ID 8803 Speculative Assistive Futures Syllabus

Course Information

Course Prefix and Number: ID 8803-1
Fall 2026

Instructor Information

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Course Description

Speculative Assistive Futures explores assistive device design through the lens of the social, medical, and functional models of disability. The course critically examines technology abandonment, investigating the systemic and structural barriers that shape access, adoption, and long-term use of assistive technologies. Through speculative-participatory workshops with people with disabilities, students engage in co-design processes to create assistive devices that prioritize accessibility, empowerment, affordability, and stigma reduction, while balancing functionality, adaptability, and aesthetic integration. By combining hands-on design with critical inquiry, the course encourages students to envision alternative, more inclusive futures for assistive technologies.

Course Learning Outcomes

Upon successful completion of this course, students will be able to demonstrate knowledge, skills, and abilities in the following areas:

- Understand key disability frameworks and approaches to designing and conducting research with people with disabilities.
- Develop and apply inclusive qualitative research methods (e.g., interviews, surveys, observation) to understand lived experiences, including technology use and abandonment.
- Analyze and synthesize empirical data using appropriate methods, and interpret findings through disability frameworks (e.g., ICF) to inform design decisions.
- Identify and critically reflect on systemic barriers and factors influencing assistive technology abandonment and long-term adoption.
- Employ speculative and participatory design methods to envision and co-create innovative solutions with community partners.
- Design and prototype mid- to high-fidelity assistive solutions with attention to usability, accessibility, affordability, and ethics.

- Understand and implement appropriate evaluation methods (e.g., PAIDS, QUEST) to assess assistive technology solutions and support design decisions.
- Collaborate with community partners and multidisciplinary teams to produce research-informed outcomes.
- Select and integrate a range of disability-centered design, research, and evaluation methods throughout the design process.

Course Format:

An activity-oriented discussion-based seminar, twice weekly. Instructional methods for teaching the course include:

- Lectures and in-class discussions
- Assigned readings (no textbook required)
- Group work during class sessions and weekly team-based assignments
- Presentations and project critiques
- Open studio sessions

Deliverables:

- New methods are introduced about every week that students work through on their own or with a small team (homework) and "present" the outcome of applying the method in the context of a project to the rest of the class in a design critique, approximately every month.
- Weekly 'researcher journals' to critically reflect on the readings.

1. PROJECT

Throughout the course, students will explore and apply research-driven design methods to investigate and address challenges in assistive technology (AT), with a focus on sustainability, abandonment, and long-term use. Projects will follow a user-centered and participatory design process, incorporating speculative and inclusive design approaches to reimagine how AT can be designed for better fit, usability, and social integration. Working in small teams, students will identify a specific issue related to AT abandonment or disuse—framed through initial research, stakeholder engagement, and survey insights. From there, they will develop a design concept and prototype informed by community co-design and iterative feedback. The final outcome will take the form of a research-informed case study and a speculative design proposal aimed at reducing abandonment and promoting reuse.

The project will be structured around five key assignments distributed across the semester, with deliverables due at each stage. Several of these milestones will involve in-class design critiques, during which teams will present their work, receive feedback, and iterate accordingly. The course culminates in a final presentation and design showcase, with selected work contributing to a

collaborative academic publication and student portfolios. Meeting each milestone is essential to completing the course successfully.

2. RESEARCHER JOURNAL

Researcher journals are an important part of the deliverables in this course. Students must do the core readings before the classes. By the due date/time, students must create an entry in their shared journal with a question/comment about the material being covered that day, one note per required reading (typically 1 per class). The goal of the shared journal is not only for students to reflect on the readings themselves, but also to learn about their classmates' reflections on those same readings. For this reason, the journal entries are open to the full class. This will lead to richer in-class discussions.

Required Course Materials

No textbook is required. All course materials will be provided in PDF format.

Tentative Grading Scheme

Your course mark will be based roughly on the following breakdown. The instructor reserves the right to change this scheme.

Researcher Journal (*pre-class preparation on readings*)	20%
Project (*approximately 5 milestones/design reviews*) • Project Milestone 1 - Empathize (10%) • Project Milestone 2 - Define (15%) • Project Milestone 3 - Ideate (15%) • Project Milestone 4 - Prototype (15%) • Project Milestone 5 - Evaluate (10%) • Project Milestone 6 - Research Process + AT Design Poster (5%)	70%
Participation (*in-class activities, discussions, contributions to solo and group activities*) and attendance	10%
Total	100%

Grading Policy

Grading will be based on the Georgia Institute of Technology system. No plus or minuses will be applied to the final grade. However, plus and minuses will be used for all the submissions during the semester. Students will have one week after each project grade submissions to discuss any grading matters to the instructor. The grade ranges are defined as follows:

