MEng COURSES for 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 C214 (3 units) – Advanced Orthopedic Biomechanics
- Mech Eng 270 (4 units) – Advanced Augmentation of Human Dexterity
- Mech Eng C215 (3 units) - Advanced Structural Aspects of Biomaterials
- Mech Eng C225 (3 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
- Mech Eng 263 (3 units) - Turbulence

Spring
- Mech Eng 260B (3 units) – Advanced Fluid Mechanics II
- Mech Eng 266 (3 units) – Finite Diff. Meth. for Fluid Dynamics
- Mech Eng 290C (3 units) – Topics in Fluid Mechanics

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

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

**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**
- Mec 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-002 (3 units) – Advanced Special Topics in Design