CS 8903
Special Problems/Independent Study Course
Fall 2026
Instructor: Dr. Carrie Bruce

COURSE DESCRIPTION

This course is intended to align with expected knowledge and skills relevant to typical research methods for Human Factors and HCI. It enables additional depth and practice with common research methods and manual techniques for interpretation and analysis.

LEARNING OBJECTIVES

Learning in this course will occur by completing the work as specified. You are expected to work actively on the assigned activities each week. As a general guideline, one credit hour equals roughly three hours of work per week, resulting in 135-140 hours for the semester for these credits.

By completing this course, you should be able to:

- Develop a focused problem space
- Conduct common research methods
- Interpret and analyze research findings to inform design decisions or directions for further investigation
- Produce and/or investigate artifacts through an iterative and evidence-based process
- Evaluate/validate your artifact
- Document and communicate findings to demonstrate the evidence-based process

ACCOMMODATIONS POLICY

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

STUDENT-FACULTY EXPECTATIONS AGREEMENT

At Georgia Tech, we believe that it is important to strive for an atmosphere of mutual respect, acknowledgement, and responsibility between faculty members and the student body. The Student-Faculty Expectations articulate some basic expectations that you can have of me and that I have of you. In the end, simple respect for knowledge, hard work, and cordial interactions will help build the environment we seek. Therefore, I encourage you to remain committed to the ideals of Georgia Tech while in this class.

STUDENT WELL-BEING:

At Georgia Tech, we are concerned about your overall physical, social, and mental well-being. A comprehensive list of wellness related resources has been compiled and maintained by the Office of the Vice President for Student Engagement and Well-being (student-resource-guide (gatech.edu)

ASSESSMENT OF LEARNING

Your learning in this course will be assessed through 3 Phases of Work that will be focused on a specific area of focus relevant to your HCI curriculum.

Phase 1 (Weeks 1-6) (35 points)

- Refine your problem statement with research questions and conduct appropriate research methods.
- Present work

Phase 2 (Weeks 7-10) (20 points)

- Prepare ideas/concepts/prototypes/artifacts
- Get feedback
- Present work

Phase 3 (Weeks 11-16) (35 points)

- Validate and assess your ideas/concepts/prototypes/artifacts
- Present work

Each phase will consist of physical and digital representations of work that you will need to show and be capable of discussing. An oral presentation with discussion will occur at the end of each Phase of work. Additionally, you are expected to provide a weekly update via Slack on your progress for the week and attend a scheduled 30-minute in-person meeting with your advisor every 2 weeks (this meeting time could be used for the scheduled presentation for each phase of work).

GRADING

Your grade will be determined by attendance and your performance, documentation, and presentation of work in each of the 3 phases.

- Attendance will comprise 10% of your final grade – submitting your weekly progress note, attending in-person meetings with advisor, showing up on time to user activities.

The remaining 90% of your grade will be divided across the 3 phases of work (35%+20%+35%) and will be based on the following components in each phase:

- Performance – communicating with and scheduling research activities, conducting secondary research activities, organizing and analyzing data, defining user needs, brainstorming ideas and concepts, conducting feedback sessions, refining design to prototype, conducting usability tests, etc.
- Documentation – producing artifacts that are relevant to the work in that phase – task flows, software teardown, comparative analysis table, user interview notes and annotations, screenshots, sketches/storyboards, wireframes, feedback protocols, feedback notes, testing protocols, notes from testing, etc.
- Presentation – preparing a slide deck of work completed, giving an in-person oral presentation, answering questions and discussing details.
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Grading: The above components will be assessed and contribute to your grade. At Georgia Tech, final course grades are awarded on a scale of A-F with no +/- grades permitted. 90-100= A; 80-89= B; 70-79= C; 60-69= D; below 60= F. **You must receive an C grade or better to pass this course as required by the MS-HCI Program.**

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):

- Unauthorized Collaboration: Unauthorized interaction with another Student or Students in the fulfillment of academic requirements.
- Plagiarism: Submission of material (including words and ideas) that is wholly or substantially identical to that created or published by another person or persons, without adequate credit notations indicating the authorship.
- False Claims of Performance: False claims for work that has been submitted by a Student.
- Grade Alteration: Alteration of any academic grade or rating so as to obtain unearned academic credit.
- Deliberate Falsification: Deliberate falsification of a written or verbal statement of fact to a Faculty member and/or Institute Official, so as to obtain unearned academic credit.
- Use of AI to solely or in large part produce work that you present as your own.
- Use of AI in a manner that violates the policy specific to the assignment, assessment, or other work instructions.

POLICY ON USE OF GENERATIVE AI FOR CLASS WORK

For this course, we treat AI-based assistance, such as ChatGPT, Claude, Copilot, etc. the same way we treat collaboration with other people: you might be welcome to talk about your ideas and work with other people, both inside and outside the class, as well as with AI-based assistants. However, all work you submit must be your own. You should never include in your assignment anything that was not written or produced directly by you without proper citation (including quotation marks and in-line citation for direct quotes). Including anything you did not write or produce in your assignment without proper citation will be treated as an academic misconduct case. Additionally, you cannot expect to use AI as work effort just because you have properly cited it.

If you are unsure where the line is between collaborating with AI and copying AI, we recommend the following heuristics:

Heuristic 1: Never hit "Copy" within your conversation with an AI assistant. You can copy your own work into your own conversation, but do not copy anything from the AI conversation or other AI workspace back into your assignment.

Instead, use your interaction with the AI assistant as a learning experience, then let your assignment reflect your improved understanding.

Heuristic 2: Do not have your assignment and the AI agent open at the same time. Similar to the above, use your conversation with the AI as a learning experience, then close the interaction down, open your assignment, and let your assignment reflect your revised knowledge.

This heuristic includes avoiding using AI directly integrated into your composition environment: just as you should not let a classmate write content, design work, or code directly into your submission, so also you should avoid using tools that directly add content to your submission.

Deviating from these heuristics does not automatically qualify as academic misconduct; however, following these heuristics essentially guarantees your collaboration will not cross the line into misconduct.