



Electrical Engineering Technology Electrical

An Associate of Applied Science Degree Program

PROGRAM DESCRIPTION

The Electrical program prepares individuals for employment as electricians in residential, commercial, and industrial settings. The program stresses wiring procedures and requirements set forth by the National Electrical Code. Emphasis is placed on the installation of service equipment, electrical circuits, conduit bending and installation, electrical power distribution, operation/control of motors, and programmable logic controllers.

The Electrical Engineering Technology program is accredited by the Association of Technology, Management, and Applied Engineering (ATMAE).

701 Exposition Place, Suite 206
Raleigh, NC 27615
Telephone: 919.635.8335

APPLICATION PROCEDURE

A student desiring to enroll in the Associate of Applied Science degree program in Electrical Engineering Technology - Concentration: Electrical must:

1. Submit the Northeast State Application for Admission to the Office of Admissions and Records.
2. Indicate Electrical Engineering Technology - Concentration: Electrical 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.



ATMAE
LEAD • INNOVATE • COLLABORATE

The Association of
Technology,
Management, and
Applied Engineering

TYPICAL PROGRAM OF STUDY

Course No.	Course Title	Credit
FALL		
EDUC 1030	College and Lifelong Learning	3
ELEC 1110	DC Fundamentals	4
ELEC 1210	National Electric Code Interpretations I	4
ENGL 1010	English Composition I	3
MATH 1050	Trigonometric Applications	4
SPRING		
ELEC 1120	AC Fundamentals	4
ELEC 1310	Motors, Alternators, and Generators	4
ELEC 2210	Magnetic Motor Controls	4
PHYS 1030	Survey of Physics	4
or		
PSCI 1010	Principles of Physical Science	4
FALL		
Elective	Behavioral/Social Science (an approved elective from the general education core)	3
ELEC 2110	Transformers and Power Factor Applications	4
ELEC 2350	Industrial Electronics	4
ELEC 2400	Siemens PLC Programming	4
SPRING		
COMM 2025	Fundamentals of Communication	3
or		
COMM 2045	Public Speaking	3
Elective	Humanities Elective (an approved elective from the general education core)	3
ELEC 2310	National Electric Code Interpretations II	4
ELEC 2410	Allen-Bradley PLC Programming	4
Total Credit Hours		63

Additional learning support courses may be required for degree completion.

TYPICAL JOB OPPORTUNITIES

Maintenance Electrician: Installs and maintains various types of electrical equipment.

Residential Electrician: Installs wiring systems in private dwellings.

Electrical Supply Sales Representative: Markets and sells electrical supplies to business, industry, and general contractors.

Construction Electrician: Installs wiring systems in industrial and commercial buildings.

Lineman: Installs and maintains wiring systems for electrical power distributors.

PROGRAM COMPETENCIES

The graduate is competent to:

1. Program, install, and troubleshoot solid state devices such as PLCs and frequency drives.
2. Identify, analyze, install, and troubleshoot electronic circuit parameters for the operation and control of general electrical components, motors, alternators, generators, and transformers.
3. Calculate and measure electrical parameters using test instruments and troubleshoot common electrical problems likely to be encountered in a typical DC or AC circuit.
4. Demonstrate, perform, and adhere to the appropriate safety procedures set forth by the National Electrical Code including requirements of NFPA 70E.
5. Upon completion of the program, all students will demonstrate critical thinking skills for inquiry and analysis, assimilation of facts and knowledge, and problem solving.

Five-Year Average Placement Rates

88%

Median Salary*

\$39,060

*Source:

Bureau of Labor Statistics, Occupational Employment Statistics Survey; Tennessee Department of Labor and Workforce Development, Labor Market Information

FOR FURTHER INFORMATION CONTACT:

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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 Administration & Grant Development, 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. Questions about the accreditation of Northeast State 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).