SS389/TC389 – User Experience Research & Design
Fall 2020
DE
TR 7:30-8:45

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Office Hours: Given the constraints of the pandemic and online delivery, I will make myself available on both Zoom and within a class group chat (app TBD in class). Zoom hours: TWR 11-12; Group chat: M through Friday, 9 to 5. Feel free to use the group chat to discuss course issues with each other, but don't expect me to respond after 5pm or on weekends.

Course Description: This class is a project-based introduction to qualitative user research. Students will learn about and apply social scientific methodologies in order to extract insights from users about creating better, more human-centered technologies, which may include apps, user interfaces, devices, architectural spaces, and/or services. Assignments will require that students combine research data and theory in order to analyze designs with regard to their ergonomics, intuitiveness, visceral "feel", and broader user narrative. Students will conduct small-scale qualitative studies, including usability studies, field observation, and interviews, and practice turning the results into concrete deliverables, such as personas, storyboards, paper prototypes and oral/written reports.

Mode of Instruction:
This class will be held entirely online. Short "asynchronous" lectures for specific concepts and illustrative examples will be recorded by the instructor for the students to watch at their leisure. We will meet "live" or synchronously at least once per week at the scheduled class time for Q&A, informal student presentations, film days, and whenever else it makes sense to (plan on at least every Tuesday). I will communicate any changes via the course Canvas website. It is the student's responsibility to read instructor communication and remember when synchronous meetings are occurring.

We may switch to fully asynchronous if a spike of cases leads to a shutdown of daycare facilities (your instructor has a two-year old) OR in response to deteriorating conditions at the university OR if the technical infrastructure at NMT does not permit a relatively seamless synchronous classroom experience OR if a supermajority of students request the switch to an asynchronous class. All synchronous material will be recorded for the benefit of students without sufficiently good Internet access, and those same students will be expected to record presentations and other forms of classroom participation.

Pre-requisites/Co-requisites: Junior Standing or permission of instructor

Place in Curriculum: General Education Core requirement, Area 4 – Social Sciences

Course Learning Outcomes: This course explores the human side of technological design. Course assignments, moreover, will help students hone their analytical, observational, and communication skills. By the end of the course, students should be able to: (1) Apply design theory in order to critique and improve technological designs (2) Conduct generative interviews, field observation, and usability studies in order to extract insights into user behavior (3) Produce

deliverables such as personas, storyboards, and paper/video prototypes (4) Reflect upon the conduct and outcomes of their research and use those reflections to discern potential methodological improvements

Program Learning Outcomes: Students will: (1) Identify and communicate orally and in written language while attending to audience, purpose and context. (2) Apply strategies such as reading for main points; seeking key arguments, counterarguments, rebuttals; locating supportive documentation for arguments; reading from the perspective of different stakeholder lens; and rhetorically evaluate texts (3) Evaluate how well supported one's own arguments and those of others by quality sources and evidence; integrate support for their own claims with information from sources that are used and cited ethically and appropriately (4) Delineate a research problem or question. (5) Identify and gather information to address problem, and evaluate evidence and data for credibility (6) Develop conclusions, solutions, and outcomes that reflect an informed, well-reasoned evaluation (7) Draw on historical and cultural perspectives to evaluate contemporary issues, modes of thought, and or modes of expression; Recognize and articulate the diversity of human experience across a range of historical periods and/or cultural perspectives (8) Discern the ethical and civic consequences of decisions and civilly engage with others when taking a position on those decisions

Course Requirements:
Required Texts:
PDFs of readings will be posted to Canvas. It is the students' responsibility to review assigned texts and apply them to their ongoing projects. These will be short and primarily aimed at extending the concepts presented in recorded lectures.

Required Equipment:
Students will be required to obtain and utilize equipment to enable them to capture pictures, audio, and video. Inexpensive digital cameras and stands/tripods are easily available online and at major retailers. Students are also to acquire materials to make prototype designs (generally paper and other art supplies will suffice) and to create design sketches and product storyboards (either hand-drawn or digitally created).

