



INSTRUMENTATION AND CONTROL TECHNICIAN

THIS BC PROGRAM HAS BEEN HARMONIZED AND IS BASED ON RSOS 2020

Occupation Description

“Instrumentation and Control Technician” means a person who installs, repairs, maintains, replaces, calibrates, programs and services all process monitoring and/or control instruments, including indicators, recording devices, control loops and computers. These instruments may be pneumatic, hydraulic, electronic, electrical, mechanical, nuclear, optical or chemical and include signal transmission, telemetering and digital devices in industrial operations.

For detailed information on the scope of knowledge and skills taught and assessed in this program refer to the Program Outline, available on the SkilledTradesBC website.

Pathways to Certification

In BC, an individual can become certified as an Instrumentation and Control Technician by completing the Instrumentation and Control Technician program or by challenging the certification. Apprenticeship programs are for individuals who have an employer to sponsor them and challenge programs are for individuals who have extensive experience working in the occupation and wish to challenge the certification.

Youth can begin an apprenticeship in high school through the Youth Train in Trades or Youth Work in Trades programs. The Youth Work in Trades program is available for any trade if an employer is willing to sponsor the student. Trades offered through the Youth Train in Trades vary by region; contact your local school district to find out which technical training programs are being offered through the Youth Train in Trades program in your region.

Foundation programs, where available, provide adults and youth who do not have work experience or employer sponsorship with an opportunity to gain the knowledge and skills needed to enter the occupation. Individuals who wish to enroll in a Foundation program must register directly with the training provider.

Recommended Education

The following education is recommended for apprentices entering this occupation. These are not prerequisites, but rather a desired level of skill or knowledge that will contribute to success in the industry.

- Grade 12 diploma, including English 12, Math 11 (Applications of Math 11 or Principles of Math 11), and Physics 11

SkilledTradesBC Registration

Individuals who wish to begin an apprenticeship in this program must register with SkilledTradesBC along with their sponsor. Application forms for all programs are available from the SkilledTradesBC website. Online registration is also available for most programs through the SkilledTradesBC website.

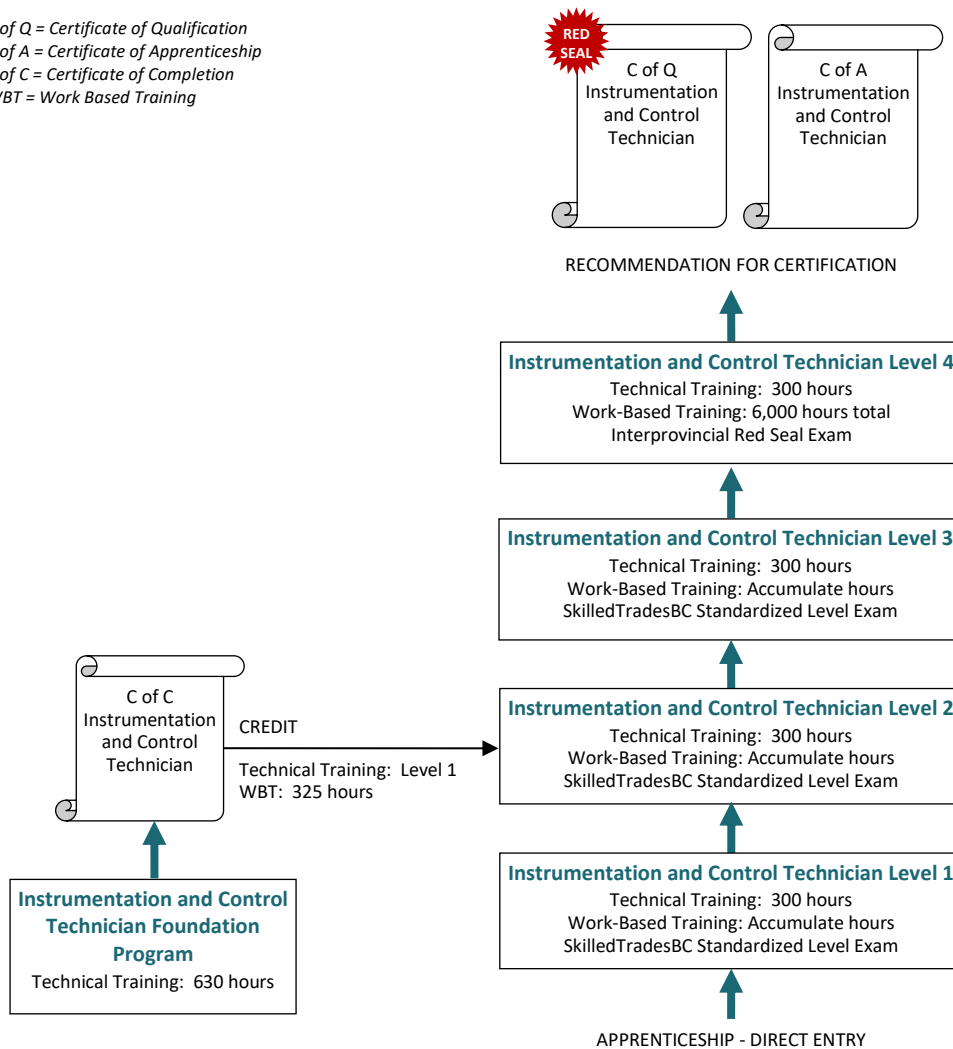
Those who wish to challenge the Instrumentation and Control Technician certification must complete the Instrumentation and Control Technician Challenge Application and submit it to SkilledTradesBC. Challenge applications are assessed for proof of workplace hours and scope of experience prior to acceptance of the individual into the Challenge pathway.



