

TDCJ ELECTRONIC TECHNOLOGY

- TDCJ Electronic Technology AAS (<https://coursecatalog.tvcc.edu/tdcj-handbook/programs/electronic-technology/electronic-technology-aas/>)
- TDCJ Electronic Technology Certificate (<https://coursecatalog.tvcc.edu/tdcj-handbook/programs/electronic-technology/electronic-technology-certificate/>)

CETT-1204. High Reliability Soldering. (2 Credits)

This course is taken for academic credit. Students will earn an A, B, C, D, F, or W. High reliability soldering, de-soldering, circuitry repair, plated-thru-hole repairs, conformal coating removal, industry standards, electrostatic discharge (ESD) control, surface mount device (SMD) installation, removal and replacement using hand held systems or reflow workstations.

CETT-1341. Solid State Circuits. (3 Credits)

This course is taken for academic credit. Students will earn an A, B, C, D, F, or W. A study of various semiconductor devices incorporated in circuits and their applications. Emphasis on circuit construction, measurements, and analysis.

CETT-1409. DC-AC Circuits. (4 Credits)

This course is taken for academic credit. Students will earn an A, B, C, D, F, or W. Fundamentals of DC circuits and AC circuits operation including Ohm's law, Kirchoff's laws, networks, transformers, resonance, phasors, capacitive and inductive and circuit analysis techniques.

CETT-1415. Digital Applications. (4 Credits)

This course is taken for academic credit. Students will earn an A, B, C, D, F, or W. An investigation of combinational and sequential logic elements and circuits with emphasis on design and trouble-shooting of combinational and sequential circuits.

ELMT-1201. Programmable Logic Controllers. (2 Credits)

This course is taken for academic credit. Students will earn an A, B, C, D, F, or W. An introduction to programmable logic controllers as used in industrial environments including basic concepts, programming, applications, troubleshooting or ladder logic and interfacing of equipment.

ELMT-1411. Solar Fundamentals. (4 Credits)

This course is taken for academic credit. Students will earn an A, B, C, D, F, or W. Fundamentals of DC circuits and AC circuits operation including Ohm's law, Kirchoff's laws, networks, transformers, resonance, phasors, capacitive and inductive and circuit analysis techniques.

ELMT-2239. Advanced Programmable Logic Controllers. (2 Credits)

This course is taken for academic credit. Students will earn an A, B, C, D, F, or W. Advanced applications of programmable logic controllers as used in industrial environments including concepts of programming, industrial applications, troubleshooting ladder logic and interfacing to equipment.

WIND-2359. Wind Power Delivery System. (3 Credits)

This course is taken for academic credit. Students will earn an A, B, C, D, F, or W. Components, equipment, and infrastructure used in the production and transmission of electricity as related to wind turbine power.

WHAT ELECTRICIANS DO

Electricians install, maintain, and repair electrical power, communications, lighting, and control systems.

SUMMARY

- Electrician
- 2020 Median Pay: \$56,900 per year or \$27.36 per hour
- Typical Entry-Level Education: High school diploma or equivalent
- Work Experience in Related Occupation: None
- On-the-job training: Apprenticeship
- Number of Jobs, 2020: 729,600
- Job Outlook, 2020-30: 9% (as fast as average)
- Employment Change: 2020-30; 66,100

WORK ENVIRONMENT

Almost all electricians work full time. Work schedules may include evenings and weekends. Overtime is common.

HOW TO BECOME AN ELECTRICIAN

Most electricians learn through an apprenticeship, but some start by attending a technical school. Most states require electricians to be licensed.

PAY

The median annual wage for electricians was \$56,900 in May 2020.

JOB OUTLOOK

The employment of electricians is projected to grow 9% from 2020 to 2030, as fast as average for all occupations. Homes and businesses continue to require wiring, and electricians will be needed to install the necessary components.

STATE & AREA DATA

Explore resources for employment and wages by state and area for electricians.

SIMILAR OCCUPATIONS

Compare the job duties, education, job growth, and pay of electricians with similar occupations.

MORE INFORMATION, INCLUDING LINKS TO O*NET

Learn more about electricians by visiting additional resources, including O*NET, a source of workers and occupations' key characteristics.

SUGGESTED CITATION:

Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*, Electricians, on the Internet at <https://www.bls.gov/ooh/construction-and-extraction/electricians.htm> (visited March 23, 2021).

Some careers in this field will require a bachelor's degree.

- TVCC's AA degrees are fully transferable to public universities in Texas. See an academic advisor for more information on this transfer opportunity.
- Many of TVCC's AAS degrees lead to an online Bachelor of Applied Arts and Sciences (BAAS) degree with participating universities. See an academic advisor for more information on this transfer opportunity.