

Mechatronics Minor

(non-teaching)

The College of Engineering offers a non-teaching minor in Mechatronics. The field of Mechatronics combines the principles of mechanical engineering with the principles of electronic instrumentation and computerized control. Mechatronics exploits the synergy of mechanical and electrical engineering to design unique and innovative electromechanical products, machines, robots, tools, and manufacturing processes.

The minor requires a minimum of 29 credits in specified subject areas: computer science, engineering mechanics, mechanical engineering, and electrical and computer engineering (see tables below).

Core Subject Areas

Courses listed for each subject area must be completed to earn the Mechatronics Minor.

Mechatronics

| | | |
|----------|------------------------------|---|
| EGEN 365 | Introduction to Mechatronics | 3 |
|----------|------------------------------|---|

Logic Circuits

| | | |
|----------|-------------------------|---|
| EELE 261 | Intro To Logic Circuits | 4 |
|----------|-------------------------|---|

Computer Programming

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|-------------|--------------------------------|-----|
| CSCI 109 | C for Engineers and Scientists | 3-4 |
| or CSCI 127 | Joy and Beauty of Data | |

Controls

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|-------------|---|---|
| EELE 321 | Introduction To Feedback Controls | 3 |
| or EMEC 462 | System Dynamics and Control | |
| or ETME 462 | Industrial Processing Automation and Controls | |

Electronics

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|-------------|------------------------------|---|
| EELE 317 | Electronics | 4 |
| or EELE 250 | Circuits, Devices and Motors | |

Mechanics

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|-------------|-----------------------------------|---|
| EGEN 201 | Engineering Mechanics-Statics | 3 |
| or EGEN 203 | Applied Mechanics | |
| EGEN 202 | Engineering Mechanics -- Dynamics | 3 |
| or ETME 340 | Mechanisms | |
| EGEN 205 | Mechanics of Materials | 3 |
| or EGEN 208 | Applied Strength of Materials | |

Microprocessors

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|-------------|--------------------------------|-----|
| EELE 371 | Microprocess HW and SW Systems | 3-4 |
| or CSCI 455 | Embedded Systems: Robotics | |

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| Total credits for Mechatronics Minor | | 29 |
| | | (minimum) |

Students must receive a grade of "C-" or better in all required courses for the Mechatronics Minor.