

# ENERGY SERVICES & RENEWABLE TECHNICIAN

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## Overview

**Degrees Offered:** AAS, Program Certificate

**Limited Enrollment:** Yes

**Program Begins:** Fall

**Delivery Method:** On Campus

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## Description

The Energy Services & Renewable Technician program prepares graduates for technician careers in the rapidly expanding energy industry. Students will gain broad based technician skill sets required in the conventional and renewable energy industry and other industries that employ automated processes.

Students receive a broad background in electrical and mechanical fundamentals, equipment and systems, instrumentation, automation, and print reading. Coursework emphasizes theory and hands-on applications of applied electronics, mechanics, hydraulics, electric motor control, programmable logic controllers (PLCs), SCADA, wind turbine systems, solar photovoltaic systems, and safe work practices.

## Preparation

Those considering energy careers should have a high school background in chemistry, physics, algebra, and English. Mechanical drawing, blueprint reading, and general shop are helpful. Wind power workers must be comfortable with heights. Knowledge of electrical, hydraulic fundamentals, mechanical fundamentals, and construction is useful.

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

## Requirements

Students who complete the curriculum requirements receive a Program Certificate or Associate in Applied Science degree.

## Career Opportunities

Graduates will be prepared to work as highly skilled technicians supporting numerous industries. These include energy service occupations supporting fossil fuel (production & transportation), renewable energy (wind & solar farms), and industrial facilities where electrical, mechanical, hydraulic and pneumatic, and troubleshooting skills sets are required.

## Additional Information

Credits from this program may be applied to BSC's Bachelor of Applied Science degree (BAS) in Energy Management, offered entirely online. The BAS is designed for individuals interested in supervisory and management positions in the energy industry. The BAS builds on the foundation laid in an AAS degree and includes general education classes, core management courses, and energy specific management courses.

BSC's National Energy Center of Excellence was designated as the National Power Plant Operations Technology and Education Center by U.S. Energy Secretary Samuel W. Bodman in 2007. This official designation recognizes BSC as the premier national center of education and training for operators and technicians in the energy industry.

## Degree Plans

- Energy Services & Renewable Technician Associate in Applied Science
- Energy Services & Renewable Technician Program Certificate

## Program Learning Outcomes

Upon graduation, Energy Services and Renewable Technician will be able to:

- Demonstrate skillful and safe work practices when working at heights and/or with electrical, hydraulic, mechanical and control systems.
- Explain operating principles governing electrical, hydraulic, mechanical and control systems.
- Troubleshoot and correct faults in electrical, hydraulic, mechanical and control systems.
- Employ professional oral and written communication skills to ensure safe and optimal operation of facility and equipment.

- Follow industry standards in the application of mathematics and print reading in a systematic, safe and comprehensive manner, to assist in the troubleshooting and prevention of operational issues with a variety of equipment and systems.