

MACHINIST

Credential Issued:

ITA Certificate of Qualification (Machinist)

Inter-Provincial Red Seal Endorsement (Machinist)

(Persons completing a formal apprenticeship also receive a Certificate of Apprenticeship)

Occupational Description:

"Machinist" means a person who sets up and operates all machine tools such as Lathes, Milling Machines, Saws, Grinding Machines, Drilling and Boring Machines, Shapers, Planers, Precision Measuring tools, Hand and Power tools, and the related attachments and accessories, including C.N.C. machining, selection, use and maintenance of cutting tools.

Program Duration & Structure:

The program will be delivered in a variety of formats combining in-school and work-based training, all designed to meet the competency standards and profile defined by the industry, and will generally take 4 years to complete. The program includes:

- In-school: 26 weeks* - (780 hours)
(approximately 6 weeks each for levels 1 and 2, 7 weeks each for levels 3 and 4)
- Work-based: 6,600 hours

*The in-school / technical training requirement is typically met through block release training delivered by an ITA approved training provider. It can also be met through approved alternative training models (e.g. distance education, part-time) and / or level challenge exam where these options are available.

Program Completion Requirements:

Completion of 6,600 workplace hours:

- Recommendation for Certification signed by the Sponsor and a certified Machinist or holder of an ITA-issued letter authorizing supervision and sign-off of apprentices in the trade.

Completion of technical training: (Requirement can be met through challenging a level exam where available.)

- Level 1 - in-school assessment and ITA standardized examination
- Level 2 - in-school assessment and ITA standardized examination
- Level 3 - in-school assessment and ITA standardized examination
- Level 4 - in-school assessment and ITA standardized examination

Inter-Provincial Red Seal Examination

Program Challenge Requirements:

- 9,900 documented hours of directly related work experience required to challenge Inter-Provincial Red Seal examination.

Program Pre-requisites:

- Recommended Education: Grade 10 or equivalent including English 10, Math 10, and Science 10.
- Preferred: Grade 12

Assessment Methods:

- In-school assessments (practical and written exams)
- Work-based assessments (practical)
- Final Assessment (Inter-Provincial Red Seal written examination)
- ITA Standardized Level Examinations by challenge

Linkages to Other Credentials:***Cross Program Credit***

- Holders of a BC Certificate of Qualification in Tool and Die Maker and/or Millwright will be eligible to receive technical training credit for Level 1 Machinist.
- Holders of a military certificate in Marine Engineering Technician, MT #313, and who are QL 5 or higher are eligible to challenge the Machinist Inter-Provincial Red Seal examination.

Prior Learning Assessment:

n/a

Program Standards Documentation:

- National Occupational Analysis (2005) www.red-seal.ca
- Program Outline

Industry Program Standards Mechanism:

Resource Industry Training Organization (RTO) info@rtobc.com

Program Providers:

Institution-based component of the program is delivered by public post-secondary institutions (see www.educationplanner.bc.ca/apprenticeship.cfm for a list of schools), private training institutions, and secondary schools that have been approved by ITA.

Technical Training Content:***Level 1***

Safety
Hand Tools
Trade Math
Blueprint Reading and Sketching
Measuring Devices
Layout
Cutting Tools
Machine Operations
Machine Maintenance
Fabrication and Assembly
Abrasive Machining
Thread Theory

Level 2

Trade Mathematics
Blueprint Reading and Sketching
Measuring Devices
Layout
Cutting Tools
Machine Operations
Metallurgy and Materials
Abrasive Machining

Level 3

Trade Math
Measuring Devices
Cutting Tools
Machine Operation
Fabrication and Assembly
Metallurgy and Materials
Abrasive Machining

Level 4

Machine Operations
Metallurgy and Materials
Gear Cutting
C.N.C. Machines
Jigs and Fixtures
Blueprint Reading and Sketching

IP Examination Competencies: (NOA 2005)

1. Occupational Skills
2. Bench Work
3. Drill Presses
4. Lathes
5. Mills
6. Saws
7. Grinders
8. Computer Numerical Control (CNC) Machines

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