SI 422: Needs Assessment and Usability Evaluation
Syllabus Winter 2021

Instructor:
Gabriela Marcu (gmarcu@umich.edu)  
Pronouns: she/her/hers

Graduate Student Instructors (GSIs):
Amna Batool (abatool@umich.edu)  
Pronouns: she/her/hers
Sangmi Kim (sangmik@umich.edu)  
Pronouns: she/her/hers

<table>
<thead>
<tr>
<th>Detailed Zoom info</th>
<th>Day/Time</th>
<th>Zoom Link</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lecture [001]</strong></td>
<td>Mon 10-11:30am</td>
<td>995 526 36700 *updated 1/23 (passcode: methods)</td>
<td>Gabi Marcu</td>
</tr>
<tr>
<td><strong>Discussion [004]</strong></td>
<td>Mon 3:30-5pm</td>
<td>972 187 56442 *updated 1/23 (passcode: 004)</td>
<td>Gabi Marcu</td>
</tr>
<tr>
<td><strong>Discussion [005]</strong></td>
<td>Mon 5-6:30pm</td>
<td>990 9567 2077 (passcode: sangmi)</td>
<td>Sangmi Kim</td>
</tr>
<tr>
<td><strong>Discussion [006]</strong></td>
<td>Tues 10-11:30am</td>
<td>953 7202 3728 (passcode: sangmi)</td>
<td>Sangmi Kim</td>
</tr>
<tr>
<td><strong>Discussion [007]</strong></td>
<td>Tues 1-2:30pm</td>
<td>985 3495 3318 (passcode: amna)</td>
<td>Amna Batool</td>
</tr>
<tr>
<td><strong>Discussion [002]</strong></td>
<td>Wed 10-11:30am</td>
<td>913 473 22479 *updated 1/23 (passcode: 002)</td>
<td>Gabi Marcu</td>
</tr>
<tr>
<td><strong>Discussion [003]</strong></td>
<td>Wed 10-11:30am</td>
<td>949 1560 2082 (passcode: amna)</td>
<td>Amna Batool</td>
</tr>
<tr>
<td><strong>Office Hours</strong></td>
<td>Tues 11am-12pm</td>
<td>975 5734 7076 (waiting room)</td>
<td>Gabi Marcu</td>
</tr>
<tr>
<td></td>
<td>Wed 3-4pm</td>
<td>979 7501 6285 (waiting room)</td>
<td>Amna Batool</td>
</tr>
<tr>
<td></td>
<td>Thurs 3-4pm</td>
<td>975 5734 7076 (waiting room)</td>
<td>Gabi Marcu</td>
</tr>
<tr>
<td></td>
<td>Fri 11:30am-12:30pm</td>
<td>290 227 3384 (waiting room)</td>
<td>Sangmi Kim</td>
</tr>
</tbody>
</table>

Make sure you are logging in to Zoom through U-M.
If you already had a personal Zoom account, here’s how to migrate it to a U-M account.

Course Overview

Have you ever been frustrated navigating the menu of a device or an application? Have you given up trying to reprogram the clock on your microwave? Does Siri ever give you the answer you are looking for?

Many products fail because they are designed with little knowledge of user desires, needs, and capabilities. It doesn’t have to be this way. Any product can be more successful when developed through a process that identifies how it will be used, elicits input from potential users, and watches how it functions in real time with real users.

This course is designed to equip you with the hands-on knowledge and skills necessary for evaluating and testing the usability of products – website, mobile device, or some form of electronically mediated service. Throughout the term, we will be working on individual, pair, and group projects that apply usability techniques to real products of your choice. As such, the class is focused on enabling you to develop critical thinking skills that drive your ability to:

- Formulate research objectives, goals, and questions
- Create solid research plans
- Conduct nuanced observational analysis
- Create well-supported findings and recommendations

Course Objectives

In this course you will learn to evaluate interactive products using a range of methods, including:

