MEng Courses | Mechanical Engineering
Fall 2019 – Spring 2020

Advanced Energy Technology

> Fall
  • Mech Eng 250A (3 units) - Advanced Conductive and Radiative Transport
  • Mech Eng 254 (3 units) - Advanced Thermophysics for Applications
  • Mech Eng 255 (3 units) - Advanced Combustion Processes
  • Mech Eng 292E (3 units) - Advanced Special Topics in Energy Science and Technology

> Spring
  • Mech Eng 235 (4 units) - Design of Microprocessor-Based Mechanical Systems
  • Mech Eng 250B (3 units) - Advanced Convective Transport and Computational Methods

Biomechanics

> Fall
  • Mech Eng C210 (4 units) - Advanced Orthopedic Biomechanics
  • Mech Eng C223 (3 units) - Polymer Engineering
  • Mech Eng 239 (3 units) - Advanced Design and Automation
  • Mech Eng C278 (4 units) - Advanced Designing for the Human Body
  • Mech Eng 292C-001 (3 units) - Human-Centered Design Methods

> Spring
  • Mech Eng 270 (4 units) - Advanced Augmentation of Human Dexterity
  • Mech Eng C216 (4 units) - Molecular BioMechanics and Mechanobiology of the Cell
Control of Robotic and Autonomous Systems
(formerly Experimental Advanced Control Systems Design)

> Fall
- Mech Eng C231A / El Eng C220B (3 units) - Experiential Advanced Control Design I (required)
- 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-003 (3 units) - Feedback Control of Legged Robots

> Spring
- Mech Eng C231B / El Eng C220C (3 units) - Experiential Advanced Control Design II (required)
- Mech Eng 233 (3 units) - Advanced Control Systems II
- Mech Eng 235 (4 units) - Design of Microprocessor-Based Mechanical Engineering

Fluids and Ocean

> Fall
- Mech Eng 260A (3 units) - Advanced Fluid Mechanics
- Mech Eng 263 (3 units) - Turbulence

> Spring
- Mech Eng 260B (3 units) - Advanced Fluid Mechanics II
- Mech Eng 290C (3 units) - Topics in Fluid Mechanics
- Mech Eng 292K-001 (3 units) - Advanced Special Topics in Ocean Engineering - "Microscale Fluid Mechanics"
- Mech Eng 292K-002 (3 units) - Advanced Special Topics in Ocean Engineering - "Mechanics of Offshore Systems"
MEMS/Nano

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

> Spring
  • Mech Eng C231B / El Eng C220C (3 units) - Experiential Advanced Control Design II (required)
  • Mech Eng 235 (4 units) - Design of Microprocessor-Based Mechanical Engineering
  • Mech Eng C218 (4 units) – Introduction to MEMS Design

Mechanics and Dynamics

> Fall
  • Mech Eng 271 (3 units) - Intermediate Dynamics
  • Mech Eng 280A (3 units) - Introduction to the Finite Element Method (required)
  • Mech Eng 287 (3 units) - Graduate Introduction to Continuum Mechanics

> Spring
  • Mech Eng C279 / Civ Eng C235 (3 units) - Statistical Mechanics of Elasticity
  • Mech Eng 282 (3 units) - Theory of Elasticity
  • Mech Eng 285A (3 units) – Foundations of the Theory of Continuous Media

Modeling and Simulation of Advanced Manufacturing Processes

> Fall
  • Mech Eng 203 (3 units) - Nanoscale Processing of Materials
  • Mech Eng C223 (3 units) - Polymer Engineering
  • Mech Eng 280A (3 units) - Introduction to the Finite Element Method (required)
> Spring
  • Mech Eng C201 (3 units) - Modeling and Simulation of Advanced Manufacturing Processes (required)
  • Mech Eng 229 (3 units) - Design of Basic Electro-Mechanical Devices
  • Mech Eng C279 (3 units) - Introduction to Statistical Mechanics for Engineers

Product Design

> Fall
  • Mech Eng C200 (3 units) - Design, Evaluate, and Scale Development Technologies
  • Mech Eng C223 (3 units) - Polymer Engineering
  • Mech Eng C231A / El Eng C220B (3 units) - Experiential Advanced Control Design I
  • Mech Eng 239 (4 units) - Advanced Design and Automation
  • Mech Eng C278 (3 units) - Advanced Designing for the Human Body
  • Mech Eng 292C-001 (3 units) - Human-Centered Design Methods
  • Mech Eng 292C-002 (3 units) - Reimagining Mobility

> Spring
  • Mech Eng C205 (3 units) - Critical Making
  • Mech Eng 229 (3 units) - Design of Basic Electro-Mechanical Devices
  • Mech Eng 235 (4 units) - Design of Microprocessor-Based Mechanical Engineering
  • Mech Eng 292C-001 (3 units) - Advanced Special Topics in Design - "Reimagining Mobility"