Electrician

MACPHAIL SCHOOL OF ENERGY

Overview

Learn how to install, repair, and maintain electrical systems. These systems provide heat, light and power.

On the job, you'll read and interpret electrical, mechanical and architectural drawings, specifications and codes to determine wiring layouts. You'll pull wires through installed conduits and other electrical conductor enclosures. You'll also maintain and install distribution and control equipment, such as switches, relays, circuit breaker panels and fuse enclosures.

You may even specialize in wind and solar or fire alarm systems.

During your career, you may be able to work in specific industries, including:

- residential (housing developments)
- commercial (office buildings)
- institutional (hospitals, schools)
- industrial (plants and factories).

Certification is required to work in this trade. This means that you must either be a registered apprentice working under the guidance of a certified journeyperson or be a certified journeyperson yourself.

Traits, skills and aptitudes

Electricians are usually self-motivated. They can work alone or alongside a team. They typically like helping people. If you enjoy problem-solving and working with your hands, you'll do well in this line of work.

To succeed in this trade, you should:

- have decent math skills and mechanical ability
- be willing to keep up with Alberta code updates and new industry developments
- recognize different colours for working with colour-coded wiring
- enjoy finding solutions to challenges
- be passionate about computers and technology
- pay attention to details
- produce quality work
- be good at communicating with others
- be committed to maintaining health and safety standards.

Credentials

Upon successfully completing the required working hours and apprenticeship education periods, you'll be awarded an advanced diploma in addition to journeyperson status by Alberta's Apprenticeship and Industry Training.

This is a Red Seal Endorsed trade – a recognizable standard that allows tradespeople to work across Canada.

Admission requirements

To enter an apprenticeship, you must have the educational qualifications required or recommended education for the trade to which you apply.

Entrance requirements are monitored and set by Alberta Apprenticeship and Industry Training.

Minimum requirements

Successful completion of the following courses:

- English 20-2
- Math 20-3
- Science 10

OR

A pass mark in all five Canadian General Educational Development (GED) or Canadian Adult Education Credential (CAEC) tests

OR

Alberta Apprenticeship and Industry Training Entrance Exam

Recommended requirements

Apprentices with an Alberta High School Diploma that includes the following courses:

- English 30-2
- Math 30-3
- Physics 30 OR Chemistry 30 OR Science 30
- Related career and technology studies (CTS) courses

Costs

2026/27 tuition and fees

The following costs are effective as of July 1, 2026.

Period	Number of weeks	Tuition fees	Additional fees	Total
1	8	$1,256	$357.50	$1,613.50
2	8	$1,256	$357.50	$1,613.50
3	10	$1,570	$377	$1,947
4	10	$1,570	$377	$1,947
			Total cost:	**$7,121**

The estimated total cost of tuition and fees in each period of technical training.

Domestic Students

Books and Supplies

This is a bring-your-own-device program with standard computer hardware and software requirements. See the specific requirements on our computers and laptops page.

Books or modules, along with other items for classes, are approximately $600 per period.

We recommend you don't purchase books or modules ahead of time as they might be outdated by the time you attend classes, and they cannot be returned to the Bookstore.

Personal protective equipment (PPE) will be required for the program, which may be an additional cost to apprentices.