Track Description
Mechatronics is the synergistic integration of mechanical engineering with electronics and intelligent computer control in design and manufacturing of industrial products and processes. Also, Robotics is emerging to be a prime technology that can greatly advance a wide variety of industries that include healthcare (e.g. surgery and rehabilitation), defense, manufacturing, transportation (e.g. autonomous driving), energy (e.g. drilling and wind turbines), smart homes, space exploration, and hazardous material handling. Due to fundamental advances across multiple disciplines, robotics will be a huge growth area over the coming years, both academically and economically.

Required Courses
**Robotics-related (choose 1+)**
- ME 350R: Robot Mechanism Design'
- ME 372J: Robotics & Automation
- ME 397*: Haptics & Teleoperated Systems
- ME 397*: Introduction to Robot Modeling & Control
- ME 397*: Algorithms for Sensor-Based Robots
- CS 376**: Computer Vision

**Mechatronics-related (choose 1+)**
- ME 348E: Advanced Mechatronics I
- ME 348F: Advance Mechatronics II
- ME 360: Vehicle System Dynamics & Controls

Elective Courses (choose up to 2)
- ME 355K: Engineering Vibrations
- ME 364L: Automatic Control System Design
- ME 369P: Application Programming for Engineers
- ME 379M: Data Science for Engineers
- ME 377K: Projects in Mechanical Engineering
- ME 397*: Real-Time Control System Lab
- ASE 330M**: Linear System Analysis
- ASE 370C**: Feedback Control Systems
- EE 445L**: Embedded Systems Design Lab
- EE 362K**: Introduction to Automatic Control
- SDS 322**: Introduction to Scientific Programming

**This course is offered by another department. Students need to check the pre-requisites of the courses and plan accordingly. Students may also need permission from the offering department to register for the course.**

**This is a graduate course. To register for a graduate course, students need permission from the instructor, an undergraduate advisor, the graduate coordinator, and ESS.**

Please contact faculty mentors for approval or to petition other courses. For course descriptions visit the University Catalog.

Faculty Mentor
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