Machinist

SCHOOL OF MANUFACTURING & AUTOMATION

Overview

Learn how to set up and use precision metal cutting and grinding machines – such as lathes, milling machines, drills and grinders – to make and repair products made from metal, plastic, rubber, fibreglass and space-age alloys.

You'll use logic and tools like micrometres and calipers to follow specific instructions and precise measurements. Some electronic instruments have digital readouts that you'll program for use.

During a project, you'll study specifications, charts, drawings or sample parts to determine what machining operation to perform. You'll also calculate dimensions and prepare working sketches if needed. Additionally, you'll measure and mark materials and set up and use tools – which may be computer numerically controlled – to verify dimensions, fit parts to mechanisms and perform machine operations.

Traits, skills and aptitudes

Machinists are skilled tradespeople who are self-motivated and get excited about working on leading-edge machinery. If you're creative and like working with precision, you'll excel in this line of work.

To succeed in this trade, you should:

- have good hand dexterity and speed
- understand machinery
- have good problem-solving skills
- work precisely
- be able to accurately measure and estimate sizes and lengths
- be comfortable working independently on tasks that require high concentration and physical effort
- be committed to safe work habits.

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.

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 10-2
- Math 10-3
- Science 10

OR

A pass mark in all five Canadian General Educational Development (GED) tests or Canadian Adult Education Credetnial (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 20 OR Chemistry 20 OR Science 20
- 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 a standard computer hardware and software requirement. 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.