90-100% = A 80-89% = B 70-79% = C 60-69% = D 0-59% = F

Attendance policy and expectations

1. There are no formal institutional requirements regarding class attendance at Georgia Tech. The resources of the Institute are provided for the intellectual growth and development of the students who attend. A schedule of courses is provided for the students and faculty to facilitate an orderly arrangement of the program of instruction. The fact that classes are scheduled is evidence that attendance is important; students should, therefore, maintain regular attendance if they are to attain maximum success in the pursuit of their studies.
2. All students are responsible for obtaining an understanding of each instructor's policy regarding absences; all students are expected to attend announced quizzes, laboratory periods, and final examinations. Although it is recognized that occasionally it may be necessary for students to be absent from scheduled classes or laboratories for personal reasons, students are responsible for all material covered in their absences, and they are responsible for the academic consequences of their absences. Students should discuss planned absences with their instructors as soon as possible after the beginning of an academic term. Work missed may be made up at the discretion of the instructors.
3. In the event of a medical emergency or an illness that is severe enough to require medical attention, students are responsible for contacting the Office of the Dean of Students as soon as possible to report the medical issue or emergency, providing dated documentation from a medical professional and requesting assistance in notifying their instructors. The medical documentation will be handled confidentially within the Office of the Dean of Students and will inform a decision as to whether communication with instructional faculty is appropriate. It is the expectation of the Institute that instructional faculty will honor a request from the Office of the Dean of Students to excuse a medical emergency or illness and allow make-up of the work missed, including homeworks, quizzes, presentations, examinations, or other class assignments.
4. Students who are absent because of participation in approved Institute activities (such as field trips, professional conferences, and athletic events) will be permitted to make up the work missed during their absences. Approval of such activities will be granted by the Student Academic and Financial Affairs Committee of the Academic Senate, and statements of the approved absence may be obtained from the Office of the Registrar. Course instructors are responsible for establishing reasonable deadlines and/or make-up materials for the missed work, and for clearly communicating this information to the relevant student(s), when absences for Institute activities are approved.
    5. Student Responsibilities
        a. Individual students requesting approval from the Student Academic and Financial Affairs Committee are expected to do so at least two weeks before their requested absences;

b. Students are expected to inform their instructors about their approved absence by the end of the class meeting immediately following receipt of their approval notice.

6. Course Instructor Responsibilities
    a. Course instructors receiving timely notification of student absence (as outlined above) are expected to establish reasonable deadlines and/or make-up materials for missed work, and for clearly communicating this information to the relevant student(s).
7. Faculty/Staff Sponsor Responsibilities
    a. Faculty/staff sponsors of student organizations are expected to submit requests for absence approval, to the Office of the Registrar, at least one week before the date of the expected absence(s);
    b. Faculty/staff sponsors are expected to provide the Office of the Registrar with roster changes in as timely a fashion as possible, to reduce negative impact on the ability of students and instructors to coordinate their plans;
    c. Faculty/staff sponsors are expected to notify students of approved absences, along with instructions for notifying their instructors, within two business days of receipt of approval from the Office of the Registrar.
8. Students who are absent because of participation in a particular religious observance will be permitted to make up the work missed during their absence with no late penalty, provided the student informs the course instructor of the upcoming absence, in writing, within the first two weeks of class, and provided the student makes up the missed material within the time frame established by the course instructor. Exercising one's rights under this policy is subject to the Georgia Tech Honor Code. The course instructor is responsible for establishing reasonable deadlines and/or make-up material for the missed work, and for clearly communicating this information to the student. Students may choose to appeal to the Student Academic and Financial Affairs Committee of the Academic Senate for formal approval of this type of absence.
9. In alignment with **section 4.1.3** of the **University System of Georgia (USG)'s general Student Affairs policy**, students are encouraged to vote in all federal, state, and local elections. Students are encouraged to plan their voting to avoid missing classes. Students are also encouraged to participate in early voting whenever possible or to vote before, in between, or after classes on election day. For students who are registered elsewhere, they are encouraged to request absentee ballots by the appropriate deadlines. However, faculty should not penalize students for missing a class to vote on election day. In this case, a student should inform the course instructor at least 5 business days before election day about the absence for voting in writing. The course instructor is expected treat the absence as an officially excused absence if a student chooses to vote in person on election day.

10. Faculty members must provide students with reasonable accommodations for making up graded work missed while on jury duty.

Academic Honesty/Integrity Statement

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 the student Code of Conduct and the Academic Honor Code, especially Appendix A: Graduate Addendum to the Academic Honor Code.

Accommodations for Students with Disabilities

If you are a student with learning needs that require special accommodation, contact the Office of Disability Services 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.

Student Well-being

At Georgia Tech, you are recognized as a human being navigating life's ups and downs. You may experience negative stressors that can impact both your academic journey and your personal wellness. These may include academic pressure and challenges associated with relationships, mental health, alcohol or other drugs, finances, etc.

If you are experiencing disruptive challenges, seeking help is a courageous thing to do for yourself and those who care about you. A comprehensive list of student services and resources has been compiled and maintained by the Office of the Vice President for Student Engagement and Well-Being, and you can find access that list here: https://students.gatech.edu/student-resource-guideLinks to an external site.

a) In an emergency, please call Georgia Tech Police Department at (404) 894-2500 or 911.
b) For immediate mental health support, you can call the Center for Mental Health Care and Resources at (404) 894-2575.
c) You can call or text 988 or chat at 988lifeline.org.

Student Code of Conduct

You can find the link to Code of Conduct and more information here:
https://catalog.gatech.edu/rules/18/