CS/PSYC 3750 Syllabus

Intro to User Interface Design, Section A, 3 credits

Summer 2026

Instructor Information

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General Course Information

Description

From the course catalog:

Describes the characteristics of interaction between humans and computers and demonstrates techniques for the evaluation of user-centered systems.

Beyond the course catalog:

This course is meant to introduce you to user-centered design. This mode of design puts the user first and "technology-for-its own sake" second. Students will be introduced to human–computer interaction (HCI) concepts, design principles and techniques and will be expected to implement them in a variety of group assignments. In this course, we work with a "real world" client and use a corporate approach where you are given a project and a team with whom to develop it.

Course Structure:

> **Foundations of HCI (Weeks 1-3)**: What is HCI? Why is there no UI/UX specialization for MS and PhD at GT? What methods do HCI researchers use? If HCI is in computer science, why aren't the studies replicable? What if I want to conduct UI design research? How are science and design different? What constitutes an academic contribution in HCI?
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> **User-centered Design in Context (Weeks 4-11)** We will focus on the user-centered design cycle: 1) Identifying needs and establishing requirements, understanding and conceptualizing interaction, 2) Ideation of novel interfaces and 3) System Prototyping and Evaluation framework.

Course Learning Outcomes

This class is designed to help students develop and use the critical thinking skills and evaluation prowess that are characteristic of HCI researchers. My goal is to create a dynamic learning environment– one where I will set the stage for learning, and students will take responsibility for their own learning as well as contribute to the learning of others. I encourage students to go beyond the class material and to seek information that supports this goal.

In completing this course you will…

- Read primary sources in HCI relevant to content area
- Be knowledgeable about human-computer interaction concepts and techniques.
- Demonstrate that design is a systematic and evidence-based process by working on a semester-long project
- Learn the difference between user-centered design and other approaches to design
- Design a system that is contextualized for a user and is a natural next step in accomplishing a task
- Gain experience as a designer of interactive technology by prototyping interfaces and functions (but not programming or developing the back-end).
- Practice qualitative and quantitative methods for requirement discovery and usability evaluation
- Design technology that is useful and easy to use

Required Course Materials

- Rogers, Sharp, and Preece. *Interaction Design: Beyond Human-Computer Interaction (5th Edition;* 2019).
  - ISBN: 1119547253, 9781119547259
  - I recommend (and may refer to) the 5th edition, but any edition you can find will work.
  - This book is an introduction to human factors and user interface design, but most of it is a handbook for design and evaluation. It's a very practical and hands-on introduction to the field. We will cover almost all of the contents of this book, but not in chapter order. Each project team might want to purchase/rent one textbook to share.
- Additional required readings will be posted and made available on Canvas (see Schedule for details).

Grading Policy:

Your individual grade is worth 50% of your total grade, consisting of the following components: attendance (10% of total grade), participation (20% of total grade), homework (20% of total grade).

The team project is worth 50% of your total grade, consisting of the following components: Part 1 (15% of total grade), Part 2 (10% of total grade), Part 3 (10% of total grade), Part 4 (15% of total grade).

Percentage grades will be converted to letter grades as follows: 100≥A≥90; 90>B≥80; 80>C≥70; 70>D≥60; F<60. Because students are given an opportunity to earn extra credit, grades will not be curved nor rounded up. See extra credit policy below.

Description of Graded Components

Learning in this course requires that students attend class regularly, arrive on time, contribute to course activities (discussions, etc.) and do the required homework. Further, much of design is iterative, so if a student fails to contribute to the deliverable for the day it will negatively impact their team. Thus, homework and participation assignments garner individual credit and missed deliverables can also negatively impact the individual's team grade for each report. For example, if your team grade is 90 out of 100 for a given report and you have lost 4 points on various homework/participation assignments then your project grade would be 86 points. The idea is that team members should only get the same grade if they contributed equally to the team effort.

Individual (50% of final grade). Unless specifically identified as group work, participation and homework, etc. are to be completed alone.

> **Attendance** (10%). Attendance is required. Students are expected to stay the entire duration of the class time and may lose attendance points for late arrival or early departure. Students are automatically granted one "freebie" after which they will lose attendance points for missing class.
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> **Participation** (20%). Students will have participation activities during most classes. Participation assignments are due by the end of lecture. Details about participation deliverables (date and time) and submissions may be communicated solely during lectures. Note: if you are "voted off" your team because you are not being responsive or productive you automatically get 0% for participation.
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> **Homework** (20%). Homework assignments, including their due dates, will be posted on Canvas.

Team Project (50% of final grade). Note that individuals will lose points based on missing participation and homework assignments. The idea is that team members should only get the same grade if they contributed equally to the team effort.

