

SI 487 – User Experience Final Project

Syllabus | Winter 2019

Version: Jan. 6, 2019

Class time: **Wednesdays, 1-4pm | 1265 North Quad (Schaub)**
Mondays, 6-7pm | 1255 North Quad (Pierce)
First standup: January 14 (Monday section) & January 16 (Wednesday section)
Student team section assignments are [here](#).

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

Prof. Casey Pierce office hours
cbspierc@umich.edu 3441 North Quad
Wednesdays, 1-3pm ([book slot](#)), 3441 NQ

GSIs: **Natalie Zauhar** office hours
nzauhar@umich.edu Wednesdays, 4-5pm, 1270 NQ
Wednesday teams Fridays, 2:15-4pm, 1265 NQ

Brittany Lang office hours
beelang@umich.edu Wednesdays, 1-4pm, 1255 NQ
Monday teams

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

Learning Objectives

At the end of this course, students will be able to:

- **Apply user experience concepts and methods** to address a challenging **real-world user experience problem** in coordination with a **project client** (industry, non-profit, government or academic partner).
- **Work together in teams to systematically define and develop the project**, as measured by progress on regular milestone assignments.
- **Elicit, clarify and formalize client requirements.**
- **Analyze and assess user experience requirements and needs** with project-appropriate methods.
- **Iteratively design, prototype, and refine user experiences** that address the project's requirements and users' needs.
- **Validate developed prototype(s)** with project-appropriate usability and user experience evaluation techniques.

- **Effectively present their work to stakeholders** (client, instructor, fellow students) in standup meetings, formal presentations and written reports.
- **Add a successful UX project to their portfolio.**
- **Work and interact professionally** with project clients, users, instructors, and student peers.

Prerequisite

This course requires completion of SI 405 (BSI Final Project Preparatory Course) in the previous term. In SI 405, student teams are formed, teams are matched with a client, and teams develop a project plan for the specific project with their client.

Course Overview

This course is the capstone project course for the UX path in the BSI program. The goal of this course is to provide students with real world experience in working on a challenging UX project with a client. In the projects, students apply their obtained skills and knowledge in UX research, requirements analysis, design, prototyping, and evaluation.

Over the course of the semester, a team of 4-5 students analyzes and addresses a UX problem specified by a client that requires assessing the user needs and user experience requirements for a website, software application, mobile app, or other user-facing system. The student team iteratively designs, prototypes and tests an improved or novel user experience, and validates the UX design and prototype with prospective users and appropriate usability and UX evaluation techniques.

This course relies heavily on effective and productive team work, because real-world UX projects are also commonly tackled by teams and require frequent interaction with team members, clients, users, and other stakeholders.

Project & Team Matching and IP/Confidentiality Agreements

Students will be matched to projects and form teams in SI 405 in the previous term.

Some project clients may require students to sign intellectual property, confidentiality or non-disclosure agreements to work on their project. This is common practice to protect clients' business interests. Before signing such agreements, students should carefully read the obligations and restrictions in the agreement. Questions regarding intellectual property and confidentiality obligations can be discussed with the instructor. Project descriptions will indicate

whether signing an IP or confidentiality agreement will be required and students have the option to choose a project where they retain full IP rights with no obligation to confidentiality.

If you signed a confidentiality agreement with your client, always seek prior approval from your client for (semi-)public presentations of your work (e.g., exposition poster, final presentation, UMSI portfolio entry, own portfolio website). Almost always clients are fine with you talking about the project, but may want to have a say in the level of detail and/or ensure that you're not revealing confidential information. It is your responsibility to obtain the client's approval.

Project milestones and reports

All projects follow a similar schedule with a number of graded milestone reports:

1. Project Goals & UX Research Plan (incl. user study materials) – 5 points

Based on your initial interaction with the client and the project scoping conducted in SI 405, describe the project's focus and goals. Describe in detail the team's plan for the UX research phase (what methods and why, how will it be conducted) and include user study materials (interview scripts, survey questions, think aloud prompts, etc.) for feedback and approval. Most projects will require competitive analysis, heuristic evaluation (if working with an existing system), user interviews or surveys. You need to explain what UX research is needed for your project and why. This milestone is intended as an opportunity to gain feedback on your project goals and UX research approach *before* you conduct your UX research. All components of this first milestone (project goals, UX research approach and rationale, methods, study materials) will also be required and assessed in the UX research and requirements report, allowing you to improve your points on this part by taking the received feedback into account when conducting your UX research.

