

COLLEGE OF ENGINEERING

- Any engineering major may declare a "Minor in Robotics Engineering" field of study, which will be listed on the student's academic record after graduation. Requirements may be satisfied by completing 18 credit hours. Student must complete one of the following options, as well as an additional two courses (6 credits) from the list of supporting courses. Major does not restrict the choice of option.

Option 1, Ocean Engineering Focus: (12 credits)

Linear Algebra (MTH 215)

Foundations of Robotics (ELE/MCE/OCE 456) (offered Fall semester)

Robotic Ocean Instrumentation Design (OCE360)

Design of Remotely Operated Vehicles (OCE467)

Option 2, Mechanical Engineering Focus: (12 credits)

Linear Algebra (MTH 215)

Foundations of Robotics (ELE/MCE/OCE 456) (offered Fall semester)

Control Systems (MCE431)

Mechatronics (MCE433)

Option 3, Electrical Engineering Focus: (12 credits)

Linear Algebra (MTH 215)

Foundations of Robotics (ELE/MCE/OCE 456) (offered Fall Semester)

Digital Control Systems & Lab (ELE 458/459)

Special Problems: Machine Learning for Engineering I (ELE391) (offered Fall Semester)

Supporting Courses: (Choose 2 other courses - 6 credits total.)

| Offered during a typical Fall semester | | |
|---|--|--------|
| Electrical | Special Problems: Machine Learning for Engineering I | ELE391 |
| Mechanical | Mechatronics | MCE433 |
| Ocean | Robotic Ocean Instrumentation Design | OCE360 |
| | Hydrodynamics | EGR515 |

| Offered during a typical Spring semester | | |
|---|---|---------------|
| Electrical | Microprocessors | *ELE205/206 |
| | Special Problems: Machine Learning for Engineering II | ELE392 |
| | Digital Control Systems & Lab | ELE458/459 |
| | Computer Vision | ELE583 |
| Mechanical | System Dynamics | **MCE366 |
| | Control Systems | MCE431/ELE457 |
| | Real-Time Monitoring and Control | MCE530 |
| | The Mechanics of Robot Manipulators | MCE566 |
| Ocean | Design of Remotely Operated Vehicles | OCE467 |
| | Biomimetics in Ocean Engineering | OCE516 |
| | Modeling, Simulation, and Control of Marine Vehicles | OCE562 |
| Oceanography | Modern Oceanographic Imaging and Mapping Technique | OCG555 |

*may not be counted toward minor requirements for ELE majors

**may not be counted toward minor requirements for MCE majors

- With prior approval, supporting courses may be substituted with appropriate other courses including special projects.
- Application for the robotics engineering minor must be filed in the Engineering Dean's Office any time before graduation.

Name: _____ Student ID #: _____

Major: _____ Intended Graduation Date: _____

Name of Minor: Robotics Engineering
Focus Area (select one): Ocean / Mechanical / Electrical

| Course Number | Course Title | #Credits | Grade |
|---------------|--------------|----------|-------|
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |

Ocean, Mechanical, or Electrical Engineering Robotics Program Coordinator Signature

Date

Departmental Chairperson Signature

Date

Dean's Signature

Date

Program Coordinators

Mechanical Engineering Focus

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