



# Instrumentation and Control Technician

## About this job

Instrumentation and control technicians are safety minded, detail oriented, and enjoy keeping updated on the technological developments within their dynamic industry. They often work independently in a variety of different settings.



INSTRUMENTATION AND CONTROL TECHNICIAN HOLDS NATIONAL OCCUPATION CLASSIFICATION (NOC) CODE #2243/22312

- Four-year program
- Red Seal Certificate
- Requires out of the territory technical training
- Mining
- Manufacturing

**\$127,328**

Estimated Average Journeyperson Salary

APPRENTICESHIP, TRADES, AND OCCUPATIONAL CERTIFICATION

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## What can I expect to do for work if I become an Instrumentation and Control Technician?

Instrumentation and control technicians install, maintain, and repair the measuring and control devices used in industrial and commercial processing. They work with a wide variety of pneumatic, electronic and microcomputer devices that measure and control pressure, flow, temperature, level, motion, force, and chemical composition. In general, they:

- consult manufacturers' manuals to determine test and maintenance procedures,
- use testing devices to inspect instrument and system operation, and diagnose faults,
- practice loss management principles,
- consult with and advise process operators, engineers and apprentices,
- repair, maintain and adjust system components or replace defective parts,
- conduct risk assessments,
- calibrate and maintain components and instruments according to manufacturers' specifications,
- install and maintain instruments on new or existing plant equipment and processes, and
- interpret and use appropriate CSA, ISA and API installation standards and practices.

## What kind of working conditions can I expect?

Instrumentation and control technicians may work regular weekday hours or shifts. They can work various rotation schedules and sometimes on-call at night and on weekends. Working conditions can vary from one job to another. This may be exposed to confined spaces, high elevations, and noisy, dusty, cold or unusually warm conditions. There may also be exposure to radiation devices and laser equipment. There are some safety

hazards, particularly when processing dangerous chemicals or working with substances under pressure or at high temperatures. The track record for safety in this profession is excellent with a low incident rate.

## What are some skills that are valued in this profession?

- the ability to pay careful attention to details,
- good communication and reading skills,
- manual dexterity and patience,
- the ability to use proper lifting techniques to lift between 11 and 25 kilograms,
- good mathematical, scientific, mechanical and logical reasoning abilities, and
- the ability and desire to keep up-to-date with technological developments in the field.

## What is the minimum requirement to become an apprentice in this trade?

Apprentices must obtain a minimum of **70% on the Trades Entrance Exam – TEE Category #2** or the equivalent education as outlined below. This must be done before signing the Apprenticeship contract and attending technical training

## How long will it take to complete an Instrumentation and Control Technician apprenticeship?

An apprenticeship takes about three years to complete, and includes four on the job periods and four technical training periods. You need to complete 1800 hours per period, for a total of 7200 hours.

## How long is technical training?

Apprentices will attend 1080 technical training hours. Apprentices usually go to school for this program in Alberta.

Period	Technical Training <sup>1</sup>	Prerequisites for technical training	Hours <sup>2</sup>
1st	8 Weeks 240 hours	Entrance Exam and 900 hours	1800
2nd	8 Weeks 240 hours	Completed 1 <sup>st</sup> Period	3600
3rd	10 Weeks 300 hours	Completed 2 <sup>nd</sup> Period	5400
4th	10 Weeks 300 hours	Completed 3 <sup>rd</sup> Period	7200

<sup>1</sup>Length of In-School Training

<sup>2</sup>Minimum Time Required to Complete (Includes Technical Training)

## For more information:

[www.gov.nt.ca/Apprenticeship](http://www.gov.nt.ca/Apprenticeship)

**SCHOOLS NORTH APPRENTICESHIP PROGRAM (SNAP) - SNAP**  
apprentices are not required to satisfy the entrance requirements prior to signing an apprenticeship contract. However, the SNAP apprentice must satisfy the entrance requirements **or** write the TEE before attending technical training.