2. UX Research & Requirements Report – 20 points

In the research phase, teams identify and prioritize UX requirements based on client and stakeholder interactions, competitive analysis, heuristic evaluation, user research, affinity diagramming, and other project-appropriate methods. Student teams need to determine the research methods appropriate for their project. The milestone report describes the rationale for the team's activities in this phase, what research was conducted and how, the analysis outcomes and findings, incl. personas and user journeys. The report concludes with a prioritized list of UX requirements and a plan for addressing them in the design phase.

3. UX Design Report & Interactive Prototype – 20 points

In the design phase, teams iteratively develop a UX design concept from ideation to prototypes and user testing with increasing fidelity and quality, culminating in an interactive digital prototype. Excellent teams implement their UX design with front-end coding. This milestone report describes the developed UX design concept, documents the design process and design decisions including feedback from user testing, and presents the final user experience,

interaction and visual design. Alongside the report, teams demonstrate their design with an interactive prototype.

4. UX Validation Report – 15 points

In the validation phase, teams comprehensively evaluate the usability and user experience of their final design to validate that the UX requirements identified in the research phase are being met. This should include either comparison to the system's previous design or comparison of different design variants. The student team decides on the validation methods appropriate for their project. This milestone report describes the evaluation study design (including metrics and rationale), study materials, data analysis and findings, as well as recommendations for further improvement based on the findings.

5. UX Specification Report – 5 points

You may refine your final UX design based on the findings and suggestions from your UX validation study. This report then specifies your final UX design at a level of detail that would allow a developer to implement the developed design as intended. This report should include key screens, interaction logic and UX behavior specification, interaction map and/or storyboards, additional sketches or screens, etc.

6. Final Report – 10 pts

The final report constitutes the major outcome for your project, which you will provide to the client. It should cover all milestones and integrate them into a consistent document. You can draw heavily from previous milestone reports, but you should carefully curate what information you present in the final report and how. View the final report as a user experience in itself and write and design it accordingly. This includes appealing layout and visual design, well-written textual documentation, as well as 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 product effectively conveying your project's research findings, UX design, its validation and implementation recommendations for the client.

Milestone Presentations, Poster Presentation & Portfolio Entry

Each milestone report will be followed by a formal presentation in class (8 minutes per team). Each of the four milestone presentations (research, design, validation, final presentation) is worth 2 points, compared to 1 point for regular standups. Teams will also formally present the milestone outcomes to their client at the next client meeting.

The final project presentations will take place on the last Wednesday class session. All teams are present for the presentations, clients will be invited to attend as well. A jury will award one Best Project Award and two Honorable Mention Awards.

In addition, student teams present a poster on their project at UMSI's expoSItion event in early April (1 point) and create a portfolio entry in UMSI's project gallery (1 point).

Report Revisions

Teams are expected to integrate feedback from client, peers, instructors and GSIs into their milestone reports and can submit a revised version of the research and design reports to improve their points for the milestone. The revision deadlines for these reports are two weeks after the original deadline.

Weekly Standup Meetings (class time)

This course operates like a UX design agency. All student teams work with different clients on different projects. User experience design is a creative and collaborative process. The weekly class time provides an opportunity for all teams 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 in each project.

We achieve this through weekly standup meetings, in which each team provides a status report on their project's progress. This status report should include:

1. The team's accomplishments and issues in the previous week
2. Plans for the current week
3. Specific questions to the other teams regarding issues, challenges, approaches, etc.

This requires that each team has properly prepared a concise update and asks meaningful questions. Updates are limited to 5 minutes per team plus 5 minutes discussion. Teams have to create slides for their standup updates. **Slides have to be uploaded into [this Google Drive folder](#) before class.**

All students are expected to actively engage with the other projects by asking questions and providing feedback and input. Engagement during standups factors into individual participation.