Assignments
Students will be evaluated and self-assess in light of the following course activities.

- Attendance and Participation: Students will contribute to "live" Q&A sessions and comment on their classmates' work. Any student unable to attend a live session will be expected to submit a very brief written reflection (i.e., 150 words) containing questions, comments, and/or reflections after watching the recording in order to receive credit.
- Homework: *This class is based on learning by doing*. Assignments will ask students to perform some element of user experience work (i.e., design assessment, short observation, nano-usability study, etc.) and document their work. Each of these introduce some component of the later major assignments. *Don't over think these or make them stressful. I expect lots of mistakes. That's how learning happens.*
- Presentations: Every week, some portion of the students will be asked to present their homework to the rest of the class during a "live" session. If they are unable to attend the live session, they will submit a recording of their presentation and respond to peer feedback in writing (likely on Canvas). *These will be relatively informal.*

- IRB Training: Students will be asked to complete a CITI course on ethical conduct and human subjects research. https://about.citiprogram.org/en/homepage/
- Major Assignments: This should include: 1) Generative Interview(s) 2) Observation/Field Study 3) Usability Study. Students will conduct these (hopefully in pairs) according to written instructions/rubric provided by the professor, submitting a more formal write up of research questions, methods, results, and conclusions, including a deliverable such as a persona, storyboard, or prototype. Depending on numbers, some portion of groups will informally present on their experiences. Everyone should expect to go up at least twice.
- Mid-term and Final Self-Assessment: See the section on "Grading"

Course Schedule: *Subject to change*

Section I: Intro to Design Thinking
Tue Aug 18 – [Live] Review of Course & Syllabus – Getting to Know Each Other.
Homework: Acquire supplies to make a paper prototype. Sketch your idea of the "ideal" wallet

Thu Aug 20 – [Live] Design Thinking In-Class Assignment.
Homework: Start IRB Training

Section II: Figuring Out What Users Want. Developing Design Ideas.

Tue Aug 25 – Complete IRB Training. Email certificate to the professor

Thu Aug 27 – How/Why Interview Users?

Homework: Interview practice: Developing and asking "open-ended" questions.

Tue Sep 1 – [Live] Student Presentations

Thu Sep 3 – Making Sense of Interview Data

Homework: Practice composing personas

Tue Sep 8 – [Live] Student Presentations

Thu Sep 10 – Brainstorming and Feeling Through Design Ideas

Homework: Draw a storyboard for a design idea

Tue Sep 15 – [Live] Student Presentations

Assignment 1: Generative interviews resulting in a deliverable

Thu Sep 17 – Independent work day. Submit script to professor for feedback by end of day

Tue Sep 22 – Independent work day.

Thu Sep 24 – Status update due.

Tue Sep 29 – [Live] Student Presentations. **Generative Interviews due.**

Section III: Watching What People Do. Observation and Field Study.

Thu Oct 1 – Social Life of Small Urban Spaces

Homework: "Ride along" study

Tue Oct 6 – [Live] Student Presentations.

Thu Oct 8 – More on Observational Methods. Submit Mid-Semester self-assessment.

Assignment 2 Assigned: Plan and Conduct an Observational/Field Site Study

Tue Oct 13 – Independent Work Day. Submit study design to professor for feedback by end of day

Thu Oct 15 – Independent Work Day

Tue Oct 20 – [Live] Student Presentations. **Observational Studies due**

Section V: Design Theory: Heuristics, Feedback, Signifiers, Affordances

Thu Oct 22 – Affordances, Feedback, Signifiers

Homework: Analyze a Frustrating Technology

Tue Oct 27 – [Live] Student Presentations

Thu Oct 29 – More Design Heuristics

Homework: Heuristic Analysis Comparing Competing Apps/Products

Tue Nov 3 – [Live] Student Presentations

Section V: Testing Designs: Usability Studies

Thu Nov 5 – Techniques for Usability Studies

Homework: Micro-Usability Study

Tue Nov 10 – [Live] Student Presentations

Thu Nov 12 – Prototyping

Homework: Create and Test a Paper Prototype

Tue Nov 17 – [Live] Student Presentations Assignment 3: Usability Study

Thu Nov 19 – Independent Work Day. Submit study design to Professor.

