**Capstone Design Course: Call for Projects**

**Course Introduction**

The Capstone Design Course is the final culminating course where graduating seniors work in **multidisciplinary** teams to design, build, and test solutions for an open-ended, real-world problem. Students apply their creativity, engineering, and project management skills while working under faculty guidance for a 15-week long semester (12-weeks for Summer). Each team typically spends around **500 person-hours** of effort on the project. The teams present their innovations at the end-of-semester Capstone Design Expo, where judges from Industry and Academia are invited to share their inputs to the team and help select the winning teams.

**Sponsor Benefits**

The course serves as a **low-cost Rapid Innovation** center that provides close engagement with students, faculty, and the state-of-the-art design and fabrication facilities available within Georgia Tech. Sponsors typically receive an Engineering Design Project Report with a fabrication package and any proof-of-concept models created by the team. Past sponsors have received out-of-box solutions to their challenging design problems, resulting in enormous cost savings and increased profitability.

**Project Requirements**

The course projects must be **Open-Ended Design Projects**, which offer design freedom to explore and evaluate multiple concepts to solve the problem. The problem can be crafted as a system, component, or process design to meet desired needs and specifications within constraints. Examples of suitable projects include (but are not limited) the following:

* Design of consumer products
* Automation and tools to enhance efficiency, sustainability, ergonomics, and/or safety
* Manufacturing process design to leverage cutting-edge technological developments

**Resources for Student Teams**

* **Faculty experts and mentors:** Capstone Design students present their progress and solicit guidance weekly from their assigned faculty instructor. They are also encouraged to engage with any Georgia Tech faculty with expertise in the project’s subject matter.
* **Fabrication Resources:** The Flowers Invention Studio has the latest 3D Printers (polymer, carbon fiber, and nylon), Waterjet, Laser cutters, Woodshop, and advanced CNC machining tools, all available to students in the course for training and for building their project prototypes.
* **Software Resources:** Advanced CAD, CAM, and CAE software to design and validate their solutions and project management tools. Examples include Solidworks, AutoDesk Fusion 360, Ansys, LabView, Siemens NX, CES Edupack, EduSourced.com, etc.

**Capstone Design Project Submission Form**

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

Please complete sections A – C and the acknowledgment under section D and return the completed form to Dr. Amit S. Jariwala ([amit.jariwala@gatech.edu](mailto:amit.jariwala@gatech.edu)) before 22nd December 2023 for the project in Spring 2024 semester. Please use one document per project.

1. **Company Information**
   * Company name:
   * Company Mailing address:
   * Technical Liaison
     + Name/Designation:
     + Email:
     + Phone:
   * Director/Manager
     + Name/Designation:
     + Email:
     + Phone:
2. **Project IP Requirements: Please review the IP policy here:** <http://mecapstone.gatech.edu/sponsors/intellectual-property/>. Also, do not share any proprietary information on this form.
   * *Require NDA:* Yes or No.
   * *Require IP assignment from students to the company:* Yes or No
3. **Project Description (please add relevant images, photos, etc.)**

* Project Title:
* Problem Background:
* Goal/Objective: *The primary purpose is to design and validate*…
* Design Constraints/Requirements/Specifications (if known):
* Desired student skills (if known):
* Anticipated future of the project beyond Capstone Design:
* Do you plan to send any materials or equipment to Georgia Tech to support this project? : *If yes, then please elaborate.*

1. **Sponsorship Expectations**

***Expectations for Technical Liaison****:* The technical mentor or his/her designate is expected to interact with the student team weekly, barring travel obligations or other special circumstances. This commitment is around 30-60 minutes per week. Interactions with the team could be via conference calls, in-person meetings, email, or text messages. The Technical Liaison is also requested to complete the interim and final team evaluation survey to assess the team’s performance. Although one of the key outcomes for the students is learning how to interact professionally and solve their problems, sponsors are strongly encouraged to contact Dr. Jariwala if any questions or issues arise during the project.

***Expectations for Project Director/Manager:***The Project director/manager is expected to ensure that the Technical Liaison is available and internally approved to support the project. A donation of $10,000 to the Georgia Tech Foundation is requested from project sponsors to support the Capstone Design course. The project director/manager is expected to ensure the funds are available if the student team(s) selects the project.

I, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (Project Director/Manager Name) acknowledge the sponsorship expectations.

1. **Tentative Course Timeline**

* January 3 – Deadline to upload materials here: <https://gtvault-my.sharepoint.com/:f:/g/personal/ajariwala3_gatech_edu/EkeaDBOCxc5HmoENwt_-FngBqVu_98VZxLBxAj3rzwRKJw>
  1. Company/organization Logo
  2. A 2-minute video pitch **or** any slides you wish to use for the Pitch Session
* January 8, 12:30 – 2:30 pm – Pitch Session (in-person meeting with students to pitch your project)
* January 16 – Projects will be assigned to teams, and an email introduction will be set up between the sponsor, team, and their faculty mentor. If possible, please try to schedule the first visit or teleconference with the team during this week.
* Week of February 5: First Report due (Design Requirements)
* Week of March 11: Second Report due (Conceptual Design and Preliminary Evaluation)
* April 23: Capstone Design Expo
* April 26: Final Design Report & Fabrication Package Due