

# Capstone Design

## ME/MSE/BME/ECE

### Fall 2021

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 Research Lab

3. Your own 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 178 students as of 19<sup>th</sup> August
  - 98 MEs and 38 ECEs in monodisciplinary capstone design.
  - 21 MEs, 1 MSE, 12 ECE, 8 BME in Interdisciplinary Capstone Design
- 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 25<sup>th</sup> August

# 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!
  - Visit <https://projects.gatech.edu/> to see the roster and find team members.
  - You may also use the MS Teams “Capstone Design Support Network: Fall 2021” to chat with other students in the class.
2. ME, ECE and MSE students to attend 1<sup>st</sup> Studio on Monday, 23<sup>rd</sup> August at 12:30pm in CULC #152
  - BME students may attend virtually at [https://mecapstone.gatech.edu/pitch\\_session\\_int](https://mecapstone.gatech.edu/pitch_session_int)
3. Attend 1<sup>st</sup> Lab session on Wednesday, 25<sup>th</sup> August at 12:30pm with **your project ideas**. You will only have this session as an interactive opportunity to present your project ideas to the class!