



# Construction Electricity

accredited by National Center for Construction and Education Research (NCCER)



CONSTRUCTION ELECTRICITY develops skills and knowledge necessary to pursue a career in the electrical construction industry. Instruction includes commercial and residential wiring methods, with a focus on implementing green technology. Solar and wind energy sources are explored. Students install solar panels for residential use, conduit systems which supply power and lighting for use in commercial settings and communication systems.

## Work Environment

The electrician may work indoors or outdoors. The construction electrician requires a working knowledge of the construction field, often working closely with other trades such as carpenters and plumbers. Skills in reading plans and schematics are essential. Work involves residential, business, and industrial applications, as well as installation and repair of various electrical devices, systems, and controls.

## Career Opportunities

Building Maintenance  
Business Owner–Electrical Contractor  
Designer  
Electrician  
Electrician Helper  
Engineer  
Estimator

## Advanced Standing Available\*

Baran Institute  
Delhi College  
Pennsylvania College of Technology  
SUNY Canton

\*Advanced Standing may be available to those who successfully complete this Tech course. See Articulation Agreements on page 49.

## Employment Outlook

The employment outlook continues to be stable due to the growth in single family home renovation and maintenance opportunities in business and industry.

**Starting Salaries:** Apprentices earn \$15/hr. to start. Union electricians earn salaries based on current contract.

## Student Supplies (approx. \$150)

1. Heavy-duty leather, steel-tipped work shoes
2. Hand tools, tool pouch, and hacksaw

## Academic credits integrated:

- Technical Math
- Technical Science
- English 12
- Economics/Participation in Gov't

## CTE Endorsement

In order to be granted the Technical Diploma endorsement, students must successfully meet the academic and attendance criteria for a two-year Wilson Tech Certificate of Completion, including Career and Financial Management (CFM), and pass the following national certification exam: National Center for Construction and Education Research (NCCER) Electrical Exam.

## Helpful Preparatory Courses

- Drafting
- Industrial Arts
- Ninth and Tenth Grade Math

## Course Outline

- Basic Electrical Theory
- Residential Wiring
- Commercial Wiring
- Industrial Wiring
- Installation of Wiring Systems
- Drawings and Schematics
- Control Equipment
- Test Equipment
- Electric Codes
- Motor Installation
- Troubleshooting
- OSHA Standards

## Consider these classes at Tech

- Building Grounds/Maintenance\*
- Building Trades\*
- Carpentry
- Computer Networking & Repair/Technical Electronics
- Drafting/Computer Aided (CAD)
- Electronic Manufacturing\*
- Heating/Ventilation/AC (HVAC)
- Video Production
- Welding

All placements are based upon individual needs and approval from the district and parent/guardian.

\*Smaller class size.