CS3750 - SUMMER 2021 (May 17th-July 27th)

T/Th 03:30 pm-05:40 pm

Final Presentations July 29, 2021 - August 5, 2021

July 6th = No Class for Holiday

WELCOME TO CS3750! This course is designed to give you a foundation of user centered design principles and what it means to design for real people in the context of the real-world. Through the course, you will acquire an understanding of user centered design strategies and apply them through a group project. This is a highly interactive course that requires active student participation and working collaboratively in small groups.

The project theme for this course will be focused on a part of the food production cycle and labor. We will discuss this in more detail and review the project description together.

Course Learning Objectives

This class is designed to help students develop and use critical thinking skills and evaluation techniques necessary to solve real-world problems related to the field of Human Computer Interaction (HCI).

In completing this course you will…

- Be knowledgeable about the history and intellectual traditions of human-computer interaction concepts and techniques.
- Be able to access and distill primary sources in HCI relevant to content area
- Learn the difference between User-Centered Design and other approaches to design
- Learn user centered design techniques and distinguish when and where is most appropriate to use these methods. (Interviewing, ethnography, etc)
- Gain experience as a designer of interactive technology by getting your hands dirty, prototyping interfaces and functions (but not programming or developing the back-end).
- Practice qualitative and quantitative methods for user needs discovery and usability evaluation.
- Demonstrate that design is a systematic and evidence based process by working in the field
- Design technology that is easy to use, useful and supports users with varying levels of expertise.

Instructors, Teaching Assistants, and Office Hours

Instructor: Alyssa Rumsey

Email: arumsey3@gatech.edu

Online Office Hours: By appointment anytime during the semester. Please email or message me on Canvas to set up a time if you would like to meet one-on-one.

Teaching Assistants (TAs):

Name: **Jung Wook Park**

Email: jwpark@gatech.edu

Name: **Yuxi Wu**

Email: yuxiwu@gatech.edu

TA Virtual Office Hours: **Every Wednesday 12:00 PM - 1:00 PM (EDT)**

TA Bluejeans Link:https://bluejeans.com/2502169937 (Links to an external site.)
Sign up for a 10-minute slot here: https://calendly.com/yuxiwu/cs-3750-office-hours (Links to an external site.)

Class Format: This course is conducted Remote Synchronous, which means you will need to be present during the regular course time slot. You will participate in the course using BlueJeans and Georgia Tech's learning management system, Canvas (http://gatech.instructure.com).

You have all received a recurring calendar invite for Bluejeans. Please join our dedicated course instruction time by following the Bluejeans email link or clicking "join" in the Bluejeans tab within Canvas found on the left-hand menu for this

Semester Overview: User-centered Design in Context (Weeks 1-9)

Weeks 1-2 Design Space Exploration - Setting the Stage and Scoping the Problem

Weeks 2-3 User Research - Understanding Users via Data Gathering (Interviewing, Observations, HTA)

Weeks 4-5 User Research - Identifying needs and establishing requirements (Personas, Scenarios)

Weeks 5-6 Ideation - Designing and Prototyping interfaces and interactions (Affinity Diagrams)

Weeks 6-7 Prototyping and Selecting Evaluation framework

Weeks 8-9 Evaluation - Empirical and analytic

	May 18	**Introductions and Administrivia** Citi Certifications HW 0 Due May 27th
Week 1	May 20	**Intro to Human Centered Research – Design Process** *Read:* *Creswell Research Worldview (HW 1 Due May 25th)* *(Optional, Highly Recommended) Attend: IPAT AgTech Research & Opportunities-* https://us02web.zoom.us/meeting/register/tZMkd-2orjkuHdFqD8WNp2toTGD43PAd8Q4i (Links to an external site.)
Week 2	May 25	**User Interface Design Critiques and Goals** **Guest Speaker** – Mitch Guth, ChickfilA, Software Engineer HW1 Due Today
	May 27	**Identifying Stakeholders, Observation as Research** (Final Teams should be formed) TAs will confirm.
Week 3	June 1	**Interviews and Questionaries** *Read:* *Flick Chapter 13 Interviewing* P0 Due Today
	June 3	**Scenarios & Personas** *Readings:* *Pruitt and Grudin, "Personas: Practice and Theory"* *Carroll, "Five Reasons for Scenario-Based Design"*
Week 4	June 8	**Hierarchical Task Analysis**

		HW 2 Due Today
	June 10	**Developing Design Criteria – Synthesis Intro** Bring Interview materials/notes to class today
	June 15	**Design Synthesis Continued - Affinity Diagraming** *Read:* *Chapter 8 Building an Affinity Diagram* **Create accounts on Miro.com - https://miro.com/app/dashboard/** P1 Due Today
Week 5	June 17	**Design Synthesis Continued** *Readings:* *Lim, Stolterman, and Tenenberg "The Anatomy of Prototypes: Prototypes as Filters, Prototypes as Manifestations of Design Ideas"* *Lichter "Prototyping in Industrial Software Projects – Bridging the Gap Between Theory and Practice"*
	June 22	**Prototyping: Sketches, Storyboards, Wireframes** *Readings: (Includes Prototype Readings from last week!)* *Greenburg et al., "The Narrative Storyboard"* HW 3 Due Today (EXTENDED DUE June 24th)
Week 6	June 24	**Evaluation Techniques - Heuristic Evaluation** *Readings:* **How to Conduct a Heuristic Evaluation** (Links to an external site.) **10 Usability Heuristics for User Interface Design** (Links to an external site.) **Severity Ratings for Usability Problems** (Links to an external site.)

