ME4182 / MSE4723
Summer 2020

You are part of an experiment to create the most high-profile, rewarding, expensive, hard-working course at Georgia Tech and a model for design education at engineering schools worldwide

http://mecapstone.gatech.edu/

What is Capstone Design all about?
Goals for the course:

1. **Identify an unmet need**

   WHAT'S THE PROBLEM?

2. **Invent/design something useful**

   CREATIVITY, INNOVATION

3. **Apply your analytical knowledge to design it**

   ANALYTICAL SKILLS

4. **Prove it will work (Simulate it, build it, test it, virtually, physically)**

   MODELING AND HANDS-ON

5. **Document your process (reports, presentations)**

6. **Demonstrate it at the Expo**

7. **Give to sponsor for use or patent it and start company**

Project Types

1. External company sponsored

2. Faculty Research Lab

3. Your own idea!

- For types #1 and #2, check out currently available projects (more are being added) here:
http://mecapstone.gatech.edu/marketplace.

- For guidance on how to use the online portal, see this:
http://mecapstone.gatech.edu/howto

- Examples of past projects are here:
http://expo.gatech.edu/projects/

Elements of a Good Student Project

- What's the problem?
  - NOT "We're going to design a better mousetrap"
- Creative/Innovative - not just an assembly of off-the-shelf parts (room for novelty)
- Lends itself to analysis
- Sufficient scope for senior design
- Team should have or acquire the skills to complete the project.
- Produce a proof-of-concept and learn from it
  - Design revisions
  - Validate design decisions

How to form and register a team?

- Find team members or call for team members:
  - Based on project interest on
    https://mecapstone.gatech.edu/marketplace
  - Based on skills and experience on
    https://mecapstone.gatech.edu/marketplace
  - Self-identified/assembled during lab meeting on **May 12**.

- Team sizes are **6** students per team.

- There are **65** MEs and **3** MSEs registered as of **May 9**

- Sign up your teams on Doodle Form:
  https://doodle.com/poll/eqmmpwgrbi6nf423
  - Team A1-A3: Tue/Thu 12:30 pm - 2:40 pm (Dr. Amit Jariwala)
  - Team J1-J6: Tue/Thu 12:30 pm - 2:40 pm (Dr. Roger Jiao)
  - Team S1-S3: Tue/Thu 3:30 pm - 5:40 pm (Dr. David Smith)

How are teams matched to projects?

- Two avenues
  - Bid for a sponsored project
  - Propose your own project
- Teams are matched to projects and to faculty
- Even if you plan on bidding for sponsored projects, should have a "Plan B (C, and D)" project idea of your own

REMINDERS

1. Form and register your team ASAP!
   – Visit http://mecapstone.gatech.edu/marketplace to see the roster and find team members.
   – You may also use the class Piazza (via CANVAS). You can post about yourself and what you are expecting from team members here: https://piazza.com/class/k8nt6epa8co5de?cid=6.
   – Sign up your teams here: https://doodle.com/poll/eqmmpwgrbi6nf423.

2. Attend the **1st Studio** on **Monday, May 11 at 5:00 pm** on Bluejeans.com. The link is posted on CANVAS.

3. Attend the **1st Lab** on **Tuesday, May 12 at 12:30pm** with **your team members and initial project ideas**.
   - You will only have this session as an interactive opportunity to know your team members and share project ideas to the class!