

# Capstone Design

## ME/MSE/ID/BME/ECE

Pre-Semester Overview: Spring 2024

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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](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 **332** students as of Jan 2
  - 173 MEs and 19 ECEs in monodisciplinary Capstone Design
  - 59 MEs, 17 IDs, 11 MSE, 42 ECE, 11 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 10 in **Exhibition Hall Midtown Ballroom**

# How are teams matched to projects?

- Review the Flowchart here:

<http://mecapstone.gatech.edu/flowchart>

- Teams are matched to projects and then to faculty advisors
- Even if you plan on bidding for sponsored projects, you should have a “Plan B (C, and D)” project idea of your own
- See additional FAQ here: <https://mecapstone.gatech.edu/faq>

# REMINDERS

1. Form your team ASAP!
  - Past students suggest forming **diverse** 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 2024](#)" to chat with other students in the class.
2. Attend 1<sup>st</sup> Studio on Monday, January 8 at 12:30 pm in **Exhibition Hall Midtown Ballroom**
3. Attend the 1<sup>st</sup> Lab session on Wednesday, January 10 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!