

## PLUMBER

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### Occupation Description

Plumbers install, repair and maintain plumbing fixtures and systems such as water, hydronic, drain, waste and vent (DWV), low pressure steam, chemical and irrigation. They also install specialized systems such as medical gas, process piping, compressed air, water conditioners, fuel piping, sewage and water treatment, and storage and flow equipment. Plumbers interpret drawings, refer to layouts of existing services, and review applicable codes and specifications to determine work details and procedures. They locate and mark positions for fixtures, pipe connections and sleeves, and cut openings to accommodate pipe and fittings.

Regulations concerning the planning, installation, maintenance and inspection of sewage treatment systems may vary by jurisdiction. Additional certification may be required in some jurisdictions to allow plumbers to plan and perform work on these systems.

For information regarding BC regulations, please refer to [Sewerage System Regulation](#)

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

### Pathways to Certification

In BC, an individual can become certified as a Plumber by completing the Plumber 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 either 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 or equivalent including:
  - English 12,
  - Algebra 11 or Trade Mathematics 11 and
  - Physics 11 or Science and Technology 11



### **ITA Registration**

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

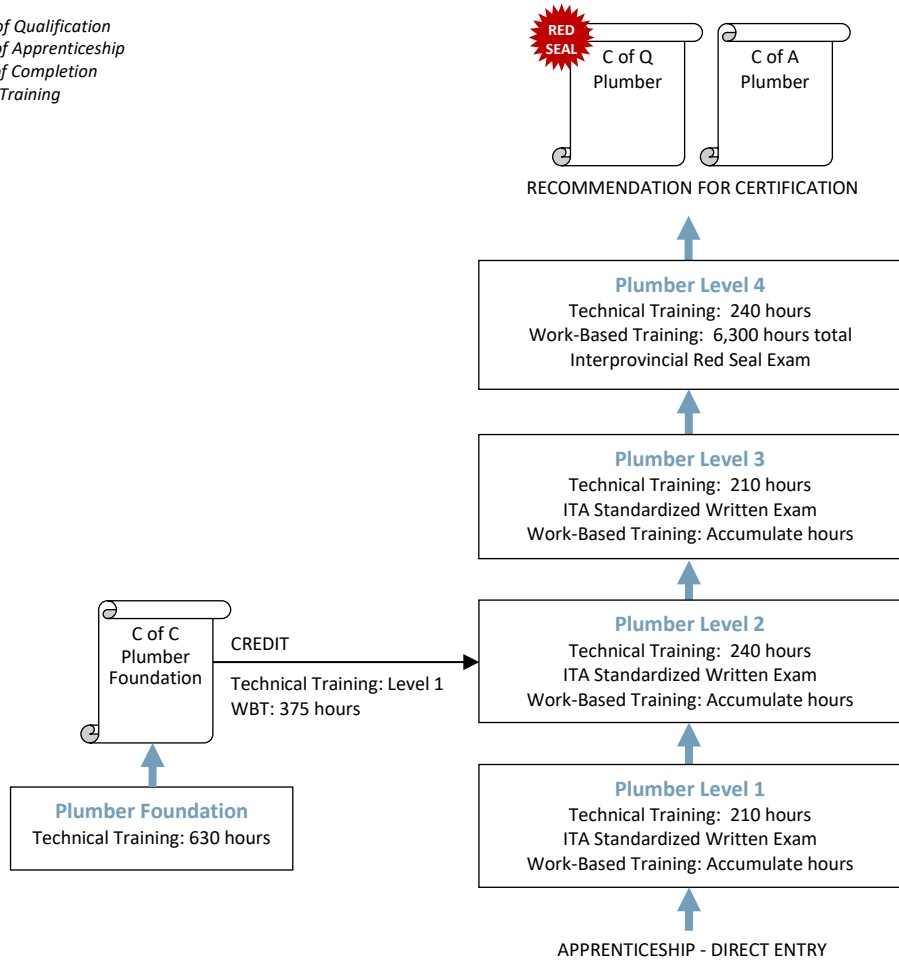
Those who wish to challenge the Plumber certification must complete the Plumber Challenge Package and submit it to ITA. Challenge applications are assessed for proof of workplace hours and scope of experience prior to acceptance of the individual into the challenge pathway.



