

Capstone Design

ME/MSE/ID/BME/ECE

Pre-Semester Overview: Spring 2023

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WELCOME!

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

<https://mecapstone.gatech.edu/students>

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 sponsored
3. Your idea!

- For types #1 and #2, check out currently available projects (more are being added) here: <https://projects.gatech.edu/>
- For guidance on how to use the online portal, see this: <http://mecapstone.gatech.edu/howto>
- Examples of past projects are here: https://capstone.gatech.edu/past_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 a team?

- Team sizes are 4-6 students per team
- Total 293 students as of January 5
 - 179 MEs and 31 ECEs in monodisciplinary Capstone Design
 - 36 MEs, 6 IDs, 38 ECE, 3 BME in Interdisciplinary Capstone Design
- Do NOT worry about swapping your registration from monodisciplinary capstone to interdisciplinary (or vice versa) during week #1. Your registration will be swapped automatically (if needed) after your teams are assigned projects during week #2
- Find team members
 - Based on project interest or skills and experience on <https://projects.gatech.edu/>
 - Via class-wide chat on MS Teams <https://mecapstone.gatech.edu/support>
 - Self-identified/assembled during lab meeting on January 11 in **Exhibition Hall Midtown Ballroom**

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 (see the FAQ [here](#))
- 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 your team ASAP!
 - Past students suggest forming teams based on complementary skills
 - Visit <https://projects.gatech.edu/> to see the roster and find team members.
 - You may also use the MS Teams "[Capstone Design Support Network- Spring 2023](#)" to chat with other students in the class.
2. ME, ID, ECE, and MSE students are to attend 1st Studio on Monday, January 9 at 12:30 pm in CULC #152
3. Attend the 1st Lab session on Wednesday, January 11 at 12:30 pm in **Exhibition Hall Midtown Ballroom** with **your project ideas** (*if any*). You will only have this session as an interactive opportunity to present your project ideas to the class!