

# ME 6102 – Designing Open Engineering Systems

## Course Syllabus

**ME6102: Designing Open Engineering Systems**

**Section: A**

Fall, 2026

**Class Meetings:** Monday & Wednesday, 9:30–10:45 am

**Location:** In person, online materials via Canvas

**Course Website:** [canvas.gatech.edu](https://canvas.gatech.edu)

## Instructor Information

**Instructor:** Dr. Julie Linsey

**Office:** GTMI 256

### Office Hours:

- Monday & Wednesday immediately following class (approximately 11:00 am–12:00 pm)
- Additional times by appointment if you have class conflicts with scheduled office hours

For online office hours, please call, text, or email by 8:00 am. Zoom links are available via Canvas.

**Email:** [julie.linsey@me.gatech.edu](mailto:julie.linsey@me.gatech.edu)

To ensure timely response, include [ME6102] in the subject line.

Emails are answered within 2 business days (48 hours), often sooner.

## Course Description

This project-based course provides a scientific foundation for the development of design models, methods, and design support tools for open engineering systems. The course focuses on innovation and product design in complex, open-ended contexts. Topics include idea generation, innovative problem solving for engineering and research applications, Design for X techniques, functional design, and prototyping. Students will develop and evaluate proof-of-concept designs using analytical, computational, and physical models.

## Course Learning Outcomes

By the end of this course, students will be able to:

- Negotiate solutions to open engineering problems that may have multiple viable outcomes
- Develop an understanding of decision-based design and concurrent design research and practice
- Critically evaluate design and research literature to identify meaningful research questions
- Improve design and analysis skills for innovative product development
- Generate and evaluate innovative solutions to challenging engineering problems
- Develop skills that support lifelong learning in engineering design processes

## Required and Recommended Course Materials

**Required Textbook:** None

**Useful Reference Books:**

- *Product Design* by K. Otto and K. Wood, Prentice Hall (any edition)
- *Engineering Design* by Dieter and Schmidt (4th edition)
- *Engineering Design* by Pahl & Beitz (any edition)
- Cagan & Vogel, *Creating Breakthrough Products* (2nd edition, Prentice Hall)  
(Available free online via provided link on Canvas)

## Grading Policy and Weighting

Component	Weight
Homework / Assignments	10%
Report 1	10%
Report 2	15%
Exam	20%
Final Project Report & Poster Presentation	45%
<b>Total</b>	<b>100%</b>

**Final Exam:** None

The final project report is submitted in place of a final exam.

## **Design Method vs. Design Concept Weighting**

- Approximately **65%** of the course grade emphasizes **design methods**
- Approximately **35%** emphasizes the **design concept**

Report 1: 100% method

Report 2: 66% method, 33% concept

Final report: 33% method, 66% final design concept

You may not earn more than 100% in any grading category.

## **Assignment Submission and Deadlines**

- Most homework is due Wednesdays at **10:00 pm Eastern**
- Reports and poster files are due by **10:00 pm Eastern** on the stated due date
- All electronic submissions must be made via Canvas
- On-campus students must also submit paper copies of reports in class

## **Attendance Policy**

**In-person attendance is required for Section A.**

Class time includes team work, activities, and direct interaction with the instructor. Attendance is necessary to participate fully in course projects and in-class work.

## **Additional Criteria for Successful Completion**

To successfully complete the course, students must:

- Complete all assignments, reports, and the course project
- Actively participate in team activities and in-class exercises
- Contribute equitably to team-based work
- Follow all policies regarding deadlines, collaboration, and academic integrity

## **Academic Integrity and Use of AI**

Students are expected to complete their own work in accordance with the [Georgia Tech Academic Honor Code](#).

- All sources, including people, documents, and AI tools, must be fully cited
- Generative AI may not be used without prior instructor approval
- Suspected violations will be handled through the Office of Student Integrity

## **Late Work Policy**

### **Homework**

- One planned late homework extension is allowed per student if requested 48 hours in advance
- One unplanned late individual homework assignment may be submitted up to 48 hours late without documentation
- Documented emergencies may be accommodated without limit
- Unapproved late submissions within 24 hours receive a 50% penalty

### **Reports**

- Reports must be submitted electronically by the deadline
- A 5% penalty applies for every 15 minutes late
- No late reports accepted unless due to a university-excused absence

## **Team Participation and Peer Evaluation**

Individual grades may be adjusted based on peer evaluations, individual contributions, and instructor assessment. Teams may not coordinate or share solutions with other teams working on the same project.

## **Re-grade Requests**

Re-grade requests must be submitted in writing within two weeks of receiving a graded assignment and must explain specifically why the grade should be reconsidered. Re-grade requests must be emailed to Dr. Linsey.

## **Recordings and Classroom Materials**

Students may not record classes or share course materials without instructor permission unless required as an approved accommodation. Course materials are for use only by enrolled students.

## **Research Participation**

Opportunities may be offered to participate in education-related research studies during the semester. Participation is voluntary, and alternative extra-credit assignments will be provided.

## **Disability Services Statement**

Students requiring accommodations should contact the Office of Disability Services (ODS) at 404-894-2563 or [disabilityservices.gatech.edu](https://disabilityservices.gatech.edu) and notify the instructor as early as possible.