

Millwright

Millwrights install, maintain, repair and troubleshoot stationary industrial machinery and mechanical equipment in sites such as factories, production plants and recreational facilities.

On a typical job, millwrights:

- Read diagrams and schematic drawings and service manuals to determine work procedures
- Operate rigging equipment and dollies to place heavy machinery and parts
- Fit bearings, align gears and shafts, attach motors, and connect couplings and belts to precise tolerances
- Align and test equipment, and make any necessary adjustments
- Perform predictive and operational maintenance using procedures such as vibration analysis, and repair or replace defective parts when necessary
- Service and repair hydraulic, pneumatic and programmable logic controls
- May do some tack welding and fabrication as well as maintain an inventory of replacement parts
- May do some tack welding (a weld that is adequate in size to temporarily hold components in place until it can be completely welded by a registered apprentice welder or a journeyman welder) and fabrication as well as maintain an inventory of replacement parts

Working Conditions

Millwrights may do primarily construction work, plant maintenance work, or a combination of both. They often work in close association with other trades people such as machinists, instrument mechanics, welders, electricians and pipefitters.

Working conditions for millwrights vary from one job to another. On construction job sites, they are exposed to a variety of weather conditions. In plant maintenance, they may work indoors and outdoors. Hours of work vary: shift work and some overtime may be required.

The work environment may be noisy, and there is a strong emphasis on safety while working with machinery.

Skills and Abilities

This occupation is most rewarding for those who enjoy variety, security and doing precision work with machinery and equipment.



To be successful in their trade, millwrights need:

- The strength and stamina required to work with heavy equipment weighing in excess of 25 kilograms
- Good coordination and manual dexterity
- The ability to visualize a layout by looking at plans and blueprints
- The ability to comprehend and trouble-shoot mechanical systems
- The ability to get along with and sometimes supervise the work of others

Employment and Advancement

Journeyman millwrights find employment in construction, maintenance, machine shops and stock keeping and sales. They are employed by manufacturing, processing, and construction companies as well as amusement parks and ski hills.

Those employed in construction may experience periods of unemployment. Journeyman wage rates vary, but generally range from **\$20.09 to \$30.49 and hour plus benefits.**

Millwrights are exposed to the duties involved in a variety of other trades, and therefore can be good candidates for promotion to supervisory and superintendent positions.

Working in Alberta

To work as a Millwright in Alberta, a person must:

- Be a registered apprentice, an Alberta-certified journeyman, hold a valid recognized credential (see Recognized Trade Certificates), OR
- Work for an employer who is satisfied that the worker has the skills and knowledge expected of a certified journeyman, OR
- Be self-employed

Millwrights learn their skills by registering with Alberta Apprenticeship and Industry Training to participate in apprenticeship training. Upon successful completion, they are awarded the Alberta Journeyman Certificate.

A millwright who holds a valid trade certificate from Alberta or from another Canadian province or territory may apply to write the Interprovincial Exam and, if successful, be granted a Red Seal under the Interprovincial Standards Red Seal Program. The Red Seal is recognized throughout most of Canada.



A millwright who holds a valid recognized credential that does not have a Red Seal may apply for:

- an Alberta trade certificate under the Qualification Certificate Program
- an Alberta Equivalency document under the Equivalency Program.

Millwrights who:

- Hold a credential that is not recognized or is no longer valid in an Alberta-designated trade, OR
- Can demonstrate their experience, skills and knowledge in an Alberta-designated trade, and meet the standards and requirements established by the Alberta Apprenticeship and Industry Training Board may be eligible to apply for trade certification under the Qualification Certificate Program.

Individuals possessing a valid Alberta Journeyman Certificate, an Alberta Qualification Certificate, an Alberta Occupational Certificate, or a valid recognized credential are eligible to receive a Blue Seal business credential after completing the necessary requirements.

Apprenticeship Training

The term of apprenticeship for a millwright is 4 years (four 12-month periods) including a minimum of 1560 hours of on-the-job training and 8 weeks of technical training each year.

- An applicant who previously completed courses of study or work experience related to the Millwright trade or holds a related journeyperson certificate and has the employer's recommendation, may qualify for credit that could reduce the term of apprenticeship. (see Accreditation Information for a list of accredited courses)
- A person who has previous training or work experience in the trade and wants to determine their level of skill and knowledge for entry or advanced standing in an apprenticeship program may apply for a Prior Learning Assessment.
- A high school student can become an apprentice and gain credits toward apprenticeship training and a high school diploma at the same time under the Registered Apprenticeship Program (RAP).



