

Prototyping Interactive Systems Syllabus

Course Information

Course Prefix and Number: CS6452

Credit Hours: 3

Instructor: Oh, HyunJoo

Semester and Academic Year

Fall semester, 2026

Course Description

This course is an introduction to computing for graduate students with non-technical backgrounds. It helps you understand how computing systems work and create functional, interactive prototypes of your ideas. For our Human-Centered Computing PhD program, this course provides a foundation needed to meet computational portfolio requirements, including skills in reading, creating, and discussing technical concepts.

Course Learning Outcomes

By enrolling in this course, students will:

1. Develop foundational skills in computing concepts for designing and building interactive systems.
2. Gain hands-on prototyping skills for physical computing systems.
3. Apply digital fabrication techniques to create prototypes.
4. Design and build interactive systems through project-based learning, integrating the skills learned in the class.

Required Course Materials

No textbooks are required. The primary resource for class activities is the SparkFun Inventor's Kit, which students may rent from the Interactive Product Design Lab (IPDL).

Grading Policy

This course is graded based on the following distribution:

- Exercises (3 total): 40%
- Project: 40%
- Attendance: 10%
- Peer Feedback & Class participation: 10%

Final grades are assigned according to the following letter grading scale: A (90% and above), B (80–89%), C (70–79%), D (60–69%), and F (below 60%).

For Satisfactory/Unsatisfactory (S/U) grading, a grade of Satisfactory (S) indicates that the student has made acceptable progress in research and coursework. In this course, a grade of B (80%) or higher is considered Satisfactory.

Attendance Policy

This course is designed as an active participation-based classroom. Regular attendance is important and will be incorporated into your final grade.

Students may miss up to two classes without penalty. Starting from the third absence, a 10% deduction will be applied to the attendance portion of the grade. Each additional set of three absences will result in an additional 10% deduction.

Additional criteria for successful completion of the course

None.

Academic and Research 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](#).

Students are expected to perform research in an ethical and responsible manner. All Doctoral and Master's Thesis students are required to take the [Responsible Conduct of Research training](#), and it is expected that students abide by the principles taught in that training while performing research.

Any student suspected of cheating or plagiarizing on a quiz, exam, or assignment will be reported to the Office of Student Integrity, who will investigate the incident and identify the appropriate penalty for violations.

Allegations of scientific or scholarly misconduct are handled in accordance with the procedures outlined by the [Policy for Responding to Allegations of Scientific or Other Scholarly Misconduct](#).

Core IMPACTS

Not applicable

[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-Faculty Expectations](#)

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](#) articulates some basic expectations that you can have of me and that I have of you. Additional information for research-related work is given in [The Expectations of Advisors and Advisees](#). 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.