

INF 315C – Topics in Human Computer Interaction: User Research

Unique Number: 78304

Semester: Summer, 2019

Instructor: Amy Rothbaum, MSIS

Office Hours: By appointment. amyrothbaum@utexas.edu

Class Time and location: UTA 1.502, 7:00-9:00 pm

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Summary

The course is designed to help students to get hands-on experience with investigating and analyzing how people use designed objects. There is a growing body of work about usability, but there is no substitute for asking people what they actually think, or watching what they actually do! In this class, we will study how to do so properly.

I may change portions of this syllabus throughout the semester to adjust to student needs and my scheduling demands.

Students will enact the following learning techniques:

We will cover three main research methods: surveying, interviewing, and observation (usability testing). Students will read articles from industry sources. Students will also conduct sample research projects using the methods we cover, as well as present the data they gather, both by writing about those data and visualizing their results with charts and other techniques.

Course prerequisites

None

Required Text

Johnson, J. (2014). *Designing with the mind in mind: Simple guide to understanding user interface design guidelines*. Morgan Kaufmann; 2nd edition.

Supplemental Readings will be available online via Canvas.

Disabilities

Any student with a documented disability (physical or cognitive) who requires academic accommodations should contact the Services for Students with Disabilities area of the Office of the Dean of Students at 471-6259 (voice) or 471-4641 (TTY for users who are deaf or hard of hearing) as soon as possible to request an official letter outlining authorized accommodations.

Course Schedule

Note: this course schedule is subject to change. Canvas will have the most up-to-date information about due dates.

Date	Day of Week	Topic	Reading	Assignment
June 10	Mon	Perception	Ch 1: Our perception is biased	
June 12	Wed	Vision	Ch 2: Our vision is optimized to see structure	
June 17	Mon	Survey design	Ch 3: We seek and use visual structure	
June 18				Instrument 1: Survey Questions due
June 19	Wed	Survey design continued	Ch 4: Our color vision is limited	
June 24	Mon	Survey creation & distribution	Ch 5: Our peripheral vision is poor	
June 26	Wed	Survey creation & distribution	Ch 6: Reading is unnatural	
June 30	Sun			Data report 1: Survey report due
July 1	Mon	Data report presentations / Attention	Ch 7: Our attention is limited; our memory is imperfect	Peer review 1: due at the end of class
July 3	Wed	Interviewing	Ch 8: Limits on attention shape our thought and action	
July 8	Mon	Interviewing analysis	Ch 9: Recognition is easy; recall is hard	
July 9	Tue			Instrument 2: Interview questions due
July 10	Wed	Interviewing analysis	Ch 10: Learning from experience and performing learned actions are easy; novel actions, problem solving, and calculation are hard	
July 15	Mon		Ch 11: Many factors affect learning	
July 17	Wed		Ch 12: Human decision making is rarely rational	
July 21	Sun			Data report 2: Interview report due
July 22	Mon	Data report presentations	Ch 13: Our hand-eye coordination follows laws	Peer review 2: due at the end of class
July 24	Wed	Intro to Usability	Ch 14: We have time requirements	
July 29	Mon	Usability continued	Readings distributed in-class	

July 31	Wed	Usability workshop	Develop usability test plan - due by the end of class	Instrument 3: Usability test plan due the end of class
Aug 5	Mon	NO CLASS: self-directed usability testing.	None	
Aug 7	Wed	NO CLASS: self-directed usability testing.		
Aug 11	Sun			Data report 3: Usability test due
Aug 12	Mon	Present final data report	No readings	Peer review 3 due at the end of class
Aug 14	Wed	Last day of class	No readings	

Assignments

You will need to complete assigned readings at home, work on 3 sample research projects in two parts, respond to peers' sample research, participate in class, and demonstrate knowledge of the readings.

Participation and Knowledge of the readings part 1: 18 Daily Quizzes: 30%

Throughout the semester, I will administer daily quizzes (1 on every day you have readings due). The quiz may be at the beginning, middle, or end of the class period. Each quiz will cover that day's readings with 2-4 questions. If you miss the time during class when the quiz occurs, you missed it. This quiz is essentially your attendance check – are you in class and paying attention? Then you will do well for 30% of your course grade.

Sample research projects part 1: 3x instruments of measurement 20%

You will turn in an instrument of measurement in advance of conducting each sample research project so that you can iterate on it for your subsequent data-gathering and report. Each should:

- Be submitted as one PDF document via Canvas to the appropriate assignment, on time, with college-level writing, and be related to a complex system.
- Include a citation and link to a scholarly paper from the approved list of resources linked in the relevant assignment on Canvas.
- Begin with a paragraph setting out the phenomena, interface, or problem you are addressing following and expanding on that prior study. Do NOT just pull your RQs, hypotheses, propositions, or questions out of thin air.
- Include the instrument itself. (for example: the questionnaire, interview questions, or experimental procedure.)

Sample research projects part 2: 3x data reporting 30%

Next, you will carry out your research, with between 4 and 20 participants, depending on the method at hand (fewer for interviews, more for surveys). You will then provide me with a report, also in PDF format on Canvas, which includes:

- An introductory paragraph setting out the phenomena, interface, or problem you are addressing.
- Between 2 and 5 visualizations of your analysis, depending on the assignment (e.g. charts and graphs). 1-2 sentences explaining why each is important. You MAY describe negative results (e.g.; “I didn’t prove my hypothesis.”) In fact, acknowledging negative results is an important ethical consideration.
- A concluding paragraph suggesting what this research means for designs related to your topic (see: your own introduction.)
- An appendix with all of the data you collected.
- An appendix with a description of how and why you iterated on your original instrument.
- Citations to background work (e.g. the paper you cited in the first part of this project).

Sample research projects part 3: 3x peer responses: 20%

You will each respond to one of your peers’ reports. In your response, you should summarize what the point of their research was, in your own words. Be sure to:

- Suggest 1-2 future directions for the research area.
- Ask the author 2-3 questions about their findings.

You will be given time IN-CLASS to complete these peer reviews. This will not require effort outside of class time, but rather serves as an opportunity to discuss research techniques and reflect on your learnings with your classmates.

Grading

Your assignments will be graded based on college-level writing standards including Grammar and spelling, demonstrated clarity of thought, and structure in your writing. Your ability to follow the instructions given and your use of resources from class (including citations). The overall quality of your reports and responses.

Title	Repetitions	Total percent of final grade
Quizzes	18	30%
Instruments	3	20%
Reports	3	30%
Peer responses	3	20%

I use plus and minus grades for the final grade. The conversion will be as follows:

A	94 – 100 points
A-	90 - 93.9
B+	87 - 89.9
B	84 - 86.9
B-	80 - 83.9
C+	77 - 79.9
C	74 - 76.9
C-	70 - 73.9
D+	67 – 69.9
D	64 - 66.9
D-	60 - 63.9 (minimum for pass/fail students to pass)
F	Below 60

Late Assignments

It is important to complete your work on time, both so you can stay on track and so you can work with your fellow students. You will be docked 10% each day for every day late for any assignment. Plan ahead.

Academic dishonesty

Students who violate University rules on scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and/or dismissal from the University.