Week 7	June 29	**Evaluation Techniques – Cognitive Walkthroughs and Think Aloud Protocols** P2 Due Today (EXTENDED DUE July 1st)
	July 1	**Prototyping Poster Session and Feedback** Gather Town
	July 6	**No class** **Forth of July Holiday**
Week 8	July 8	**Usability Testing Wrap Up and Evaluation Planing** *Reading:* *Dumas and Redish 1999. A Practical Guide to Usability Testing* HW 4 Due Today
	July 13	**Evaluation Analysis** *P3 Due Today*
Week 9	July 15	**HCI Research and Examples** ***Prototype Demos in Class**
	July 20	**MS HCI Careers Panel**
Week 10	July 22	**TBD – Class Topic Suggestion**
Week 11	July 27th	**Final Team Presentations** P4 Materials due during Final Exam Slot (August 3rd by 5:30PM

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Grading: Grading for the course will be broken down as follows:

Individual Grade	**50%**
Team Project	**50%**
Total	**100%**

Individual grade (50%):

- Class participation = 20%
    - Class attendance is mandatory, in class assignments, poster critique, timely homework submission, etc.
    - NOTE: if you are "voted off" your group because you are not being responsive or productive you automatically get 0% for participation
- Homework=30% (your total/total points possible)-- note that this may be individual homework or group homework.

Team grade (50%):

Project (Links to an external site.)**Submission Components**

- Part 0: Project idea and overview (Homework grade)
- Part 1: Project requirements 10%
- Part 2: Design alternatives (includes Poster Session) 10%
- Part 3: Prototyping and Evaluation plan 10%
- Part 4: Final Report, Final project deliverable and presentation 20%
- *Note that teams are able to request feedback from the TAs throughout the course.

Written Submissions: Reports and Homework

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 the students in accordance with the GT honor policy listed below.

Participation: This class is heavily based on participation and that is reflected in the grading. 2 in-class exercises will be dropped at the end of the semester. Any additional absences will need proof of documentation in accordance with Georgia Tech's student handbook. Your grade will be subject to a drop in one letter grade after 2 missed classes.

Grade Scale

A 100%-90%

B 89%-80%

C 79%-70%

D 69%-60%

F <60%

Computer Requirements

You will need to have regular access to the following to participate in this class:

- a computer/tablet with internet access
- access to a microphone & webcam
- an up-to-date browser, operating system

Some of the documents in this course will be available to you in PDF form. If you do not have Adobe Acrobat Reader software on your computer, you can download it by going to http://get.adobe.com/reader/ (Links to an external site.)
(Links to an external site.) (Links to an external site.)

Course Communications

Announcements

Announcements will be posted in CANVAS on a regular basis. They will appear on your CANVAS dashboard when you log in and/or will be sent to you directly through your preferred method of notification from CANVAS. Please make certain to check them regularly, as they will contain any important information about upcoming projects or class concerns.

Virtual Office Hours

I will be available for virtual office hours by appointment throughout the semester. Please email me to set up a one-on-one meeting via Bluejeans.

During the week (M-F) I will check Canvas email and monitor the discussion board several times a day. If you have a concern and send me a message during the week, you can expect a response within 48 hours.

Slack Channel - https://cs3750s21.slack.com (Links to an external site.)
If the above link does not work for joining, you can sign up here: https://join.slack.com/t/cs3750s21/signup (Links to an external site.)

Course Assignments

Important Dates

The due dates for your assignments can be found in the in Canvas. Please review these. In addition, we will post reminders prior to the due dates in the ANNOUNCEMENTS.

Diversity and Disability Statement

Georgia Tech values diversity and inclusion; we are committed to a climate of mutual respect and full participation. Our goal is to create learning environments that are usable, equitable, inclusive, and welcoming. If there are aspects of the instruction or design of this course that result in barriers to your inclusion or accurate assessment or achievement, please notify the instructor as soon as possible. Students with disabilities should contact the Office of Disability Services to discuss options of removing barriers in this course, including accommodations. ODS can be reached at 404.894.2563, dsinfo@gatech.edu, or disabilityservices.gatech.edu

Course Expectations and Guidelines:

1. The Georgia Tech Academic Honor Code applies to all work submitted in this course. To review the Honor Code, please visit https://osi.gatech.edu/content/honor-code (Links to an external site.)
2. You are expected to check your e-mail and Canvas daily. Important class announcements and information will be posted to Canvas. You are responsible for all materials posted.
3. Grades will be posted to Canvas throughout the semester. It is your responsibility to keep track of your submitted assignments and grade progress throughout the semester.
4. All assignments are due at 11:59 PM EST. Assignments can be turned in up to one week after the due date. Late assignments will be penalized 10 points per day.
5. Appropriate online behavior is expected at all times. This means that you should be respectful of your classmates, your TAs, and your instructor.