- Comparison of features and usability with the competition (competitive/comparative analysis)
- In-depth analysis of user needs (observation and ethnographic methods)
- Asking users about their opinions and experiences (interviews and surveys)
- Identifying a set of target users and uses (personas and scenarios)
- Using checklists to evaluate the system from several points of view (heuristic evaluation)
- Doing user testing of typical tasks on the system (usability testing)
- Monitoring and testing the design of a system (experiments, log analysis)
- Working with a larger team (real-world issues)

The course will be divided into four parts:

1. Principles, Methods, and Best Practices. You will practice writing solid research questions, doing analysis, and learning methods. You will also be expected to participate in studies to build empathy with participants.
2. Discovery and Strategy. We will cover the research questions and methods that UX researchers leverage as they learn what user needs are, assist in the formation of strategy, and define what they should build.
3. Design and Development. We will cover and practice the methods that are used to understand design documentation.

4. Post-Launch. We will discuss and use methods that UX researchers leverage to help improve features and functions within an existing experience.

**Grading**

Weekly assessment will help you gauge how you are doing in the course, and I encourage you to reach out early or come to office hours if you have concerns about your grade. Course grades will be weighted as follows:

- 50% Assignments (weekly)
- 25% Perusall reading annotations (weekly)
- 20% Attendance and participation (weekly)
- 5% Reports

Final grades will not be curved, and will be assigned based on the following scores:

<table>
<thead>
<tr>
<th>Score</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>98%</td>
<td>A+</td>
</tr>
<tr>
<td>90%</td>
<td>A</td>
</tr>
<tr>
<td>87%</td>
<td>B+</td>
</tr>
<tr>
<td>80%</td>
<td>B</td>
</tr>
<tr>
<td>77%</td>
<td>C+</td>
</tr>
<tr>
<td>70%</td>
<td>C</td>
</tr>
<tr>
<td>67%</td>
<td>D+</td>
</tr>
<tr>
<td>60%</td>
<td>D</td>
</tr>
<tr>
<td>58.75%</td>
<td>D-</td>
</tr>
<tr>
<td>58.75%</td>
<td>D-</td>
</tr>
</tbody>
</table>

**Assignments**

Assignments will be due each Saturday at midnight. The weekly assignments will build on one another by focusing on aspects of the research process (e.g., planning, collecting data, analyzing data, drawing conclusions) while working with a certain research method (e.g., interviewing, surveys, usability testing).

Each assignment will ask you to execute some part of the process or method, detail how to submit the resulting deliverables, and then ask you to answer reflective prompts about the process or that method. All assignments will be graded based on critical thinking and reflection, using this rubric.

**Perusall reading annotations**

Annotations on our readings, through the Perusall tool, will be due each Monday at 9am. To help you prepare for each week’s topic, you will collaboratively annotate each of that week’s readings with the other students in your discussion section using the Perusall tool. Instructors will read but not post on Perusall. Instructors will monitor annotations to ensure they are always respectful and professional, and also to identify areas of confusion or interest to cover in lecture or discussion.

For details about completing annotations, see Perusall instructions and rubric. Perusall automatically scores your annotations in real time, and you can always go into the “My scores” tab in Perusall to make sure you are meeting all requirements for a full score. Note that
scores may take some time to transfer into your gradebook on Canvas, but Perusall will always show your accurate score. Your lowest Perusall score will be dropped from your final grade.

**Attendance and participation**

Attendance and/or participation is required for both lecture and discussion. Points for a lecture can be earned by attending synchronously, or watching the recording and answering a few prompts on the week’s topic (due one week from the lecture date). Points for a discussion section can be earned by attending synchronously, or participation on Piazza with any relevant and thoughtful questions or answers timestamped that week. You can earn points for each week from Sunday through Saturday.

Piazza will be a place for you to engage with other students for practical help and advice as you are completing assignments. Students often have similar questions or clarifications, so this should be the first place you check. Instructors will monitor Piazza and endorse student responses, and will only post if a topic remains unanswered.

Your two lowest attendance/participation scores will be dropped from your final grade.

**Reports**

Some assignments will be finished off with a report, which more formally presents the results of your research the way you would to a product team or client. These will be graded differently than your assignments, based on how clear, convincing, and useful your insights are.

