

# SI 699-3 : User-Centered Agile Development

## Course Syllabus

Winter 2021 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.*

Initial version: Jan. 14, 2021

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## Instructor

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

**Email:** mwnewman@umich.edu

**Office Hours:** See my [bookable office hours](#)

## 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

There are four components that will determine your grade in the course. All of them are based principally on effort and attention.

- **Preparation:** During the first few weeks of class we will read, view, and discuss materials covering Agile concepts and practices, including the integration of agile software development with UX methods. You will receive points based on your level of participation in these activities as well as your demonstrated knowledge.
- **Performance:** Once the project work begins, you will be assessed on you and your team's success in moving the project forward. The assessment of performance will come from multiple courses, including yourself, your teammates, your peers in the class, and the instructor. Performance will be assessed after each sprint as well as after key milestones, such as the midpoint presentation, expoStition, and final deliverables.
- **Teamwork/Agility:** In addition to performance you will be assessed on your team's adoption of Agile principles and methods. You will also be assessed on your personal contribution to the team's functioning, including your communicativeness, helpfulness, and performance of any roles to which you are assigned. As with performance, this assessment will be based on input from yourself, your teammates, and the instructor.
- **Course Mechanics:** In order for the course to work effectively, you will need to provide input at various points. Part of your grade will be based on providing said input in a timely and conscientious manner.

Here are the details

	Graded by	Frequency	Points each	Total points
<b>Preparation (40 points, or 8%)</b>				
Reading comments	Instructor	1	10	10
Video comments	Instructor	1	10	10
Agile Quiz	Instructor	1	20	20
<b>Performance (260 points, or 52%)</b>				
<i>Sprint &amp; Final Reviews</i>				
Self	Self	4	10	40
Self	Team	4	10	40
Team	Team	4	10	40
Team	Instructor	4	10	40

<i>Deliverables</i>				
Midpoint Presentation	Instructor	1	20	20
Midpoint Presentation	Peer	1	10	10
expoStition	Instructor	1	20	20
expoStition	Peer	1	10	10
Final Report	Instructor	1	40	40
<b>Teamwork &amp; Agility (160 points, or 32%)</b>				
<i>Sprint &amp; Final Reviews</i>				
Self	Self	4	10	40
Self	Team	4	10	40
Team	Team	4	10	40
Team	Instructor	4	10	40
<b>Course Mechanics (40%, or 8%)</b>				
Intro slide	Instructor	1	5	5
Team formation questionnaire	Instructor	1	5	5
Sprint & final reviews	Instructor	4	5	20
Midpoint peer feedback	Instructor	1	5	5
expoStition peer feedback	Instructor	1	5	5
<b>TOTAL</b>				<b>500</b>

## Letter Grades

Your final grade in the course will be based on the percentage of the total points you receive. All individual subjective assignments will be graded such that if you meet expectations you will receive an A.

A+	>99 %
A	94-98.99%
A-	90-93.99%
B+	87-89.99%

B	83-86.99%
B-	80-82.99%
C+	77-79.99%
C	73-76.99%
C-	70-72.99%
D+	67-69.99%
D	63-66.99%
D-	60-62.99%
E/F	0-59.99%

## 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)

The sections of these books we will read will be made available via Perusall, which will be linked through Canvas. There will also be some assigned videos to watch, also via Perusall.

## Class Meetings

**Modality:** This course will be entirely remote, and portions of it will be synchronous. We will use Zoom for synchronous videoconferencing

**Times:** The time reserved for this course is 1-3:50pm every Tuesday and Thursday. However, you will be required to attend class synchronously during a subset of those times. Please refer to the Course Schedule for more details.

**Duration of Course:** Every Tu/Th from Jan. 19 - Apr. 20 (inclusive), with the exception of Tuesday, Mar. 23, which has been designated as a Wellness Day by the University.

**End of Course:** Tuesday, April 20 is the final class meeting, and your synchronous presence will not be required for this course after that date. There is no final exam. Your final deliverables will be due on April 29

## Communication

### Canvas

All assignments and course resources will be made available via Canvas. Grades will also be made available via Canvas. Important announcements will be made via Canvas, and you are expected to be aware of any information shared via Canvas.

### Slack

We have a course Slack channel within the UMSI Slack Workspace. Once we have formed teams, we will also have a dedicated channel for each team. Slack will be the primary venue for coordinating group work as well as for requesting and receiving help (from each other and from the instructor).

### Email

Contact me (Mark) directly by email if you have any concerns (you can also DM me on Slack).

## Office Hours

I will hold regular office hours, with the option to pre-book 15-minute meeting slots during my office hours. Bookings can be made via my [bookable office hours](#) Google calendar.

## Non-Disclosure Agreements and Intellectual Property

Please note that the clients of some projects require all students working on that project to sign an NDA and/or IP agreement. The terms of this agreement can vary from just allowing the client to continue work on the project after the course is over to signing away all rights to royalties and the use of any patent. It is each student's responsibility to read these agreements and ask questions prior to selecting a project. Non-disclosure agreements may require you to keep the information you obtain about the client's products and the project confidential for a specified period of time.

UMSI discourages organizations from using NDA and IP agreements; however, some organizations choose to utilize such documents and require students to agree when working on a project associated with their products or data. You have the right to ask to not be assigned a project that has an NDA or IP agreement associated with it.

By selecting one of these projects, you are agreeing to the terms of the IP/NDA contract, even before signing the contract. You are strongly encouraged to read the IP/NDA agreements associated with your project as soon as it is available to you. If you have already signed any sort of agreement with a future employer or a past employer, you may want to consider these agreements and contracts when indicating a preference for your BSI Capstone project.

If you have questions about the agreement, please talk to the project sponsor or Drew Bennett, Associate Director of Licensing, Software, Mobile and Digital Technologies at the U-M Office of Technology Transfer ((734)615.4004, [andbenne@umich.edu](mailto:andbenne@umich.edu)).

Faculty are not responsible for your NDA/IP agreements. These agreements are signed between student teams and the project organization. Faculty are able to be consulted with regarding these documents but are not legal professionals.

## Intellectual Property Disclosure

Information exchanged in class is in the context of the course itself. Students who have signed a contract with intellectual property restrictions need to acknowledge that certain project information is required to be kept confidential amongst the project participants and not discussed in a classroom or public context.

## 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 give the author(s) credit in code comments, 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 the assistant dean for academic and student affairs.

## 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.