> **Project Description**/ **Part 0** (Included in "Homework" grade): Project idea and overview
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> **Part 1** (15%): Project requirements
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> **Part 2** (10%): Design alternatives
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> **Part 3** (10%): Prototyping and Evaluation plan
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> **Part 4** (15%): Final Report

Course Policies

Attendance and Participation

Attendance is required. Students are expected to stay the entire duration of the class time and may lose attendance points for late arrival or early departure. Students are automatically granted one "freebie" after which they will lose attendance points for missing class.

No late participation or homework will be accepted unless due to approved institution activities or extenuating circumstances (e.g., illness, family emergency) with appropriate documentation from the Dean of Students. In these cases, inform me as soon as possible in order to discuss an opportunity to make up missed work.

If you need to miss class for other reasons of which you think I should be aware (e.g., large career fairs) please also let me know.

Inform your project team if you need to miss a class.

All participation assignments are due by the end of lecture. All homework assignments are due as stated on the schedule or canvas.

Academic Integrity

Georgia Tech aims to cultivate a community based on trust, academic integrity, and honor. Students are expected to act according to the highest ethical standards. Review Georgia Tech's Honor Code and the student Code of Conduct.

Any student suspected of cheating or plagiarism on an assignment (including the use of generative AI) will be reported to the Office of Student Integrity, who will investigate the incident and identify the appropriate penalty for violations.

Accommodations for Students with Disabilities

If you are a student with learning needs that require special accommodation, contact the Office of Disability Services (404-894-2563) as soon as possible to make an appointment to discuss your special needs and to obtain an accommodations letter. Please also e-mail me as soon as possible in order to set up a time to discuss your learning needs and I will be happy to accommodate.

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.

Course Website

Canvas serves as the course website. All course materials will be posted there and announcements will be sent via Canvas.

Extensions and Late Assignments

No late participation or homework will be accepted unless due to approved institution activities or extenuating circumstances with appropriate documentation from the Dean of Students. In these cases, please inform me as soon as possible so we can discuss.

Regrade Policy

For team reports (parts 1 through 3), each team is allowed one opportunity to revise and resubmit a report. This resubmission may earn up to a one letter grade improvement (e.g., an additional 10 points for an assignment graded out of 100). Resubmission is due one week after that report's grades are released.

Classroom Engagement

This course is in large part reliant on activity and discussion, thus students need to be fully engaged. There are also many group activities in which you will share your deliverables and provide feedback to your peers. Please bring notebook paper and pens/pencils to class (different colors would be nice!)

I am committed to creating a learning environment in which all of my students feel safe and included. Because we are individuals with varying needs, I am reliant on your feedback to achieve this goal. I invite you to enter into dialogue with me about the things I can stop, start, and continue doing to make my classroom an environment in which every student feels valued and can engage actively in our learning community.

Devices Policy

Mobile phones are not permitted during class, except with explicit permission from me. Phones should be silenced or turned to airplane mode to limit disruptions to class. Use of laptops and tablets is permitted only for activities related to the class discussion. With our emphasis on discussion and activities, you are encouraged to take class time as a break from your devices.

Plagiarism & Generative AI

Written work is an important part of many of the evaluation components. Students are expected to use best practices when submitting written work. This means clearly citing material that is not yours and attributing ideas when they came from others. When in doubt about best citation practices, please ask me.

For this course, use of generative AI is not allowed. If you find yourself wanting to turn to generative AI to complete coursework, please reach out to discuss. I may be able to help!

Extra Credit Opportunity

All students have an opportunity to "solidify" their final grade by two points, e.g., earn 80% instead of 78%.

Pick either a scholarly book or set of 6 academic papers that relate to your CITI trainings or research ethics more broadly. Read these sources and compose an essay of at least 1,000 words summarizing what you learned and how it might relate to HCI research. After submitting your essay, I may ask you for a 5-10 minute meeting to discuss it with you. I also highly recommend meeting with me early on to ensure you are on the right track regarding the topic and finding relevant sources. Your extra credit essay may be submitted at any point throughout the course, but the final deadline will be listed on the Schedule.

This is an opportunity for two extra credit points, but may also appeal to students who are interested in history, ethics, or just learning more about how to approach academic literature with my guidance!

Campus Resources for Students

Undergraduate Student Academic Success Resources:

A list of resources for undergraduate students' academic success and information about advising can be found at Success at Tech.

Student Well-Being:

While I care about this course (and hope you do, too!) I know that you have a life outside of the classroom. Your physical, social, and mental well-being always come first. 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).

Acknowledgments

I extend my thanks to those who developed and shared the instructional material used in this course, including: Gregory Abowd, Colin Potts, Jim Foley, Jennifer Kim, Rosa I. Arriaga, and teaching assistants who helped improve the content.