

MTEC 1101: Emerging Media Foundation
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Project 3 (team-based)


Physical Computing Concept, Design, “Prototype,” Presentation

Imagine that the City of New York launched an open call for physically interactive design solutions that address one of today’s most pressing needs. Your team’s mission is to create a concept design/proposal plus a lo-fi physical/digital prototype and present it, as if you could be awarded the grant funding to create your hi-fi prototype. Your design solution can be an experiential game, game controller, IoT product, wearable, art object, installation, or something akin to one of the examples you read about in Assignment 8, but it must fit the description of physical computing that we reviewed in class:

Sensing and controlling the physical world through hardware and software.


Connecting your digital world, and the capabilities of computing, with your analogue physical reality, through interactive systems.

Your team’s proposal must mix hardware and software, physical elements with code, and integrate a human-centered interactive system. Your team’s lo-fi prototype (made by one member with materials at home) can be a metaphor, and your canvas demo must show at least two sensors and two actuators “activated” via mouse or keys.

The  icon below indicates assignments to be done in coordination with your team *between each class*.


M 11/18 (Class 22) — ideation and design solution

Brainstorm/ideate and determine a problem/solution. Sketch ideas on paper. Draft Section 1: Executive Summary of the P-Comp Concept Document Outline. DM the G-doc link + a photo of your sketch via Slack.

 Do the research as described in 2.2 in the Document Outline


W 11/20 (Class 23) — research & development / low-fi physical prototyping

Draft Section 2: Proposed Physical Computing Concept. Begin work on diagrams and a physical lo-fi prototype.

 Work with your team on the diagrams and prototype, and DM photos via Slack.

M 11/25 (Class 23) — R&D cont’d / circuits, prototypes, testing / presentation prep

Draft and submit Section 3: Recommendations + Section 4: Appendix of the Document. Finalize your diagrams and your prototype, and translate this to a p5.js sketch. Begin collaboratively creating a presentation file. Determine a plan for obtaining and recording feedback, discussing feedback, and integrating what you learned and discussed into your presentation.

 Interview a roommate or family member about the design/prototype and DM the video clip (or audio clip + photos) via Slack (and include in the online presentation file).

 Submit your completed P-Comp Concept Document Outline + link to your presentation file.

M 12/02 (Class 24) — team presentations

Each team will have about 15 minutes to present, with around 5-10 minutes for feedback, discussion, and critiques. As with Project #1, each team member should speak about a section of the presentation, and be prepared to discuss process, roles, etc. during the Q&A.