**Late Policy and Resubmissions**

The late policy in this course is as follows:
- Late assignment and report submissions will lose 1 point per 24 hours.
- You can still earn points on Perusall reading annotations after the deadline, but only if you start them and earn partial points before the deadline (details here).

Assignment and report resubmissions can be turned in for up to 80% of the original points. All resubmissions must be received within one week of the grade being released. When re-submitting, you must use track changes or otherwise highlight all revisions you have made in order to earn points for that content.

**Communication**

Canvas is the dissemination method for announcements, assignments, schedule, and other course materials. You are responsible for keeping up-to-date with the materials on Canvas. Course announcements will be made by the instructor via Canvas and in lecture.

Questions about course logistics or content will be answered on Piazza, where others can benefit from seeing responses. Students are encouraged to provide answers to one another. Instructors will endorse responses, and post responses if a question remains unanswered.
How will we use Piazza and Perusall differently? Perusall is for annotating our readings as you engage with the content for the first time, helping you to think critically about it and make connections. Instructors will monitor Perusall annotations to adjust how we present the content in class, with clarifications and emphasis to help you learn key concepts. Then, as you are applying what you learned in class to complete each assignment, practical questions may arise about how exactly to do the work. Piazza is for these applied questions. Perusall is for thinking more broadly about the content of the course and understanding it in complex real-world contexts (“It’s good to know that 5 is commonly considered an ideal number of participants for usability testing.”); Piazza is for putting things into practice through our assignments and meeting specified requirements (“Do I only need to do my usability test with 3 people?”).

For individual questions or more personal concerns, please come to office hours or email your GSI or the instructor directly.

COVID Statement – 8/12/20

For the safety of all students, faculty, and staff on campus, it is important for each of us to be mindful of safety measures that have been put in place for our protection. By returning to campus, you have acknowledged your responsibility for protecting the collective health of our community. Your participation in this course on an in-person basis is conditional upon your adherence to all safety measures mandated by the State of Michigan and the University, including maintaining physical distancing of six feet from others, and properly wearing a face covering in class. Other applicable safety measures may be described in the Wolverine Culture of Care and the University’s Face Covering Policy for COVID-19. Your ability to participate in this course in-person as well as your grade may be impacted by failure to comply with campus safety measures. Individuals seeking to request an accommodation related to the face covering requirement under the Americans with Disabilities Act should contact the Office for Institutional Equity. If you are unable or unwilling to adhere to these safety measures while in a face-to-face class setting, you will be required to participate on a remote basis (if available) or to disenroll from the class. I also encourage you to review the Statement of Students Rights and Responsibilities, which includes a COVID-related Statement Addendum.

Academic Integrity

Collaboration

- UMSI strongly encourages collaboration while working on some assignments, such as homework problems and interpreting reading assignments as a general practice. Active learning is effective. Collaboration with other students in the course will be especially valuable in summarizing the reading materials and picking out the key concepts. You must, however, write your homework submission on your own, in your own words, before turning it in. If you worked with someone on the homework before writing it, you must list any and all collaborators on your written submission. Each course and each instructor may place restrictions on collaboration for any or all assignments. Read the instructions carefully and request clarification about collaboration when in doubt. Collaboration is almost always forbidden for take-home and in class exams.
Plagiarism

- All written submissions must be your own, original work. Original work for narrative questions is not mere paraphrasing of someone else’s completed answer: you must not share written answers with each other at all. At most, you should be working from notes you took while participating in a study session. Largely duplicate copies of the same assignment will receive an equal division of the total point score from the one piece of work.

You may incorporate selected excerpts, statements or phrases from publications by other authors, but they must be clearly marked as quotations and must be attributed. If you build on the ideas of prior authors, you must cite their work. You may obtain copy editing assistance, and you may discuss your ideas with others, but all substantive writing and ideas must be your own, or be explicitly attributed to another. See the (Doctoral, MSI, BSI) student handbooks available on the UMSI intranet for the definition of plagiarism, resources to help you avoid it, and the consequences for intentional or unintentional plagiarism.

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 we teach may be modified to facilitate your participation and progress. As soon as you make me 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. I 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. 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.

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