

OPERATOR I

Overview

Degrees Offered: Program Certificate

Limited Enrollment: Yes (On Campus)

Program Begins: Fall, Spring, Summer (Online) | Fall (On Campus)

Delivery Method: Online, On Campus

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Description

This program certificate provides a comprehensive foundation for understanding the inner workings of an industrial facility. It covers the fundamental principles of facility operations, safety protocols, and the scientific principles underlying industrial operations. Students gain a solid understanding of industrial equipment, systems, and technical drawings, as well as the essential sciences that drive industrial processes, including electricity, heat transfer, and fluid flow.

Preparation

Background in basic chemistry, basic physics, and high school Algebra I is helpful.

Prospective students should be prepared for the physical demands of entry-level technician positions after completing the program. Typical industry requirements often include passing a physical exam, the ability to lift over 50 pounds, and the ability to climb ladders and work in confined spaces or at heights. Job applicants may also be required to pass a drug screening and eye exam, including the ability to distinguish between colors accurately, which is a key aspect in some maintenance tasks.

Requirements

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

Program Pathways

Credits from the Operator I Certificate may stack into the following Program Certificate degrees:

- Mechanical Maintenance Technology
- Water and Wastewater Technology
- Nuclear Power Technology

Credits from the Operator I Certificate may stack into the following Associate in Applied Science degrees:

- Mechanical Maintenance Technology
- Power Process Technology
- Petroleum Production Technology
- Nuclear Power Technology

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

- Energy Management
- Operations Management (Refer to the list of degrees in the Preparation section)

Career Opportunities

Graduates are well-prepared to work in a variety of energy and manufacturing industries, including electrical generation, petrochemical processing, refineries, ethanol plants, gasification, natural gas processing, and water treatment facilities. Their foundational knowledge also allows them to pursue careers in wind farms, co-generation power plants, industrial process operations, manufacturing, pipeline transportation, petroleum and chemical products, mining, and utilities. Employers seek professionals who are detail-oriented, possess strong computer skills, and can identify and solve problems. These careers offer excellent pay, strong employability, and sustained job demand nationwide, making them both versatile and rewarding.

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

- Operator I Program Certificate

Program Learning Outcomes

Upon graduation, Operator I students will be able to:

- Demonstrate an operator's responsibilities by applying safety, environmental, and ethical standards to maintain professional practices in industrial environments.
- Analyze and interpret piping and instrumentation drawings to support the operation, maintenance, and troubleshooting of equipment and systems in industrial facilities.
- Apply foundational principles of mathematics, chemistry, and industry science to ensure efficient and systematic operations in alignment with industry standards.