

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

Instructor Information

Instructor: Dr. Julie Linsey

Office: GTMI 256

Office Hours:

- Monday & Wednesday immediately following class (11:00 am–12:00 pm)
- Additional times by appointment if you have class conflicts or similar commitments 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

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%
Total	100%

Final Exam: None

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

Major Item Due Dates

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**
- All electronic submissions must be made via Canvas
- On-campus students must also submit paper copies of reports in class
- Report 1: Friday 10/2/26 10 pm ET
- Report 2: Sunday 11/1/2026 10 pm ET
- Final Poster: Sunday 11/29/2026 10 pm ET
- Final Report: Monday 12/7/2026 **9:30 am ET**

Attendance Policy

In-person attendance is required for Section A.

Class time includes teamwork, activities, and direct interaction with the instructor. Attendance is necessary to participate fully in course projects and in-class work (or online versions for DL students).

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 (or online versions for DL students)
- 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 and notify the instructor as early as possible.