To facilitate engaged interchange among teams, projects will be organized into one-hour clusters. Your team's assigned standup time is available [here](#). You must attend the entire standup session as scheduled for your team cluster. During the 1-hour stand-up meeting active participation and engagement is expected from everyone. (See the attendance policy for additional details.)

During the rest of the three-hour block, students are expected to work in their teams to advance their projects. This may include scheduling your weekly client meetings at those times. However, the full three-hour block you've been assigned to belongs to SI487. You must be either in the standup meetings or work with your team.

Note that these two hours of team work will not be enough to make sufficient progress on your project. **You and your team should schedule additional meetings and block off additional regular time to work on this capstone project outside of class time.**

You can use the following rooms for team work. At the stated times, one of the GSIs is present and can help you with questions regarding your project:

- Mondays, 5-6pm, 1255 NQ
- Mondays, 7-8pm, 1255 NQ
- Wednesdays, 1-4pm, 1255 NQ (GSI present)
- Fridays, 2:15-4pm, 1265 NQ (GSI present)

Client meetings and communication

Each team is expected to meet once per week with their client. These meetings must be scheduled for the whole term at or before the first client meeting of the term. All team members should attend all meetings with the client. At the same time, it is important to respect and accommodate the client's schedule. If no time for the weekly client meeting can be found at which all team members are available, a suitable time at which most team members are available should be selected. The instructor and GSI have to be informed via email about this arrangement, including your team's plan for updating absent team members.

In SI 487, we work with clients from all over the country. If your client is local, you should meet in person if possible. If your client is remote, you should use video conferencing if possible. Only as a last resort use audio-only phone conferencing. Ask your client if they have a preferred conferencing service they would like to (or must) use. If not, suggest a video conferencing solution that both the client and all team members are comfortable with. Examples are BlueJeans (<http://its.umich.edu/communication/videoconferencing/blue-jeans>), Google Hangouts or Skype.

Professional communication and conduct with clients is of high importance. This includes (1) respectful, well-written and relevant email communication, (2) responsiveness to client communication (you should reply within 24 hours), (3) being prepared and punctual at meetings, as well as (4) professional conduct and attire at client meetings.

GSI support and office hours

We are fortunate to have two full-time GSIs assigned to this course to support the course through activities that include:

- Consultant for UX methods and issues.
- Setup, tutorials, and support of course infrastructure/tools.
- Grading and evaluation (e.g. milestone reports, final reports, etc.)

The GSI holds weekly office hours and all teams should make use of this offering. The GSI office hours allow for early and informal feedback throughout the research, design and validation phases of the project. Both of our GSIs have lots of UX experience and are eager to assist you with your projects – please leverage their expertise!

Internal team meetings and collaboration

The most successful projects are those in which the team works closely together with multiple in-person interaction points throughout the week. Because everyone has busy and demanding schedules, it is important to early-on identify joint availability and schedule internal team meetings and joint work sessions to advance your project. Minimal engagement is not an option in this course.

Individual reflection and peer evaluation

Students are asked to individually write reflections on the project work, team dynamics, and individual team members' contributions **after each milestone** and **at the end of the course** (each worth 1 point). The goal is to individually reflect on what is working well in the project/team and what could be improved and how. A courteous and constructive tone is expected in these reflections and evaluations. Feedback will be anonymized and shared with the whole team. The team should then work together – with support from the instructors and GSIs – to address identified challenges.

While we hope that all group members would strive to equally contribute to the group project, we realize that this is not always the case. Therefore, the grade you receive on group assignments and the course will depend on **your individual contribution to the project**, which will be based on participation, peer evaluations, client feedback, GSI feedback and the instructors' assessment. Freeloading is not an option in this course.

Classroom / Attendance Policy

Attending all weekly class sessions and all meetings scheduled with client, instructor or GSI is mandatory and required to pass the course. You may **miss no more than one standup or scheduled meeting** without providing a valid reason (e.g., job interview). You should always inform the instructor and your team in advance if you cannot attend a meeting. The instructor will take attendance and factor this in when assessing course participation. Students are asked to attend class or meetings on time and remain for the entire class or meeting.