## Apprenticeship Pathway

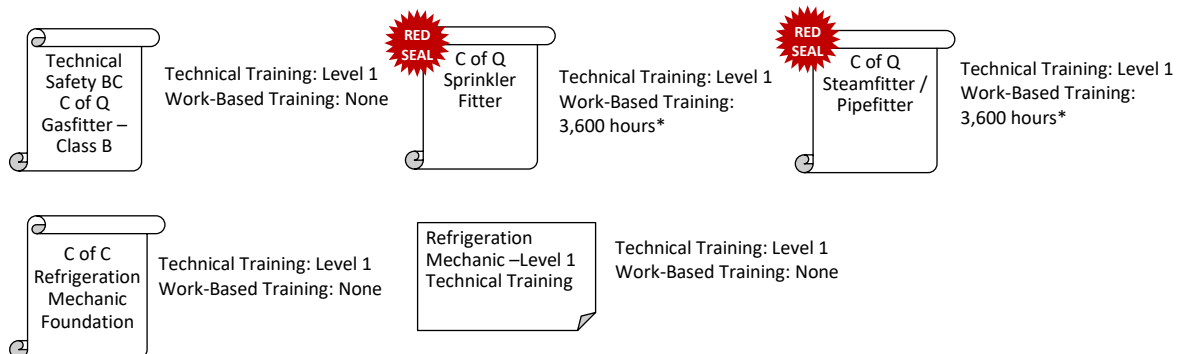
This graphic provides an overview of the Plumber apprenticeship pathway.

*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



*\*Individuals who are holders of more than one of these credentials will only be awarded credit for 3,600 hours total*



### Apprenticeship Program Standards

<b>Credentials Awarded</b>	<ul style="list-style-type: none"> <li>▪ Plumber – Certificate of Qualification with Interprovincial Red Seal endorsement</li> <li>▪ Plumber – Certificate of Apprenticeship</li> </ul>										
<b>ITA Registration Pre-requisites</b>	<ul style="list-style-type: none"> <li>▪ Agreement signed by the employer to sponsor the apprentice</li> </ul>										
<b>Completion Requirements</b>	<p>Certification as a Plumber is awarded upon successful completion of:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid black;">Requirement</th> <th style="text-align: left; border-bottom: 1px solid black;">Level of Achievement Required</th> </tr> </thead> <tbody> <tr> <td style="border-bottom: 1px solid black;">Technical Training</td> <td style="border-bottom: 1px solid black;">                     Minimum 70% in each level of technical training:                     <ul style="list-style-type: none"> <li>▪ Level 1: 210 hours and ITA standardized written exam</li> <li>▪ Level 2: 240 hours and ITA standardized written exam</li> <li>▪ Level 3: 210 hours and ITA standardized written exam</li> <li>▪ Level 4: 240 hours</li> </ul> </td> </tr> <tr> <td style="border-bottom: 1px solid black;">Interprovincial Red Seal Exam</td> <td style="border-bottom: 1px solid black;"> <ul style="list-style-type: none"> <li>▪ Minimum 70%</li> </ul> </td> </tr> <tr> <td style="border-bottom: 1px solid black;">Work-Based Training</td> <td style="border-bottom: 1px solid black;"> <ul style="list-style-type: none"> <li>▪ 6,300 hours</li> </ul> </td> </tr> <tr> <td style="border-bottom: 1px solid black;">Recommendation for Certification</td> <td style="border-bottom: 1px solid black;"> <ul style="list-style-type: none"> <li>▪ Recommendation for certification signed by the Sponsor and an individual holding credentials eligible for sign-off authority</li> </ul> </td> </tr> </tbody> </table>	Requirement	Level of Achievement Required	Technical Training	Minimum 70% in each level of technical training: <ul style="list-style-type: none"> <li>▪ Level 1: 210 hours and ITA standardized written exam</li> <li>▪ Level 2: 240 hours and ITA standardized written exam</li> <li>▪ Level 3: 210 hours and ITA standardized written exam</li> <li>▪ Level 4: 240 hours</li> </ul>	Interprovincial Red Seal Exam	<ul style="list-style-type: none"> <li>▪ Minimum 70%</li> </ul>	Work-Based Training	<ul style="list-style-type: none"> <li>▪ 6,300 hours</li> </ul>	Recommendation for Certification	<ul style="list-style-type: none"> <li>▪ Recommendation for certification signed by the Sponsor and an individual holding credentials eligible for sign-off authority</li> </ul>
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Interprovincial Red Seal Exam	<ul style="list-style-type: none"> <li>▪ Minimum 70%</li> </ul>										
Work-Based Training	<ul style="list-style-type: none"> <li>▪ 6,300 hours</li> </ul>										
Recommendation for Certification	<ul style="list-style-type: none"> <li>▪ Recommendation for certification signed by the Sponsor and an individual holding credentials eligible for sign-off authority</li> </ul>										
<b>Program Duration</b>	<p>Duration varies depending on how training is delivered, but the program generally takes 4 years to complete.</p> <p>The technical training requirement is typically met through block-release training (full-time, at school) delivered by an ITA-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.</p>										
<b>Sign-off Authority</b>	<p>Credentials eligible to sign-off on the Recommendation for Certification:</p> <ul style="list-style-type: none"> <li>▪ Plumber – Certificate of Qualification</li> <li>▪ Plumber – Interprovincial Red Seal endorsement</li> <li>▪ ITA-issued letter authorizing supervision and sign-off of apprentices in this occupation</li> </ul>										
<b>Challenging a Level</b>	<p>The following levels of technical training can be challenged for advanced placement in this program:</p> <p>Level</p> <ul style="list-style-type: none"> <li>▪ Level 1</li> <li>▪ Level 2</li> </ul>										



