

MECHATRONICS II

Overview

Degrees Offered: Program Certificate

Limited Enrollment: Yes (On Campus)

Program Begins: Spring

Delivery Method: Online, On Campus

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Description

The Mechatronics II Certificate equips students to understand and work with industrial automation systems. The coursework covers interpreting technical documents like schematics and diagrams, then applying that knowledge to motors, controllers, and programmable logic controllers (PLCs). Students will gain hands-on experience through labs, allowing them to build, program, and troubleshoot automation systems used in manufacturing and energy production.

Students must successfully complete Mechatronics I before enrolling in Mechatronics II.

Preparation

Those considering an automation career should have a high school background in applied physics and algebra. Knowledge of mechanical electrical, and/or instrumentation systems is beneficial.

Prospective students should be prepared for the physical demands of entry-level technician positions after completing this program. Typical industry requirements include passing a physical exam, lifting 50+ pounds, climbing ladders, and working in confined spaces or heights. Job applicants may also be required to pass a drug screening and an eye exam, including the ability to distinguish between colors accurately.

Requirements

Students who complete the curriculum requirements receive a Program Certificate in Mechatronics II. Additional coursework may lead to an Associate in Applied Science degree.

The Mechatronics II program is available both online and on campus. Hands-on lab requirements are required to complete the online degree. These requirements may be completed at the BSC campus or remotely at an individual's place of employment. A consultation is required before enrolling in the online program.

Program Pathways

Credits from the Mechatronics II Certificate may stack into the following Associate in Applied Science degrees:

- Industrial Automation and Robotics
- Energy Services and Renewable Technician

The Associate in Applied Science degrees may stack into the following Bachelor of Applied Science degrees:

- Energy Management
- Mechatronics Engineering Technology
- Operations Management

Career Opportunities

Mechatronics and Industrial Robotic knowledge and skills lead to high paying careers in industry automation and other technical fields. The need for trained automation technicians continues to increase as manufacturing moves toward Industry 4.0 standards and energy toward more automation.

Additional Information



This program receives funding from the U.S. Department of Labor; therefore, veterans and eligible spouses receive priority of service over non-covered persons. (20 CFR 1010)

Degree Plans

- Mechatronics II Program Certificate

Program Learning Outcomes

Upon graduation, Mechatronics II students will be able to:

- Demonstrate skillful and safe work practices when working with motors and programmable logic controllers embedded in industrial automation systems.
- Explain operating principles governing motor and programmable logic controllers embedded in industrial automation systems.
- Troubleshoot and correct faults in motor and programmable logic controllers embedded in industrial automation systems.
- Employ professional oral and written communication skills to ensure safe and optimal operation of facility and equipment.
- Follow industry standards in the reading and application of schematics and diagrams in a systematic, safe and comprehensive manner, to assist in the troubleshooting and prevention of operational issues with a variety of equipment and systems.