

# ELECTRICAL TRANSMISSION SYSTEMS TECH

ONLINE



**BISMARCK**  
STATE COLLEGE

North Dakota's  
Polytechnic Institution



Bismarck State College is recognized by the North American Electric Reliability Corporation (NERC) as a continuing education provider.

## CAREER opportunities

- System Operator
- Generation/Transmission/Power Dispatcher
- Load Forecasting
- Energy Balancing Authority
- Energy Trader
- Power Marketer
- Interchange Operator
- NERC Reliability Coordinator

## Benefits to Enrolling:

- Become qualified in an industry with critical employment needs
- Online courses are flexible to fit varying work schedules
- Interactive industry approved online education
- Program available entirely online
- Courses begin every 3-5 weeks throughout the year

## HANDS-ON LEARNING.

## WORKFORCE READY.

**BSC's online Electrical Transmission Systems Technology program was created in response to industry demand for qualified system operators.**

System operations is the aspect of the energy industry that deals with the management, delivery, safety and reliability of the wholesale electrical power market. System operators ensure the reliability of the transmission of electricity over the electrical grid to consumers and the economical use of resources. The Electrical Transmission Systems Technology program teaches students about the electrical power system in North America, including basic electricity generation, distribution, and transmission, with a strong emphasis on system operations and dispatching.

In the event of an electric system disturbance or failure, system operators quickly restore service in a safe and orderly manner through switching and radio directions given to field crews.

### There are many options within the Electrical Transmission Systems Technology program:

- Continuing education hours (CEHs) for North American Electric Reliability Corporation (NERC) certification
  - Individual college courses for professional development
  - Complete a Certificate or Associate of Applied Science Degree in ETST
- \*Review the back for more details*

## NERC

**NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION**

BSC (BSC\_001) is recognized by the North American Electric Reliability Corporation (NERC) as a continuing education provider who adheres to NERC CE Program Criteria.



**STRONG  
JOB MARKET**



**\$65.5K  
MEDIAN  
SALARY**



**INCREASED JOB  
QUALIFICATIONS**

[bismarckstate.edu](http://bismarckstate.edu)

\*Earning estimates were provided by Lightcast in the Fall of 2024

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FAC-1024

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## Core Classes

### 1st Semester:

ETST 240	Power Industry Concepts	3 credits	
ENRT 106	DC Fundamentals	2 credits	(45 CEH)
ENRT 108	AC Fundamentals	3 credits	(55 CEH)
ETST 250	Electrical Generation Theory	4 credits	(41 CEH)

### 2nd Semester:

ETST 254	Substations	3 credits	(42 CEH)
ETST 256	Transformers	3 credits	(46 CEH)
ETST 258	Protective Relaying	4 credits	(55 CEH)
ETST 260	Electrical Diagram Interpretation	2 credits	(31 CEH)

### 3rd Semester:

ETST 262	Power System Operations	3 credits	(31 CEH)
ETST 266	Interconnected System Operations	3 credits	(47 CEH)
ETST 268	Power Flow	3 credits	(40 CEH)
ETST 270	System Operator Work Practices	3 credits	(40 CEH)

### 4th Semester

ETST 272	Power System Safety	3 credits	(38 CEH)
ETST 274	SCADA Systems and Communications	3 credits	(44 CEH)
ETST 276	Power System Economics	3 credits	(48 CEH)
ETST 278	Power System Emergency Concepts	3 credits	(49 CEH)
ETST 280	Reliability Policies & Procedures	3 credits	(54 CEH)

### Additional courses are available for CEH only

Emergency Operations Section 1	(12 CEH)
Emergency Operations Section 2	(12 CEH)
Emergency Operations Section 3	(12 CEH)
NERC Standards Section 1	(12 CEH)
NERC Standards Section 2	(12 CEH)
NERC Standards Section 3	(12 CEH)
Power System Operations 1	(6 CEH)
Power System Operations 2	(8 CEH)
Basic Electrical Theory	(7 CEH)
Switchman Training	(9 CEH)
Power Control 1	(8 CEH)
Power Control 2	(6 CEH)

For detailed simulation hours and operator hours, visit [bismarckstate.edu/energy/nerc](http://bismarckstate.edu/energy/nerc)

Discover the next version of you. Apply today!

Virtual & in-person visits available at [bismarckstate.edu/visit](http://bismarckstate.edu/visit)

Call 701-224-5429

Text 701-390-1075

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