**SS389/TC389 – User Experience Research & Design**

**Fall 2019**

**Jones Annex 106**

**TR 14:00-15:15**

**Instructor:** Taylor Dotson

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**Office Hours:** Mon 11-12, Wed 1-2 (in Fitch 103/104),or by appointment (Fitch 205)

**Course Description:**

This class is a project-based introduction to qualitative user research. Students will learn about and apply a number of methodologies to extract insights from users about creating better, more human-centered technologies, which may include usability studies, ethnographic observation, interviews, and focus groups. This application will be supplemented by readings, written assignments, and oral presentations, where students will analyze technological designs in light of theory and research on ergonomics, user interfaces, urban planning/architecture, and emotional design. The semester culminates in a project in which groups of students utilize experience research methods to propose how a local technology could be redesigned to better meet the needs of a particular community of users.

**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 observation in order to critique and improve technological designs (2) Conduct an usability study and analyze the results (3) Apply one or more advanced qualitative research methods to extract insights regarding users’ emotional relationship with a technology (4) Carry out a longer term research project that applies user insights in order recommend improvements to a design for a particular community.

**Program Learning Outcomes**:

Students will:

1. Identify, describe, and explain human behaviors and how they are influenced by social structures, institutions, and processes within the contexts of complex and diverse communities.

2. Articulate how beliefs, assumptions, and values are influenced by factors such as politics, geography, economics, culture, biology, history, and social institutions.

3. Describe ongoing reciprocal interactions among self, society, and the environment.

4. Apply the knowledge base of the social and behavioral sciences to identify, describe, explain, and critically evaluate relevant issues, ethical dilemmas, and arguments.

**Course Requirements**:

**Required Texts:**

PDFs of readings will be posted to Canvas. Students are responsible for keeping up with the reading schedule. It is strongly encouraged that students print out and annotate electronically received readings.

**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.

**Assignments**

**Attendance and Participation**

Quality in-class discussions depends on the attendance and preparation of all students. Apart from mere presence, students are expected to have read and reflected upon assigned texts.

**In-Class Activities and Homework**

Numerous small tasks will be conducted in and out of class. Generally, these will entail observing or locating and analyzing examples of human-centered design principles (or the failure to apply them). Students will either turn in written record or their work and reflections or present them orally to the class. Graded on a credit/no-credit basis.

**Usability Study:** Students will work with a partner and serve as first the subject and then researcher in a usability study for a technology of their choosing, which can be an app, website, gadget, vehicle, or other reasonably complex device. Students will not only create and submit a video record of the study, but will write a brief paper on the study that analyzes its findings in terms of design theory and makes recommendations regarding potential ways to improve functionality. Recommendations should also include a sketch, wireframe, or another mockup of changes.

**Observational Study:** Students will work with a partner to observe (also taking video) one of Socorro, ABQ’s, or NMT’s small urban spaces or a particular workplace or activity, writing up a brief analysis in light of foundational design principles and facets of emotional design. Students will use this analysis to suggest changes to improve these spaces, providing sketches or other visual means of representing the changes.

**Interview or Focus Group:** The third major assignment entails applying one or more qualitative methods in order to undercover potential design opportunities. These will involve more open ended research, with students more seeking to discover unmet needs or frustrations in everyday life that may have been previously unrecognized, then exploring potential design solutions (i.e., do not pick a technology and then try to find a problem that it solves). Therefore, pairs of students will choose a particular subset of users and an area/facet of everyday life, letting their research questions and findings guide them forward. Students will produce a professional write up of deliverables, including stories, personas, etc.

**Final Project:** The semester ends with a longer research project, where groups of students (3+) choose a technology relevant to a local group of users. Potential objects of study include: NMT’s registration and scheduling system, campus study or social spaces, an app or website used by students or town residents, diners’ experience in a nearby restaurant or cafe, an important device or system present in the homes or dorm rooms of local residents, or some other technologically mediated facet of people’s lives. Students will demonstrate their ability to use two or more qualitative methods covered in the course in order to extract user insights: what are users’ needs, what relationship to they have or fail to have with the technology in questions, and how might the technology be more usable and/or meaningful to the group of users.

**NOTE:** Depending on what NMT’s IRB officer tells me, your choice of users/groups, and/or if you want to disseminate the results of your work (e.g., in a portfolio, senior thesis, or for grad school apps), you may be required to complete IRB training on the ethics of human subject research and/or apply for IRB approval. Any video capture in private spaces will require signed consent forms for foreground subjects and measures to ensure the video data is kept secure, not unintentionally disseminated, and destroyed at the end of the semester (unless the IRB board approves a longer timespan).