Instructor meetings in each phase

In addition to the weekly standups, teams have to schedule at least one individual team meeting with the instructor in each phase (three total), during the instructor's office hours (see details for booking appointment slots above) or your group's work time. If those times do not work for your team, you may request a different meeting time. Either way, your team has to schedule the three meetings for the whole term with the instructor by Jan. 20, including Google Calendar events accepted by the instructor. The purpose of these meetings is to provide an opportunity for teams to discuss their progress with the instructor, discuss any questions and issues that arose during standup meetings, or to discuss project aspects that are not relevant or appropriate for the standup meetings. Teams and individual students are welcome and

encouraged to make use of both the instructors' and GSIs' office hours beyond those three meetings.

Course Schedule

*Student presentations are marked in **bold**; submission deadlines are **bold red**. Required and suggested team activities for a given week are listed between the standup sessions.*

Jan 11	Due	Teams develop UX research plan Teams start heuristic evaluation and competitive analysis Teams prepare first standup presentation Teams schedule weekly meetings with client
Jan 14/16	Standup 1	Course introduction Teams present their project goals and initial UX research plan Primer: ux research methods and user study design
Jan 20	Due	Teams conduct heuristic evaluation Teams conduct competitive analysis Teams design user study and study materials UX research plan, user study design & materials
Jan 20	Due	Teams schedule three meetings with instructor
Jan 23	Standup 2	Present UX research plan, user study design and materials <i>Primer: personas and user journeys</i> <i>Note: the Monday section's standup will be moved to Jan. 23 due to MLK day. Details will be discussed in the first standup meeting.</i>
		Team present user study design to client and revise as needed Teams finalize heuristic evaluation Teams finalize competitive analysis Teams finalize user study design Teams conduct user study
Jan 28/30	Standup 3	Present findings from competitive analysis and/or heuristic evaluation <i>Primer: identifying and prioritizing requirements</i>

		<p>Teams conduct and finalize user study</p> <p>Teams analyze findings (affinity diagramming, etc.)</p> <p>Teams derive personas</p> <p>Teams develop user journeys</p> <p>Teams derive prioritized UX design requirements</p> <p>Teams prepare milestone report</p> <p>Teams prepare milestone presentation</p>
Feb 3	Due	UX research & requirements report
Feb 4/6	Standup 4	Milestone presentation: UX research & requirements
Feb 6	Due	<p>Individual reflection / peer evaluation: UX research phase</p> <p>Teams presents findings and UX requirements to client</p> <p>Teams transition to ideation</p> <p>Teams revise UX research/requirements report</p>
Feb 11/13	Standup 5	<p>Discuss initial design ideas and directions</p> <p><i>Primer: ideation and design process</i></p>
Feb 17	Due	<p>Teams develop and refine ideas</p> <p>Teams start prototyping (wireframes, paper prototypes, etc.)</p> <p>Teams start iterative user testing</p> <p>Revised UX research & requirements report</p>
Feb 18/20	Standup 6	<p>Present UX design concept / initial prototypes</p> <p><i>Primer: Prototyping tools</i></p>
Feb 25/27	Standup 7	<p>Teams iterate on design and prototypes</p> <p>Teams continue evaluating designs with users</p> <p>Present UX design progress / challenges</p> <p><i>Primer: presenting UX design & prototypes</i></p>
Mar 4/6	<i>No standup</i>	<i>Spring break!</i>

Mar 11/13	Standup 8	Present comprehensive design & interactive prototypes <i>Primer: UX validation and study design</i>
		Teams finalize user testing Teams refine and finalize comprehensive design concept Teams finalize interactive prototype/implementation Teams develop validation study design and materials Teams prepare milestone report Teams prepare milestone presentation
Mar 17	Due	UX Design Report & Interactive Prototype
Mar 18/20	Standup 9	Milestone presentation: UX Design & Prototype
Mar 20	Due	Individual reflection / peer evaluation: UX design phase Teams present final design & prototype to client Teams refine design/prototype/implementation Teams refine validation study design and materials Teams make poster for expoStion Teams revise UX design report
Mar 24	Due	Submit validation study design and materials
Mar 25/27	Standup 10	Present validation study design and materials <i>Primer: professional UX reports</i>
		Teams refine design/prototype/implementation Teams refine validation study design and materials Teams pilot test validation study Teams conduct validation study with users Teams analyze findings
Mar 31	Due	Revised UX Design Report & Interactive Prototype
Apr 1/3	Standup 11	Present validation study progress & preliminary results <i>Primer: UX specification</i>
		Teams complete validation study Teams analyze findings Teams derive final recommendations / next steps Teams prepare milestone report Teams prepare milestone presentation
Apr 7	Due	UX Validation Report
Apr 8	Poster	Poster presentation at expoStion

