Electric Motor Systems Technician

MACPHAIL SCHOOL OF ENERGY

Overview

Pursue a career as an electrical motor systems technician. Learn to check, fix and rebuild electrical and mechanical equipment like electric motors, generators, transformers, controllers and more.

In this program, you'll learn to:

- figure out what's wrong with electric motors, transformers, generators and other equipment
- take apart machines to fix or change them
- use blueprints and manuals to put in new parts, such as shafts, bearings and other components
- wind, assemble and reinstall coils for electric motors or transformers
- balance parts – like armatures or rotors
- weld, braze or solder electrical connections
- reassemble electrical and mechanical equipment.

You'll be responsible for keeping electric motors and related equipment running smoothly in places like production plants and large businesses.

Traits, skills and aptitudes

Electrical motor systems technicians are self-motivated and mechanically inclined. If you like problem-solving and working with your hands, you'll excel in this line of work.

To succeed in this trade, you need to:

- pay attention to details
- produce quality work
- enjoy finding solutions to tricky problems
- be interested in new technologies
- have a friendly attitude
- enjoy helping people
- enjoy working with machines and tools
- have good hand-eye coordination and physical strength
- be committed to maintaining health and safety protocols.

Credentials

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

Admission requirements

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

Alberta Apprenticeship and Industry Training set and monitor the entrance requirements.

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) 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 20 OR Chemistry 20 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	8	$1,256	$357.50	$1,613.50
4	8	$1,256	$357.50	$1,613.50
			Total cost:	**$6,454**

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

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.