

MAS.S65: Technology Design for Interactive and Installation Art

Description: In contrast to 2D, static work, interactive and installation art engages the viewer on a very physical level, which creates both opportunities and complications. Through this course we will take a look at the technical, social, and artistic trade-offs that arise, using the lens of user-centered design as a way of navigating the problem space. Students will learn about the available sensor/actuator technologies, receive practical advice on mechanism and exhibit design, and hear from current installation designers on what works and what doesn't work. Problem sets, readings, and critiques will all build toward a final project, where students will be required to install their work and evaluate its impact on the viewer.

Prerequisites: None. Although, as the class is very hands-on, enrollment will be limited to 10 students, with priority given to MAS graduate students. External enrollment approved after the second day of class.

Units: 12 (4-0-8)

Schedule: M12-2, F2-4: E15-359

Grading: The course is Pass/Fail. Students must complete all assignments and have a satisfactory attendance record. There will be a problem set (50%) due each week, and a final project (50%).

Syllabus: Every 2 weeks we will focus on a single topic, with a lecture, a guest speaker, and studio style discussion/critique. The topics will be as follows:

Art/Science

1. Introduction - course objectives, structure. the relationship between art and science. what is the role of intention in art?
2. History - what constitutes interactive art, what influences its evolution, what questions does it answer?
3. Perception - how do we view the world, and how can these perspectives be replicated, altered, or influenced?

Design/Engineering

4. Methodologies of user-centered Design - user studies, visual languages, interface design.
5. UI/UX - prototyping, testing, narrative structure, MIMO systems.
6. Mechanical design principles - stress, strain, bearings, tolerances, materials.
7. Electrical design principles - microcontrollers, motors, LEDs, opamps.
8. Sensors - what is available and how do you communicate with them?

Craft/Fabrication

9. Working with space - how to find a venue, dealing with venue constraints, following fire code, sound and light isolation.
10. Installation - time constraints, personnel issues, tools, organization.
11. Public art - politics, laws, perception, consent.
12. Funding - grants, crowd-sourcing, corporations, art as product.