Apr 8/10	Standup 12	Milestone presentation: UX Validation <i>Primer: effective presentations</i>
Apr 10	Due	Individual reflection / peer evaluation: UX validation phase Teams present UX validation results to client Teams revise and finalize prototype/implementation Teams finalize UX specification Teams finalize recommendations for client Teams work on final project report Teams prepare final presentation
Apr 14	Due	Final UX specification
Apr 17	Class	Final project presentation <i>Note: all teams will present on Wednesday, April 17, 1-4pm</i>
Apr 23	Due	Teams finalize project report Final report Teams have final handover meeting with their client
Apr 25	Due	Client handover summary / debrief
Apr 25	Due	UMSI Seelio Portfolio entry on project
Apr 25	Due	Individual reflection / peer evaluation: capstone experience

Grading

The course is project-based and has no mid-term or final exam. Evaluation will be based on points for the following components:

UX research & requirements report	20
UX design report & interactive prototype	20
UX validation report	15
UX specification	5
Final report	10
Weekly standup presentations (9x 1)	9
Milestone presentations (4x 2)	8
Project poster	2
Project portfolio entry	1

Client handover summary	1
Reflections (4x 1)	4
Individual participation	5

Teams must satisfactorily complete **all** milestone assignments **on time**, including written reports and presentations, weekly standup presentations, final report and portfolio entry – regardless of grade – to pass the course. This includes a number of ungraded submissions, such as the initial research materials submission and the validation study design and materials. These ungraded submission allow to receive early feedback on efforts that will be graded as part of subsequent reports.

Milestone reports should be revised based on feedback from the client, peers, GSI and instructor. **Revisions** can be used to improve grades for individual milestones. When submitting a revision, the team must separately describe the changes made.

While we hope that all group members would strive to equally contribute to the group project, we realize that this is not always the case. Therefore, **the final grade depends on a team member's individual contribution to the project and may deviate from the overall score earned by the team** to reflect especially large or small relative contributions. Individual participation and contributions will be assessed based on participation, peer evaluations, client feedback, GSI feedback and the instructors' observations. Freeloading is not an option in this course.

The final score out of 100 will be converted to a letter grade on the following scale:
A+ 98; A 95; A- 90; B+ 87; B 83; B- 80; C+ 77; C 73; C- 70; D+ 67; D 63; D- 60; E 50; F 40.

Individual students **must adhere to the classroom and attendance policy** outline above; students who miss more than 1 class or scheduled meeting without a valid reason and permission from the instructor will receive a 5% penalty on your overall grade for each additional day missed (up to and including a failing grade).

If longer term extenuating circumstances prevent you from meeting course requirements, please contact the UMSI Office of Student Affairs (OSA) so they can assist you. OSA will then let the instructors know you will need special accommodations to complete the course. The instructors are understanding of life hardships and will be flexible to find reasonable alternatives for your specific situation. Again, these special accommodations are reserved for extenuating circumstances only and do not apply to job interviews, a busy course load or demanding extracurricular schedule.

Academic Integrity and Original Work Policy

Unless otherwise specified in an assignment, **all submitted work must be original work to you and/or your team, as appropriate**. 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 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 the instructor 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 the instructor aware of your needs, we can work with the Office of Services for Students with Disabilities (SSD) to help us determine appropriate accommodations. SSD (734-763-3000; ssd.umich.edu/) typically recommends accommodations through a Verified Individualized Services and Accommodations (VISA) form. The instructor will treat any information that you provide in as confidential a manner as possible.

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.

For a more comprehensive listing of the broad range of mental health services available on campus, please visit: <http://umich.edu/~mhealth/>