



PSYC 6023
Research Methods for HCI
Dr. Carrie Bruce
Fall 2018

Office: TSRB 346
E-mail: carrie.bruce@gatech.edu
Office Hours: email to make an appointment
Lecture: M, W, F 12:50-2:30pm; COB 102
TAs: Brittany Noah (brittany.noah@gatech.edu)
Ashok Krishna (akrishna43@gatech.edu)
Jason Paul (jpaul46@gatech.edu)

Course Description

How do you know what a user wants on a wearable display, whether an app feature is being used, whether a clickable button is better than a swipe, or whether a person who is blind can use your website? Research methods for HCI allow you to investigate such questions and develop evidence to inform design decisions. In this course, you will learn about common methods employed in user-centered and evidence-based design. You will also learn how to choose methods, plan studies, and perform research that is inclusive of users with a range of abilities. The objective of this course is to train you to use the appropriate methods, tools, metrics, and analyses for generating evidence to inform and reflect on design decisions. This course is different from traditional research methods because you will be expected to increase your awareness, understanding, and application of inclusive research practices.

Learning Objectives

Learning in this course will occur through lectures, structured discussions, readings, in class and out of class activities, and assignments. You are expected to complete the specified readings to contribute to discussions and effectively engage in course activities.

At the end of this course, you should be able to:

- Appraise a research context and develop a focused problem space
- Conduct common user research methods and articulate their advantages and disadvantages
- Select and apply appropriate data treatment techniques to examine data
- Interpret research findings to synthesize and inform design decisions
- Document and communicate research findings to demonstrate the evidence-based process

Required Textbooks

Baxter, K., Courage, C., & Caine, K. (2015). *Understanding Your Users: A Practical Guide to User Research Methods* (Second Edition). Waltham, MA: Morgan Kaufmann/Elsevier.

Tullis, T. & Albert, B. (2013). *Measuring the User Experience: Collecting, Analyzing, and Presenting Usability Metrics* (Second Edition). Waltham, MA: Morgan Kaufmann/Elsevier.

Accommodations Policy

If you are a student with a disability and you need academic accommodations, please see me and contact the Disability Services (404-894-2563), <http://disabilityservices.gatech.edu/>. All academic accommodations must be arranged through that office. They will then contact me with instructions.

Assessment of Learning

Participation	10%
Quizzes	45%
Team Project	45%

Participation

Attendance is expected for this course. You should come to classes prepared -- that is, having read and made an attempt to understand the reading material that was assigned, and ready to engage in class activities. You should be ready to discuss and apply material covered in the lectures and reading. If you come to class and adequately contribute towards classwork and your team project, you can anticipate receiving this credit. A total of 10% of your grade will be based on a participation rating determined by the following:

- You will be responsible for keeping track of the ways in which you have contributed in class discussions and activities, and towards your team project. At announced times during the semester you will refer to your notes about your participation and provide a summary based on those notes
- Teammates' peer evaluations
- Instructor's and TAs' observations and interactions with you

Quizzes

There will be 4 quizzes assigned for individual completion (not a partner or group effort). Quizzes will serve to assess your knowledge about course topics and ability to justify the application of a method or approach to research. Quizzes will take the form of short answer. These will contribute to 45% of your course grade.

Team Project

You will engage in a semester-long team project. Teams will work on a research-focused project that results in a portfolio-ready artifact. Teamwork means working together to complete specified in-class and out-of-class activities, and graded assignments. The project will contribute to 45% of your course grade.

Industry Experts

This course will leverage the expertise and experience of industry professionals (and other practitioners) to connect class content with the day-to-day research-related activities that can occur in many HCI-related jobs. These professionals will bring real-world perspectives and case examples through lectures and activities. Engaging with professionals in class is also an

opportunity for students to learn about a variety of workplace cultures and practices, and better understand the role of research in these workplaces.

Respect and Consideration

Please, above all, be respectful and considerate of others in the class. It should go without saying, but this includes showing up on time for classes, meetings, exams, etc. Please mute all devices while in class. If you have an emergency phone call that you must take, please exit the class and take the phone call outside of the room. Consider that others sitting around you can see what is on your screen.

Academic Integrity

All students are assumed to have read the Honor Code and consented to be bound by it. Violations of the Honor Code are taken extremely seriously and will result in a failing grade for the course and referral to the Dean of Students for further action. Specific violations include (but are not limited to):

- Use or provision of prohibited assistance during exams.
- Sharing of outside assignments such as questionnaires, research reports.
- Plagiarism. This includes both the use of the words and ideas without attribution.

All exams administered in this course are to be taken without the use of notes, books, or ancillary materials, and without the assistance of any other person or group, in the class or outside of the class. Texting or other use of electronic devices such as PDAs, cell phones, audio devices, or other mobile devices during scheduled exams is prohibited for reasons of exam integrity. Use of these devices during exams is viewed as a violation. If you have any questions, please ask. I will assume that all students enrolled in the course know and understand what constitutes academic misconduct and agree to be bound by these rules.

Additional Reading Materials

Additional readings, typically research articles and book chapters, may be added during the semester. Email and T-Square announcements will be sent out when these are assigned. Students will be responsible for obtaining and reading all materials before the class in which they are to be discussed. Demos and examples may also be made available via the T-Square.

Schedule (Subject to Change)

Week#	Date	Topic(s)
1	8/20	Introduction and Class Overview, History of Research in HCI
	8/22	Project Intro, Human Abilities and Diversity
	8/24	Research Ethics and Existing Evidence
2	8/27	User Research Basics
	8/29	Decomposition and Dissection
	8/31	Observations
3	9/3	No Class – Labor Day
	9/5	Interviews: Overview and Construction
	9/7	Contextual Interviews
4	9/10	Contextual Interviews Cont.
	9/12	Data coding
	9/14	Walking the Wall – User Needs and Prioritizing
5	9/17	Translating User Needs into Design Implications/Requirements
	9/19	Survey Skills
	9/21	Survey Use in Industry
6	9/24	Surveys More
	9/26	Survey Deployment and Pilot Testing
	9/28	Data Treatment (Descriptive Statistics)
7	10/1	Data Storytelling: Presenting and Communicating Findings
	10/3	Presenting Data to Clients
	10/5	Project Feedback Sessions
8	10/8	No Class – Fall Break
	10/10	Concept Feedback, wireframes, paper prototype
	10/12	Informing Information Architecture/Card Sorting
9	10/15	Automated Tools and Validation
	10/17	Web Analytics
	10/19	Log File Analysis
10	10/22	User research and data collection in international locations
	10/24	Expert Evaluation: Cognitive Walkthroughs, Heuristics
	10/26	Study Design Overview - include A/B testing
11	10/29	Usability Testing: Overview
	10/31	Usability Testing Practice
	11/2	Usability Testing Remote Unmoderated
12	11/5	Presenting Data: Graphs and Charts
	11/7	Performance-based and Physiological Metrics
	11/9	Usability Testing: Data Treatment
13	11/12	Data Storytelling
	11/14	TBD
	11/16	Project Feedback Sessions
14	11/19	Work Day
	11/21	No Class – Thanksgiving
	11/23	No Class – Thanksgiving
15	11/26	Presenting Research in Portfolios
	11/28	Final Quiz
	11/30	Presentation Prep Day
16	12/3	Project Presentations
	12/5	No Class – Reading Period
	12/7	No Class – Reading Period
17	12/12	