To learn the skills required of a Millwright in Alberta and be issued an Alberta Journeyman Certificate, a person must:

- Satisfy the entrance requirements or pass the entrance exam (see Entrance Level Competencies, Exam Counselling Sheet, Entrance Exam Study Guide, and Entrance Exam Support Materials List)
- Find a suitable employer who is willing to hire and train an apprentice

Most employers prefer to hire high school graduates and may select apprentices from among their current employees.

- With their employer, complete the Apprenticeship Application and Contract and submit it to an Apprenticeship and Industry Training Office
- Pay the non-refundable application fee as identified on the application noted above
- Complete the required on-the-job training
 - during on-the-job training, apprentice millwrights earn at least 60 percent of the journeyperson wage rate in their place of employment in the first year, 70 percent in the second, 80 percent in the third, and 90 percent in the fourth year.
- Complete the required technical training each year
- Enroll in technical training
 - select an educational institution that offers training for Millwright apprentices, and a time to attend training
 - determine requirements for enrolling at the selected institution, and forward completed enrollment form to the selected institution
- Review books and materials required for training
- Successfully complete all required exams
- Apprentices may attempt the Interprovincial Exam in the final period of their apprenticeship training and, if successful, be granted a Red Seal.

Review the Apprenticeship and Industry Training Policy on Cheating

When apprentices attend technical training, they are required to pay the applicable tuition fee and purchase course supplies.

Grants, scholarships and other financial assistance may be available. For more information see Financial Assistance or contact an Apprenticeship and Industry Training Office.



Interprovincial Standards Red Seal Program

To qualify for a Red Seal, a person must:

- Hold a valid trade certificate in a trade that participates in the Interprovincial Standards Red Seal Program:
 - an Alberta trade certificate or completion of apprenticeship certificate, OR
 - a journeyperson or completion of apprenticeship certificate issued by another Canadian province or territory
- For applications based on Alberta certificates
 - complete the Interprovincial (Red Seal) Examination Application - Alberta Certified (no application fee is required)
 - submit the application to an Apprenticeship and Industry Training Office
- For applications based on non-Alberta certificates
 - complete the Qualification Certificate – Recognized Credential Application
 - submit the application to an Apprenticeship and Industry Training Office
 - pay the non-refundable application fee as identified on the application form
- Prepare for the exam (see Exam Counselling Sheets)
 - review the Apprenticeship and Industry Training Policy on Cheating
 - review available resource materials (see Resource Materials - Millwright)
- Successfully complete the required exam

Equivalency Program

To qualify for an Equivalency document *based on a recognized credential*, a person must:

- have a valid recognized credential that does not have an Interprovincial Standards Red Seal
- complete the Equivalency Application and deliver it in person to an Apprenticeship and Industry Training Office. Government issued photo identification is required



- pay the non-refundable application fee as identified on the application noted above

A person who holds a valid recognized credential, as described above, does not require an Alberta Equivalency document to work in the trade in Alberta. However, some employers may require Alberta documentation as proof that the holder is allowed to work in the trade or that the holder's credential is recognized.

Qualification Certificate Program

To qualify for a Qualification Certificate *based on a recognized credential*, a person must:

- hold a valid recognized credential that does not have an Interprovincial Standards Red Seal
- complete the Qualification Certificate – Recognized Credential Application and submit it to an Apprenticeship and Industry Training Office.
- pay the non-refundable application fee as identified on the application noted above
- prepare for the exam(s)

Review the Apprenticeship and Industry Training Policy on Cheating

Review available resource materials

- successfully complete the required exam(s)

To qualify for an Alberta Qualification Certificate *based on work experience*, a person must:

- Have at least 9,360 hours and 72 months of 'hands-on' work experience as a millwright

Time spent on supervisory or foreman duties, counter work, heading the tool crib, or on a training course is NOT counted as 'hands-on' work experience.

- Complete the Qualification Certificate - Work Experience Application (and review the Application Guide) and submit it to an Apprenticeship and Industry Training Office
- Pay the non-refundable fees as identified on the application noted above

This application fee covers the review of the application, the assessment and confirmation of the applicant's work experience hours/months, the administration of the applicant's demonstration of competency, and one attempt at the Qualification Certificate theory examination. The Qualification Certificate practical examination requires a separate fee as identified on the application noted above.



- Prepare for the exam(s)
- Review the Apprenticeship and Industry Training Policy on Cheating
- Review available resource materials
- Successfully complete the required exam(s)

