

ENERGY TECHNICIAN CERTIFICATE OF APPLIED SCIENCE *PROGRAM PLACED ON MORATORIUM*

The Energy Technician CAS will provide completers the entry-level skill needed to gain enrollment as an apprentice electrician in the residential wiremen track. According to Bureau of Labor Statistics, employment of electricians is projected to grow 20% from 2012 to 2022, faster than the average for all occupations. The total number of electrician jobs that will be added over the next 10 years is 114,700. Apprentice electricians are responsible for assisting journeyman electricians with installing and maintaining electrical and power systems in homes and businesses. They work at construction sites, factories, businesses, and residences. Energy Technician CAS students are introduced to and taught the skills required to be an apprentice electrician. The Energy Technician program admits new cohorts in the fall of odd numbered years. Some courses are offered only every other year.

Please note: Students must test into M 114 or WRIT 121 through the COMPASS placement test or take the appropriate prerequisite course work in order to start this program.

Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Install wiring systems.
- Upgrade existing wiring.
- Use State and National Electrical Codes during installation and inspection.
- Repair electrical equipment.
- Trace out short circuits in wiring using test meter.
- Read and interpret blueprints.
- Examine diagrams of circuits, outlets, load centers, and panel boards.
- Determine where wires and components will be situated.
- Install and connect wires to circuit breakers, outlets, and transformers.
- Use tools such as conduit benders, screwdrivers, pliers, knives, hacksaws, and wire strippers.
- Install circuit breakers, fuses, switches, electrical and electronic components, or wire.
- Calculate Service Entrance requirements and install Load Centers.
- Calculate lighting loads and branch circuit requirements.
- Calculate special purpose branch circuits requirements for appliances.
- Install new lighting and ceiling fans.
- Study motors, transformers, generators, and electronic controllers.
- Bend offsets, kicks, saddles, segmented and parallel bends.

Required Courses

Code	Title	Credits
CAPP 120	Introduction to Computers	3
COMX 106	Comm in a Dynamic Workplace	3
ETEC 103	AC/DC Electronics II	3
ETEC 192	Fund Electrical Technicians I	3
ETEC 193	Fund Electrical Technicians II	3
ETEC 284	Digital Electronics	4
M 114	Extended Technical Mathematics	3

TRID 150 or PPT 151	Environ/Shop Practices Process Plant Safety I	2
TRID 185	Intro Industrial Power Systems	2
TRID 186	Intro Indstrl Pwr Systms Lab	1
WRIT 121	Intro to Technical Writing	3
Total Minimum Credits		30

Suggested Plan of Study

Code	Title	Credits
Semester 1 Fall		
CAPP 120	Introduction to Computers	3
COMX 106	Comm in a Dynamic Workplace	3
ETEC 192	Fund Electrical Technicians I	3
TRID 150	Environ/Shop Practices	2
TRID 185	Intro Industrial Power Systems	2
TRID 186	Intro Indstrl Pwr Systms Lab	1
Total		14
Semester 2 Spring		
ETEC 103	AC/DC Electronics II	3
ETEC 193	Fund Electrical Technicians II	3
ETEC 284	Digital Electronics	4
M 114	Extended Technical Mathematics	3
WRIT 121	Intro to Technical Writing	3
Total		16