

<https://me.berkeley.edu/graduate/meng/>

MEng Areas of Concentration

- [Advanced Energy Technology](#)
- [Aerospace Engineering](#)
- [Biomechanics](#)
- [Control of Robotic and Autonomous Systems](#)
- [Fluids and Ocean](#)
- [MEMS/Nano](#)
- [Mechanics and Dynamics](#)
- [Modeling and Simulation of Advanced Manufacturing Processes](#)
- [Product Design](#)

MEng Degree Requirements (25 units)

- **12 units:** ME 200 level courses
- **8 units:** FUNG leadership courses
 - 2 units of bootcamp courses in fall (E270A and E270B)
 - 2 units of bootcamp courses in spring
 - 1 unit of ENG 270C (fall course)
 - 1 unit of ENG 270K (spring course)
 - 2 units of communication course total (ENG 295 in fall and spring)
- **5 units:** Capstone class (ENG 296MA - 2 units – fall and ENG 296MB - 3 units – spring)
- Comprehensive exams: leadership (spring) and technical (spring)

All courses must be taken for a letter grade (minimum of C- or higher to count towards your degree). A cumulative GPA of 3.0 is also required to complete the MEng degree requirements.

Schedule of Classes – Fall 2022

Advanced Energy Technology

- Mech Eng 249 (3 units) – Machine Learning Tools (Python)
- Mech Eng 250A (3 units) - Advanced Conductive and Radiative Transport ☒
- Mech Eng 254 (3 units) - Thermodynamics

Aerospace Engineering

- Mech Eng 236U (3 units) – Control and Dynamics of Unmanned Aerial Vehicles
- Mech Eng 287 (3 units) – Introduction to Continuum Mechanics
- Mech Eng C231A / El Eng C220B (3 units)- Experiential Advanced Control Design I
- Mech Eng C232 / El Eng C220A (3 units) - Advanced Control Systems I
- Mech Eng 263Z (3 units) - Engineering Aerodynamics

BioMechanics

- Mech Eng C210 (4 units) – Advanced Orthopedic Biomechanics
- Mech Eng 292C-001 (3 units)- Human-Centered Design Methods

Control of Robotic and Autonomous Systems (Formerly Experimental Advanced Control Systems Design)

- **Mech Eng 206A/EECS C206A (4 units) – Introduction to Robotics (NEW) *206B not offered in S23**
- Mech Eng C231A / El Eng C220B (3 units)- Experiential Advanced Control Design I
- Mech Eng C232 / El Eng C220A (3 units) - Advanced Control Systems I
- Mech Eng 236 U (3 units) – Introduction to Control of Unmanned Aerial Vehicles
- **Mech Eng 292B – 001 (4 units) – Linear System Theory (NEW)**
- **Mech Eng 292B – 002 (4 units) – Statistics and Data Science for Engineers (NEW) * will also be offered in S23**

Fluids and Ocean

- Mech Eng 242 (3 units) – Mechanics of Offshore Systems
- Mech Eng 260A (3 units) – Advanced Fluid Mechanics
- Mech Eng 262 (3 units) – Hydrodynamic Stability and Instability
- Mech Eng 292K (3 units) – Special Topics in Ocean Engineering

MEMS/Nano

- Mech Eng 219 (3 units)- Introduction to Microelectromechanical Systems
- Mech Eng C231A / El Eng C220B (3 units)- Experiential Advanced Control Design I
- Mech Eng 280A (3 units) - Introduction to the Finite Element Method

Mechanics and Dynamics

- Mech Eng 280A (3 units) - Introduction to the Finite Element Method
- Mech Eng 287 (3 units) – Graduate Introduction to Continuum Mechanics

Modeling and Simulation of Advanced Manufacturing Processes

- Mech Eng 226 (3 units)- Tribology
- Mech Eng C231A / El Eng C220B (3 units)- Experiential Advanced Control Design I
- Mech Eng 280A (3 units) - Introduction to the Finite Element Method

Product Design

- Mech Eng C231A / El Eng C220B (3 units)- Experiential Advanced Control Design I
- **Mech Eng 226L (4 units) – Science and Engineering of Cooking (NEW)**
- Mech Eng 239 (4 units) – Robotic Locomotion
- Mech Eng 292C (3 units) - Human-Centered Design Methods

ME department Comprehensive Technical Oral Exam

- **Two committee members must be in attendance:** One committee member must be a ME representative and one committee member must be on the academic senate.
- **You will be individually tested on the ME content of your contribution to the capstone project.**
- **If you select a capstone project in another department (ex. Civil Engineering) you will be tested on the ME content of your contribution to the capstone project.**

**Please note, if you select a capstone project from outside the ME department, one faculty member must be from the ME department to administer the exam.*

Berkeley MEng Tech+ Certificates

(2nd year offered)

<https://funginstitute.berkeley.edu/techplus/>

The Fung Institute, together with the departments of Mechanical Engineering, Nuclear Engineering, Materials Science Engineering, and BioEngineering, are offering 7 new certificates for the 2022-2023 academic year. **This year, certificates are limited to MEng students in the BioE, MSE, NE, or ME departments.** Students in these departments may take a certificate offered from another department, classes are on a space available basis.

1. Materials for Biological and Medical Applications (Department of Bio Engineering)
2. Structural Materials for Nuclear Applications (Department of Nuclear Engineering)
3. Nuclear Security (Department of Nuclear Engineering)
4. Intellectual Property and Entrepreneurship Strategy (IPES)
5. Engineering Data Science (Department of Mechanical Engineering)
6. Control of Robotic and Autonomous Systems (Department of Mechanical Engineering)
7. Modeling and Simulation of Advanced Manufacturing Processes (Department of Mechanical Engineering)

FAQ

1. What if I have back to back classes:

Answer: Instructors start class 10 minutes after the scheduled start time to allow students time to walk from one class to another if they have back to back classes. For example, if the scheduled start time is 11 am, the instructor starts the lecture at 11:10 am.

2. Can I take technical courses outside the ME department

Answer: Yes, but the courses won't count towards your MEng degree. No exceptions to this policy. Also be aware that some courses won't enroll students that are not in their major or program.

3. Can I be a GSI or Reader?

Answer: Yes, but due to the short length of the program and heavy workload, we don't recommend students be GSI or Readers. Please note, the ME department has limited number of GSI and Reader positions, and to increase your chances of receiving employment I recommend you apply to multiple departments (Math, Physics, or CE).

4. Can I change my area of concentration?

Answer: Yes, please let me know before you enroll in courses (mid July) and the faculty advisor in the new area you want will need to approve your request by reviewing your MEng application.

5. Can I defer admission.

Answer: We review requests to defer admission on a case by case basis. After June 1, the graduate division will only approve requests if a student is experiencing extraordinary circumstances beyond their control. Example: Not receiving a visa in time to attend classes on campus.

6. Can I extend the program to a third semester?

Answer: The full-time MEng program is currently a lock-step, two-semester degree program. Students are expected to graduate in two semester and exceptions are only considered in exceptional circumstances if a student does not complete all their degree requirements in two semesters. We cannot accommodate request for planned or voluntary program extensions.

7. Can I add the PhD program?

Answer: Yes. After completion of the MEng program (spring), you can request to continue on to the Phd Program (starting in following fall semester). The process to make the request is on our website at:

<https://me.berkeley.edu/gradbook/12-1-change-of-degree-goal-add-ph-d-to-5th-year-ms-or-m-eng/> or to our website and search “Change of Degree Goal”.

CONTACT INFORMATION

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