

# WATER AND WASTEWATER TECHNOLOGY

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## Overview

**Degrees Offered:** Program Certificate

**Program Begins:** Fall

**Delivery Method:** Online

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## Description

The Water and Wastewater Technology program at BSC is offered online and designed for entry-level employment in water and wastewater treatment facilities. Students acquire understanding of operator responsibilities regarding the safety of communities, personnel, and environment. Coursework includes laboratory testing and analyses for operational control and regulatory compliance, as well as applying biological, chemical, and mechanical knowledge and skills to the operation of water and wastewater treatment facilities.

Job shadowing at an approved facility or hands-on lab activities at BSC's National Energy Center of Excellence during the final semester is required for students to demonstrate safe, efficient operation and routine maintenance of a treatment facility and related equipment.

Courses are offered online only beginning every three to five weeks and are not subject to limited enrollment.

## Preparation

A background in applied math, basic chemistry, and computer training is beneficial.

## Requirements

Students who complete the curriculum requirements receive a Program Certificate and are ready to enter the workforce.

## Career Opportunities

Graduates are employed by cities, counties or agencies, as well as industries that operate and maintain water treatment, water distribution, wastewater collection, and/or wastewater treatment systems.

## Additional Information

Water and wastewater operators in North Dakota are required to meet North Dakota certification requirements. Graduates of the Waste and Wastewater Technology program will qualify for a certification track that allows reduced work experience to take the Class II, Class III, and Class IV exams. Students completing the job shadowing requirement may also earn experience credit toward North Dakota's first-level certification requirement. The program has been approved by some states for CEU/CEC training.

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. This program includes apprentice courses approved by the National Rural Water Association.

## National Designation

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

- Water and Wastewater Technology Program Certificate

## Program Learning Outcomes

Upon graduation, Water and Wastewater Technology students will be able to:

- Apply regulatory standards in the application of chemical, biological and mechanical processes relating to the operation of water and wastewater treatment facilities.
- Perform skilled laboratory testing and analyses for operational control and regulatory compliance.

- Describe plant operator's responsibilities in regards to the safety of communities, personnel and the environment.
- Demonstrate regulatory maintenance processes that support a safe and efficiently operated treatment facility.