### 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 (4 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
- Mech Eng C225 (4 units) - Deformation and Fracture of Engineering Materials
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 I
  • Mech Eng 262K (3 units) - Mechanics of Offshore Systems

> Spring
  • Mech Eng 260B (3 units) - Advanced Fluid Mechanics II
  • Mech Eng 262 (3 units) - Theory of Fluid Sheets and Fluid Jets
  • Mech Eng 245 (3 units) - Oceanic and Atmospheric Waves

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 224 (3 units) - Mechanical Behavior of Engineering Materials
• Mech Eng C 225 (4 units) - Deformation and Fracture of Engineering Materials
• 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"