**Apprenticeship Program Standards**

**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
Domestic/Commercial Gasfitter B – Certificate of Qualification issued by the Technical Safety BC OR Gasfitter – Class B Certificate of Qualification issued by the Technical Safety BC	<ul style="list-style-type: none"> <li>▪ Technical Training: Level 1</li> <li>▪ Work-Based Training: None</li> </ul>
Sprinkler Fitter – Certificate of Qualification with Interprovincial Red Seal endorsement	<ul style="list-style-type: none"> <li>▪ Technical Training: Level 1</li> <li>▪ Work-Based Training: 3,600 hours*</li> </ul>
Steamfitter/Pipefitter – Certificate of Qualification with Interprovincial Red Seal endorsement	<ul style="list-style-type: none"> <li>▪ Technical Training: Level 1</li> <li>▪ Work-Based Training: 3,600 hours*</li> </ul>
Refrigeration Mechanic Foundation – Certificate of Completion	<ul style="list-style-type: none"> <li>▪ Technical Training: Level 1</li> <li>▪ Work-Based Training: None</li> </ul>
Refrigeration Mechanic – Level 1 Technical Training	<ul style="list-style-type: none"> <li>▪ Technical Training: Level 1</li> <li>▪ Work-Based Training: None</li> </ul>

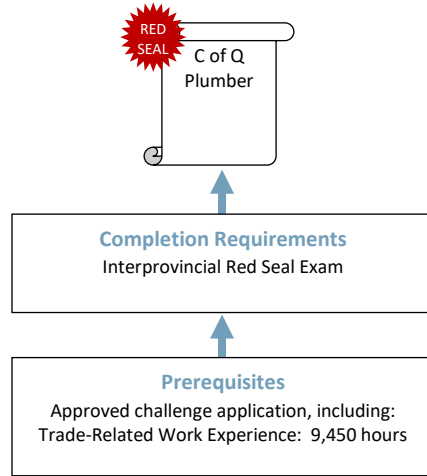
*\*Individuals who are holders of more than one of these credentials will only be awarded credit for 3,600 hours total*



