

# Project Kickoff

Lecture 15

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# Outline

## Final Project

- Overview
- Scope
- Budget
- Deliverables

# Scope

- Be creative!
- Should be larger than a 1-week lab but small enough to be doable
- Your project should:
  - Meaningfully use both the MCU and FPGA in new ways (i.e., develop new designs for both)
  - Do something useful or interesting
  - Lots of past examples on the course webpage and across the web.

# Budget

- \$50 **team** budget to purchase additional supplies not in your kit or in the E155 cabinet.
- Order through Sydney whenever possible using the engineering department order form. List me as the approver.

<https://www.hmc.edu/engineering/current-student-information/departments-forms/>

# Deliverables

- Project proposal
  - 2-page proposal
  - What are you going to build?
  - Be clear about deliverables, no stretch goals or wiggle room.
  - Include a budget for supplies
  - Initial documentation for the design (e.g., block diagrams, code flow)
- Status report
  - 4-page report (plus appendices)
  - Joint team checkoff
- Problem Design Review Presentations
- Project Demonstration

# Deliverables continued

- Problem Presentations
  - 12-minute presentations in class
  - In-depth focus on specific technical problem that you are working on but have not yet solved.
- Project Demonstration
  - Demonstrate a working project to me in a checkoff slot.
  - You must show that your project meets spec.
  - Will be asked technical questions about the operation of your design.
  - Fail final project if no functional system is demoed by Friday.

# Deliverables continued

- Final Report Website and Demo Video
  - Website and GitHub repository as portfolio
  - Clearly explain how your design works
  - Detail any specific techniques that would be useful for students in the future
- Demo Day
  - Show-and-tell style demonstration of final projects using demo videos
  - Will try to send some of the best projects (maybe a class vote) to be highlighted in HMC news or social media

# Grading

TBD with specifications for each deliverable.



# **Project Ideation Activity**

# Overview

- Break into randomly assigned teams
- Warm up: “Yes, and...”
- Ideation activity
  - Focus on quantity, not quality
- Group mixing: get together in groups of three and think about what you might create together.