**Course Schedule**:

**USABILITY AND DESIGN**

**Tue Aug 20 –** Review of Course & Syllabus. Norman – The Psychopathology of Everyday Things

**Thu Aug 22 –** Norman – The Psychology of Everyday Actions. Homework Assigned: Design Analysis I

**Tue Aug 27 –** Norman – Knowing What to Do. Discuss Photos.

**Thu Aug 29 –** Norman – Design Thinking. Continue to Discuss Photos. Homework: Design Analysis II

**Tue Sep 3 –** Conducting a Usability Study. From Kulnavsky et al. *Observing the User Experience*. Discuss Photos. Usability Study Assigned.

**Thu Sep 5** – **[Professor at Conference].** Students Conduct Usability Studies.

**Tue Sep 10 –** Discussing Initial Thoughts on Usability Study Results

**Thu Sep 12 –** Film - Objectified

**Usability Study Due**

**EMOTIONAL DESIGN, URBAN SPACES, AND OBSERVATION**

**Tue Sep 17 –** Norman – Attractive Things Work Better and Multiple Faces of Emotion and Design

**Thu Sep 19 –** Norman – Three Levels of Design. Homework: Reflection on a Valued Technology

**Tue Sep 24 –** Norman – Fun and Games. Discuss Reflections.

**Thu Sep 26 –** Norman – People, Places, and Things. Homework: Design Analysis III.

**Tue Oct 1 –** Whyte – Social Life of Small Urban Spaces.Discuss Photos.

**Thu Oct 3 –** Kulnavsky et al. – Observation. Begin work on Observational Study.

**Tue Oct 8 –** Discussing Initial Thoughts on Observational Study Results

**Thu Oct 10 –** Film – Urbanized

**Observational Study Due**

**INTERVIEWS, FOCUS GROUPS, AND MORE**

**Tue Oct 15 –** Kulnavsky et al./Portigal - Interviews

**Thu Oct 17 –** More from Portigal – In-Class Interviewing and Discussion of Ethics. No Homework: Enjoy 49ers.

**Tue Oct 22 –** Kulnavksy et al. – Focus Groups. In-Class Practice

**Thu Oct 24 –** Kulnavsky et al. – Object Based Techniques. In-Class Practice. Homework: Develop a set of questions/exercises for interview or focus group.

**Tue Oct 29 –** Kulnavsky et al. – Analysis

Choosing Interview/Focus Group Topic. Contacting/Recruiting. IRB approval, if necessary.

**Thu Oct 31 –** Kulnavsky et al. – Deliverables. Homework: Revise Previous Analysis to Incorporate Personas, Scenarios, Storyboard, etc.

**Tue Nov 5 –** Planning Interviews/Focus Group

**Thu Nov 7 –** Brief Check in on progress. Supervised In-Class Work, If Needed.

**FINAL PROJECTS**

**Tue Nov 12** **–** Pick Groups and Areas for Final Project. Conduct Background Research.

**Interview/Focus Group Assignment Due.**

**Thu Nov 14 –** Designing the Study

**Tue Nov 19 –** Progress Report I

**Thu Nov 21 –** Brief Check-In. Supervised In-Class Work.

**Tue Nov 26 –** Progress Report II

**Thu Nov 28 – [Thanksgiving]**

**Tue Dec 3 – Student Presentations**

**Thu Dec 5 – Student Presentations [Papers Due Friday by 5pm]**

**[Finals Week]**

**Grading**:

A = 100-93%; A- = 92-90%: B+ = 89-87%; B = 86-83%; B- = 82-80%; C+ = 79-77%; C = 76-73%; C- = 72-70%; D = 69-60%; F=<60%

**Breakdown:**

Attendance and Participation 20%

In-Class Tasks and Homework 10%

Usability Study 15%

Observational Study 15%

Ethnography/Interview/Focus Group 15%

Final Project 25%

**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.

For this course, the biggest risk lies in plagiarism, whether unintentional or not. Students are required to appropriately cite any idea that they use that came from class readings or research texts, even if the student modifies that idea. Not only is this more honest, but it demonstrates to the professor that you read and learned the material.

**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 of Counseling and Disability Services (OCDS) as soon as possible. To schedule an appointment, please call 835-6619.

**Counseling Services:**

New Mexico Tech offers mental health and substance abuse counseling through the Office of Counseling and Disability Services. These confidential services are provided free of charge by licensed professionals. To schedule an appointment, please call 835-6619.

**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.