### Challenge Pathway

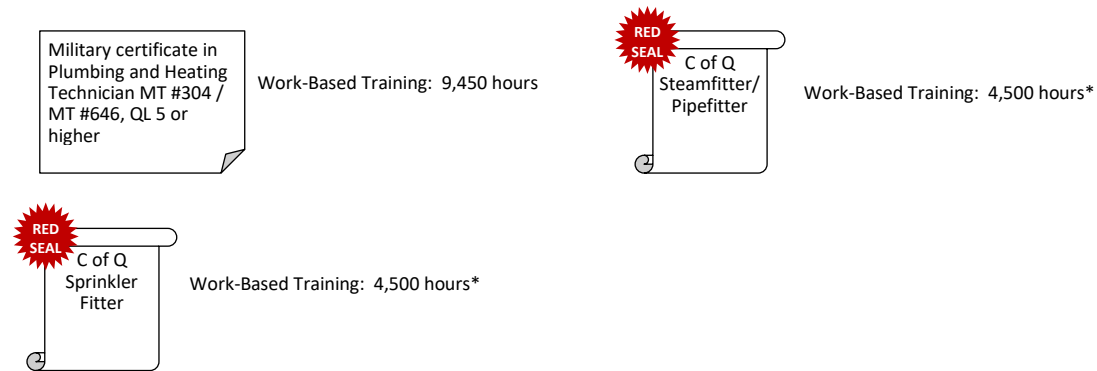
This graphic provides an overview of the Plumber challenge pathway.

*C of Q = Certificate of Qualification*



#### CREDIT FOR PRIOR LEARNING

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



*\*Individuals who are holders of more than one of these credentials will only be awarded credit for 4,500 hours total*



### Challenge Program Standards

**Credentials Awarded** Plumber – Certificate of Qualification with Interprovincial Red Seal endorsement

**ITA Registration Pre-requisites** An approved Challenge Application, which includes:

- 9,450 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:

Credential	Credit(s) Granted
Steamfitter/Pipefitter – Certificate of Qualification with Interprovincial Red Seal endorsement	▪ Work Experience: 4,500 hours*
Sprinkler Fitter – Certificate of Qualification with Interprovincial Red Seal endorsement	▪ Work Experience: 4,500 hours*
Military certificate in Plumbing and Heating Technician MT #304 / MT #646, QL5 or higher	▪ Work Experience: 9,450 hours ▪ Approved Challenge Application

**Completion Requirements** Certification as a Plumber is awarded upon successful completion of:

Requirement	Level of Achievement Required
Interprovincial Red Seal Exam	▪ Minimum 70%

*\*Individuals who are holders of more than one of these credentials will only be awarded credit for 4,500 hours total*

### Foundation Program

Refer to the Apprenticeship pathway diagram for this program to see how the Plumber Foundation program leads to apprenticeship in this trade.

### Foundation Program Standards

**Credentials Awarded** Plumber – Certificate of Completion

**Enrollment Pre-requisites** 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 the program generally takes 630 hours to complete.

**Credit toward Apprenticeship** Individuals who complete the Plumber Foundation program will receive the following credit toward completion of the Plumber apprenticeship program:

- Technical Training: Level 1
- Work-Based Training: 375 hours



## Supporting Documents

Plumber Program Outline (2017) – Defines the full scope of knowledge and skills required to competently perform the occupation in BC. Available from the ITA website.

Plumber Red Seal Occupational Standard (2016) – 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](http://www.red-seal.ca).

## Contacts

The **Industry Training Authority (ITA)** manages B.C.'s industry training and apprenticeship programs. Contact ITA Customer service if you have any questions regarding registration, examinations or certification for this program.

Telephone: 778-328-8700  
Toll Free (within BC): 1-866-660-6011  
Website: [www.itabc.ca](http://www.itabc.ca)

Fax: 778-328-8701  
Email: [customerservice@itabc.ca](mailto:customerservice@itabc.ca)

## Revision History

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

Program Approved: March 2002  
Updated: January 2006  
Updated: July 2010  
Updated: June 2011  
Updated: November 2017  
Updated: November 2018

Program Profiles are updated regularly. Visit [www.itabc.ca](http://www.itabc.ca) for the most current version.