

# INSTRUMENTATION AND CONTROL TECHNOLOGY

ON CAMPUS • ONLINE



**BISMARCK**  
STATE COLLEGE

North Dakota's  
Polytechnic Institution



Instrument and control technicians are needed nationally and are in high demand in the Bakken and other growing regions. Two-year pathway for new students and a one-year pathway available for Journeyman Electricians!

## CAREER opportunities

- Instrument Technician
- Industrial Automation Mechanic
- Electronics Technician
- Controls Technician
- Instrument Mechanic
- I&E / E&I / I&C / E&C Technician
- Service Technician
- Measurement Technician
- Electrical Technician
- Automation Technician
- Analyzer Technician
- Environmental Technician
- Sales Engineer

## HANDS-ON LEARNING.

## WORKFORCE READY.

**BSC's Instrumentation & Control Technology program prepares students for careers in any industrial location that utilizes automation.**

Instrument and control technicians troubleshoot, repair, calibrate, install equipment and systems in order to manipulate measured variables such as temperature, pressure, flow, force, vibration and chemical composition. Students master skills by completing project-based learning by doing lab activities utilizing state-of-the-art instruments.

Applying learned theory, mechanical skills, troubleshooting concepts and industry standards; instrumentation and control graduates can work in power generation and transmission systems, hydrocarbon or renewable facilities, food and beverage plants, water treatment facilities, medical facilities, factories, and other industrial locations.

### Program Benefits:

- 1 year pathway for Journeyman Electricians
- Cutting edge learning tool access
- Classes available online and on campus
- Fully accredited
- Credit for experience
- Seamless transfer to a 4 year program in Energy Management



**STRONG  
JOB MARKET**



**\$80K  
AVERAGE  
SALARY**

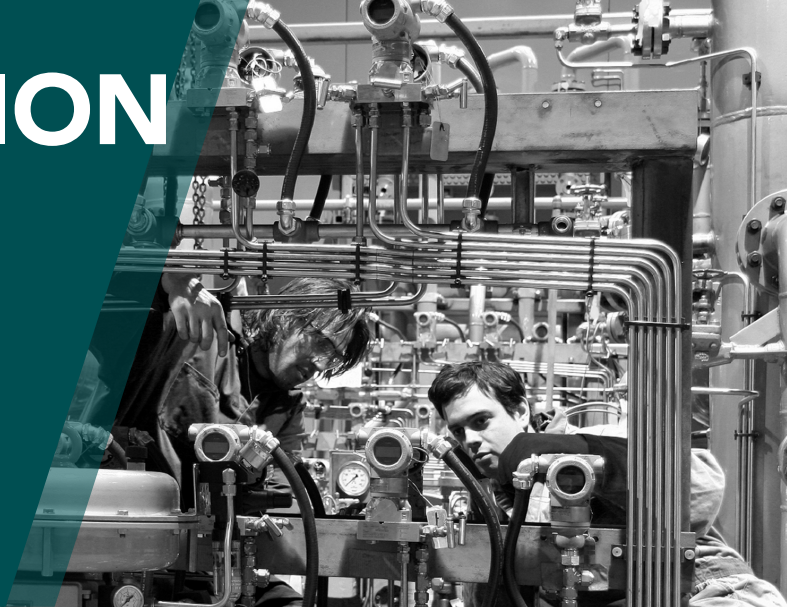


**MASTER INDUSTRY  
KNOWLEDGE**

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

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## Prescribed Technical Program Requirements

### 1st Year

ELEC 100	Direct Current Analysis	4 credits
ELEC 100L	Direct Current Analysis Lab	1 credits
ELEC 118	Solid State Devices I	4 credits
ELEC 118L	Solid State Devices I Lab	1 credits
ELEC 114	Digital Electronics I	3 credits
ELEC 114L	Digital Electronics I Lab	1 credits
ELEC 130	Active Devices	4 credits
ELEC 130L	Active Devices Lab	1 credits
ELEC 120	AC Analysis	4 credits
ELEC 120L	AC Analysis Lab	1 credits
ELEC 115	Digital Electronics II	3 credits
ELEC 115L	Digital Electronics II Lab	1 credits

OR

Journeyman Electrician License

AND/OR

Transfer in Electrician coursework completed through a regionally accredited institution

### 2nd Year

ICTL 205	Mechanical Practices	4 credits
ICTL 205L	Mechanical Practices Lab	1 credits
ICTL 215	Instrumentation Drawings and Documents	4 credits
ICTL 215L	Instrument Drawings and Documents Lab	1 credits
ICTL 225	Input and Output Devices	4 credits
ICTL 225L	Input and Output Devices Lab	1 credits
ICTL 235	Motors and Controllers	4 credits
ICTL 235L	Motors and Controllers Lab	1 credits
ICTL 245	Controls	4 credits
ICTL 245L	Controls Lab	1 credits
ICTL 255	Automation Overview	4 credits
ICTL 255L	Automation Overview Lab	1 credits

Discover the next version of you. Apply today!

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

 Call 701-224-5429

 Text 701-390-1075