



Electromechanical

A Technical Certificate Program

PROGRAM DESCRIPTION

The Electromechanical certificate program prepares individuals for employment in electrical and mechanical maintenance fields as entry level maintenance technicians. Individuals learn the basic tools to assist in diagnosing electrical and mechanical problems. The program will also emphasize preventative maintenance issues to prevent maintenance problems from occurring.

PROGRAM ARTICULATION

All courses in the Electromechanical certificate program will articulate into the Associate of Applied Science degree program in Electrical Engineering Technology - Concentration: Electromechanical.

APPLICATION PROCEDURE

A student desiring to pursue a certificate in Electromechanical must:

1. Submit the Northeast State Application for Admission to the Office of Admissions and Records.
2. Indicate Electromechanical as the desired major on the Northeast State application form.
3. See a faculty advisor from the Electrical Engineering Technology program prior to registering for classes.

GAINFUL EMPLOYMENT DISCLOSURE

As required by the U.S. Department of Education
[https://apps.northeaststate.edu/
GainfulEmployment/](https://apps.northeaststate.edu/GainfulEmployment/)

TYPICAL PROGRAM OF STUDY

Course No.	Course Title	Credit
<u>FALL</u>		
ELEC 1110	DC Fundamentals	4
MECH 1210	Mechanical Transmissions	4
MECH 2310	Hydraulics and Pneumatics I	4
MATH 1050	Trigonometric Applications	4
<u>SPRING</u>		
ELEC 1120	AC Fundamentals	4
ELEC 1310	Motors, Alternators, and Generators	4
MECH 2330	Piping and Auxiliaries	4
MECH 2610	Millwright Principles	4
Total Credit Hours		32

Students must complete learning support deficiencies in reading and Mathematics, or have appropriate entrance scores.

TYPICAL JOB OPPORTUNITIES

Maintenance Electrician: Install, maintain, and troubleshoot a variety of electrical equipment in an industry setting.

Maintenance Mechanic: Install, maintain, troubleshoot, and perform preventative maintenance on a variety of mechanical equipment in an industry setting.

PROGRAM COMPETENCIES

The graduate is competent to:

1. Identify, analyze, install, and troubleshoot electronic circuit parameters for the operation and control of general electrical components, motors, alternators, and generators.
2. Calculate and measure electrical parameters using test instruments and troubleshoot common electrical problems likely to be encountered in a typical DC or AC circuit.
3. Install, repair, maintain, and troubleshoot pumping, hydraulic, and pneumatic systems.
4. Upon completion of the program, all students will demonstrate critical thinking skills for inquiry and analysis, assimilation of facts and knowledge, and problem solving.

FOR FURTHER INFORMATION CONTACT:

Rick Black
Instructor, Mechanical
Telephone: 423.354.2402
rablack@NortheastState.edu

or

Fred Cope
Associate Professor, Electrical Engineering
Technology
Telephone: 423.354.2442
fmcope@NortheastState.edu

or

Steve Smith
Instructor, Electrical Engineering Technology
Telephone: 423.354.2410
srsmith@NortheastState.edu

or

Nichole Manz-Young
Dean, Technologies Division
Telephone: 423.354.5253
Inmanzyoung@NortheastState.edu

or

Technologies Division
Telephone: 423.279.7639

Northeast State Community College is part of the Tennessee Board of Regents system, Tennessee's largest higher education system, governing 40 post-secondary educational institutions with over 200 teaching locations. The TBR system includes 13 two-year colleges, 27 colleges of applied technology, and TN eCampus, providing programs to students across the state, country, and world.

Northeast State Community College does not discriminate on the basis of race, color, religion, creed, ethnic or national origin, sex, disability, age status as a protected veteran or any other class protected by Federal or State laws and regulations and by Tennessee Board of Regents policies with respect to employment, programs, and activities. The following person has been designated to handle inquiries regarding the non-discrimination policies: Linda W. Calvert, Vice President for Institutional Advancement and Culture, AffAct@NortheastState.edu, P.O. Box 246, Blountville, TN 37617-0246, 423.323.0222.

Northeast State Community College's policy on nondiscrimination can be found at <https://apps.northeaststate.edu/ie/policymanual/pol.asp?p=254>.

Northeast State Community College is accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) to award the associate degree. Northeast State also may offer credentials such as certificates and diplomas at approved degree levels. Questions about the accreditation of Northeast State Community College may be directed in writing to the Southern Association of Colleges and Schools Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097, by calling (404) 679-4500, or by using information available on SACSCOC's website (www.sacscoc.org).