Tue Nov 24 – [Thanksgiving]

Thu Nov 26 – [Thanksgiving]

Tue Dec 1 – [Live] Invited Speaker or Film TBA.

Thu Dec 3 – [Live] Student Presentations **Usability Study Due**

Final Self-Assessment Due Monday Dec at 5pm.

Grading: This course follows an "ungrading" philosophy. Research finds that an excessive focus on quantitative assessment is generally detrimental to the classroom experience and to students' own learning. Instead, evaluation of student work will more closely model what actually occurs at real life jobs.

I will not assign letter grades to any assignment. Rather, the student will fill out a checklist when turning in an assignment, marking which components were completed and which were not. I will provide written and/or oral feedback on the assignment, which the student is expected to apply to future assignments.

Students will be asked to evaluate themselves at midterms and before finals week. They will submit a short piece of writing where they reflect upon their learning so far in the course, assess their strengths and weak points, how they could have done things differently, and how they hope to improve in the future. They will then assign themselves a letter grade for their work in light of an honest appraisal of their efforts. I will follow up with individual students regarding their

self-assessment. The mid-term self-assessment can be brief (< 1 page), while the final self-assessment should be considerably longer.

In the case of an obviously inaccurate self-assessment, I reserve the right to change the final grade as appropriate.

Academic Honesty: New Mexico Tech's Academic Honesty Policy for undergraduate and graduate students is found in the student handbook, which can be found at: http://www.nmt.edu/student-handbook. You are responsible for knowing, understanding, and following this policy.

The biggest academic honesty hazard in this class is plagiarism and/or claiming other people's work as your own. This is avoided by simply attributing to the right person any fact, idea, argument, etc. when acquired from elsewhere and doing your own work. Students are allowed and even expected to work collaboratively (and ask for assistance or peer evaluation from a tutor or friend), but the creation of deliverables to be submitted for evaluation must be the work of the student and assigned partners.

Reasonable Accommodations:
New Mexico Tech is committed to protecting the rights of individuals with disabilities. Qualified individuals who require reasonable accommodations are invited to make their needs known to the Office for Disability Services (ODS) as soon as possible. To schedule an appointment, please call 835-6209, or email disability@nmt.edu.

Counseling Services:
New Mexico Tech offers individual and couples counseling, safety assessments, crisis intervention and consultations through The Counseling Center. These confidential services are provided free of charge by licensed professionals. For more information, please call 835-6619, email counseling@nmt.edu or complete an Intake Form on our website at https://www.nmt.edu/cds/. All services are provided via phone or Zoom during the Covid-19 pandemic.

Respect Statement: New Mexico Tech supports freedom of expression within the parameters of a respectful learning environment. As stated in the New Mexico Tech Guide to Conduct and Citizenship: "New Mexico Tech's primary purpose is education, which includes teaching, research, discussion, learning, and service. An atmosphere of free and open inquiry is essential to the pursuit of education. Tech seeks to protect academic freedom and build on individual responsibility to create and maintain an academic atmosphere that is a purposeful, just, open, disciplined, and caring community."

Title IX Reporting:
Sexual misconduct, sexual violence and other forms of sexual misconduct and gender-based discrimination are contrary to the University's mission and core values, violate university policies, and may also violate state and federal law (Title IX). Faculty members are considered "Responsible Employees" and are required to report incidents of these prohibited behaviors. Any such reports should be directed to Tech's Title IX Coordinator (Dr. Peter Phaiah, 20D Brown Hall, 575-835-5187, titleixcoordinator@nmt.edu). Please visit Tech's Title IX Website (www.nmt.edu/titleix) for additional information and resources.