicate where you got it in a comment, and you must also make sure that your use of the code does not violate the author's copyright or terms of use.

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 a school administrator.

## Accommodations and Services for Students

If you need or believe you may need an accommodation, e.g. 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 we teach may be modified to facilitate your participation and progress. As soon as you make us aware of your needs, we can work with the Office of Services for Students with Disabilities (SSD Office) to help us determine appropriate accommodations. SSD (734-763-3000; <http://ssd.umich.edu/>) typically recommends accommodations through a Verified Individualized Services and Accommodations (VISA) form. I will treat any information that you provide in as confidential a manner as possible.

If you have a concern along with or separate from the above that affects the process of class at large or for you, please approach or contact me confidentially. I will also treat any such shared information in as confidential a manner as possible and will do what I can to ensure you have what you need in this course and/or have the resources to find it.

# Mental Health and Well-Being at the University of Michigan

The University of Michigan is committed to advancing the mental health and well-being 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. We take this seriously.

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/>

If you are seeking advice, answers to questions, or help accessing resources, you should contact the Office of Academic and Student Affairs within UMSI, on the 5th floor of the Collegian building, 333 Maynard St. You can also contact them for support with academic or personal advising while in the program.