Apprenticeship Pathway

This graphic provides an overview of the Instrumentation and Control Technician apprenticeship pathway.

C of Q = Certificate of Qualification
C of A = Certificate of Apprenticeship
C of C = Certificate of Completion
WBT = Work Based Training



CROSS-PROGRAM CREDITS

Individuals who hold the credentials listed below are entitled to receive partial credit toward the completion requirements of this program

None

Apprenticeship Program Standards

Credentials Awarded

- Instrumentation and Control Technician – Certificate of Qualification with Red Seal Endorsement
- Instrumentation and Control Technician – Certificate of Apprenticeship

SkilledTradesBC Registration Prerequisites

- Agreement signed by the employer to sponsor the apprentice

Completion Requirements

Certification as an Instrumentation and Control Technician awarded upon successful completion of:

Requirement

Level of Achievement Required

Technical Training

Minimum 70% in each level of technical training:

- Level 1: 300 hours and SkilledTradesBC standardized written exam
- Level 2: 300 hours and SkilledTradesBC standardized written exam
- Level 3: 300 hours and SkilledTradesBC standardized written exam
- Level 4: 300 hours

Interprovincial Red Seal Exam

- Minimum 70%

Work-Based Training

- 6,000 hours

Recommendation for Certification

- Recommendation for certification signed by the Sponsor and an individual holding credentials eligible for sign-off authority

Program Duration

Duration varies depending on how training is delivered, but the program generally takes 4 years to complete.

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

Sign-off Authority

Credentials eligible to sign-off on the Recommendation for Certification:

- Instrumentation and Control Technician – Certificate of Qualification
- Instrumentation and Control Technician – Interprovincial Red Seal Endorsement
- SkilledTradesBC-issued letter authorizing supervision and sign-off of apprentices in this occupation

Challenging a Level

The following levels of technical training can be challenged for advanced placement in this program:

- Level 1
- Level 2
- Level 3

Cross-Program Credits

Individuals who hold the credentials listed below are entitled to receive partial credit toward the completion requirements of this program

Credential

Credit(s) Granted

None

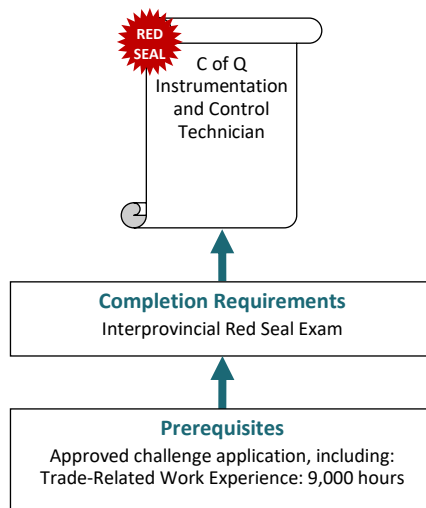
- N/A



Challenge Pathway

This graphic provides an overview of the Instrumentation and Control Technician challenge pathway.

C of Q = Certificate of Qualification



CREDIT FOR PRIOR LEARNING

Individuals who hold the credentials listed below are considered to have met or partially met the prerequisites for challenging this program

- None

Challenge Program Standards

Credentials Awarded

Instrumentation and Control Technician – Certificate of Qualification with Red Seal Endorsement

SkilledTradesBC

Registration Prerequisites

An approved Challenge Application, which includes:

- 9,000 documented hours of directly related experience working in the occupation

Credit for Prior Learning

Individuals who hold the credentials listed below are considered to have met or partially met the prerequisites for challenging this program

- None

Completion Requirements

Certification as a Instrumentation and Control Technician is awarded upon successful completion of:

Requirement

Interprovincial Red Seal Exam

Level of Achievement Required

- Minimum 70%



Foundation Program

Refer to the Apprenticeship pathway diagram for this program to see how the Instrumentation and Control Technician Foundation program fits into apprenticeship.

Foundation Program Standards

Credentials Awarded Instrumentation and Control Technician – Certificate of Completion

Enrollment Prerequisites Contact training provider. Prerequisites vary between training institutions

Completion Requirements A Certificate of Completion in this program is awarded upon successful completion of:

Requirement

Level of Achievement Required

Technical Training

- Minimum 70%

Program Duration Duration varies depending on how training is delivered, but program generally takes 21 weeks to complete, assuming 30 hours in school per week

Credit toward Apprenticeship

Individuals who complete the Instrumentation and Control Technician Foundation program will receive the following credit toward completion of the Instrumentation and Control Technician apprenticeship program:

- Technical Training: Level 1
- Work-Based Training: 325 hours



Supporting Documents

Instrumentation and Control Technician Program Outline (2020) – Defines the full scope of knowledge and skills required to competently perform the occupation in BC. Available from the SkilledTradesBC website.

Instrumentation and Control Technician Red Seal Occupational Standard (2019) – Prepared by industry experts, under the guidance of the federal government, for Red Seal trades to define the national standard of competence for the trade. Available from the Red Seal website: www.red-seal.ca.

Contacts

SkilledTradesBC manages B.C.'s industry training and apprenticeship programs. Contact SkilledTradesBC Customer service if you have any questions regarding registration, examinations or certification for this program.

Telephone:	778-328-8700	Fax:	778-328-8701
Toll Free (within BC):	1-866-660-6011	Email:	customerservice@skilledtradesbc.ca
Website:	www.skilledtradesbc.ca		

Revision History

The standards for this program were reviewed and/or updated on the dates below.

Program Standards Approved:	March 2002
Updated:	February 2008
Updated:	July 2009
Updated:	March 2015
Updated:	May 2016
Updated:	December 2016
Updated:	May 2020
Updated:	December 2025

Program Profiles are updated regularly. Visit www.skilledtradesbc.ca for the most current version.