

The **Applied Electrical Technology** Program students will be involved in “live” work on off-campus construction and restoration sites. Students will master the fundamentals of residential wiring and, as a second year student, learn electrical codes and their interpretations, the proper installation of metallic and PVC conduit.



Program Content...

Electrical Theory

- National Electrical Code
- Electrical Energy & Flow
- Electrical Circuits
- Ohm’s Law & the Power Formula
- Electrical Tools & equipment
- Single & Three Phase Power
- Standard Residential Voltage
- Standard Industry Voltage
- Electrical Symbols
- Meters

Residential Electricity Skills

- Electrical Diagrams
- Electrical Devices
- Wire, Fittings & Boxes
- Conduit
- Rough Wiring & Rewiring
- Switch, Outlet & Light Fixture Installation
- Wiring for Telephone and Cable
- Design & Layout

Safety & Customer Service

- Electrical Hazards & Personal Safety
- OSHA 10 Hour Certificate
- Destructive Capacity of Electricity
- Construction Industry Hazards
- Customer Relations
- Project Plans/Layouts
- Material Requirements
- Cost Estimates

Industrial Electricity Skills

- Three Phase Power
- Conduits/Enclosures
- Industrial Voltage
- Motor Controls
- Lighting Loads
- Heating Loads
- Conductors
- Design & Layout

Alternative Energy-Production & Management

Are you interested in exploring renewable energy sources? Explore what electricity’s role will be in the future of the world’s new energy production and management.

Solar Thermal:

- S-POD Construction
- Solar-Water Applications
- Integration of solar into the home

Photovoltaics:

- Terminology
- Wiring Techniques
- Designing PV Systems

Benefits...

Articulation Agreements/College Credit

- Pennsylvania College of Technology
- Cayuga Online—Cayuga Community College

Completed Career Portfolio

Integrated Math Credit

Portfolio...

All second year students will complete a **Career and Technical Education Portfolio** that exhibits necessary elements for CTE Endorsement and demonstrates competencies in Applied Electrical Technology.

For more information, contact ...

Your High School Guidance Office or The Guidance Office at the BOCES

Cayuga-Onondaga BOCES
1879 W. Genesee Street Road
Auburn, NY 13021
315.253.0361
www.caybores.org

No student shall on the basis of gender, race, color, national origin, disability or age, be excluded from participation in, be denied the benefits of or otherwise be subjected to unlawful discrimination under any career and technical program or activity.

Applied Electrical Technology could lead to careers in...

- Electrician Assistant
- Industrial Maintenance
- Appliance Repair
- Service Representative

Careers with additional training and education...

- Residential/Commercial Electrician
- Independent Electrician
- Electrical Inspector
- Installers of Alternative Energy
- Residential Wiring
- Commercial Wiring

Current Job Site Projects...

Students participate in various off-campus projects, including: houses, additions, garages and various non-profit community organization projects.

The off campus building project (Residential Home or Community Service Project) will provide the students with an apprenticeship training experience. The students work under the supervision of the class instructors and will come in contact with the people involved in the project, including, but not limited to: Heavy Equipment Repair & Operation Program, Applied Electrical Technology Program, Plumbers, Heating Contractors, Building Inspectors, Architects, etc. The project will last until the end of the school year.

Clothing Needs...

No Nylon Material

- Long pants, jeans or equivalent
- Sleeved shirt, at least a short sleeved Tshirt
- Leather work boots, steel toed is optional
- Winter work coat, Carhartt preferred but optional
- Winter work pants, Carhartt preferred but optional
- Leather work gloves
- Work gloves
- Knit winter hat

Students enrolling in this Program will be responsible for purchasing some tools for the program.