



## PLMB2 – Plumber Apprenticeship Level 2

### Trades

**Effective Term & Year:** Fall 2022

**Program Outline Review Date:** 2025-03-01

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**Program Area:** Trades Apprenticeship Training

#### **Description:**

This 8 week program delivers the skills, knowledge and training required for Level 2 of the 4 Level Plumber Apprenticeship Program. Topics covered include using technical instruments and testers, performing piping system layouts, installing, maintaining and repairing sanitary and storm drainage systems, fixtures and appliances, hydronic heating and cooling systems, and specialized systems, such as gas-fired appliances and systems. The program includes classroom theory, demonstrations and practical hands-on training in a plumbing lab and shop setting. Safe work habits are important in this trade and are emphasized, practiced and reinforced throughout the program.

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#### **Credentials Granted:**

Upon successful completion of the 8-week Level 2 Plumber Apprenticeship program, students receive:

Level 2 Technical Training credit of the Plumber Apprenticeship program from SkilledTradesBC

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**Delivery Methods:** On-Campus (Face-to-Face), Online

**Program Duration:** 8 weeks

#### **Instructional Activity and Hours:**

| <b>Activity</b> | <b>Hours</b> |
|-----------------|--------------|
|-----------------|--------------|

|                              |           |
|------------------------------|-----------|
| Instructional Hours (hrs/wk) | 28 hrs/wk |
| Directed Studies (hrs/wk)    | 2 hrs/wk  |
| Total (hrs/wk)               | 30 hrs/wk |
| Total Program Hours          | 240 Hours |

### Content Weighting:

| Activity         | Percentage |
|------------------|------------|
| Theory           | 75%        |
| Practical Skills | 25%        |

### Admission Requirements:

Sponsored Plumber apprentice who has successfully completed Level 1 Plumber apprentice (harmonized) technical training or Level 1 Plumber apprentice (non-harmonized) technical training program PLUS Gap A training 30 hours (PLMB 199), or Piping Trades Foundation program or Plumber Foundation program.

### Flexible Assessment:

Credit cannot be awarded for this program through Flexible Assessment.

### Program Transfer Credit:

For information about block transfer agreements between programs in British Columbia, Alberta, and elsewhere, please visit <http://www.cotr.bc.ca/transfer>.

To minimize transfer issues, check with an academic advisor at the institution that will receive the transfer credits.

### Textbooks and Required Resources:

Textbook selection varies by instructor and may change from year to year. At the Program Outline Effective Date the following textbooks were in use (most current edition):

Plumber – Level 2: COTR Custom Package and 2010 National Plumbing Code

**Program Competencies and Technical Training Content:**

Upon the successful completion of this program, students will be able to:

**PLUMB 201 Use Tools and Equipment**

- Use technical instruments and testers

**PLUMB 202 Perform Routine Trade Activities**

- Use mathematics and science
- Interpret drawings and specifications
- Use codes, Regulations and standards
- Use manufacturer and supplier documentation
- Perform piping system layout

**PLUMB 203 Install Plumbing Fixtures and Appliances**

- Install fixtures
- Install appliances

**PLUMB 204 Install Drainage, Waste and Vent (DWV) Systems**

- Install sanitary drainage systems
- Install storm drainage systems
- Test sanitary and storm drainage systems

**PLUMB 205 Install Hydronic Systems**

- Interpret heating and cooling systems
- Install piping and components for hydronic systems
- Install hydronic heating and cooling generating systems
- Install hydronic transfer units

**PLUMB 206 Plan Gas-Fired Appliance Systems Installations**

- Select gas-fired appliances

**Evaluation and Assessment:**

**PLUMBER APPRENTICESHIP LEVEL 2**

| COTR COURSE | SUBJECT COMPETENCIES             | THEORY WEIGHTING | PRACTICAL WEIGHTING |
|-------------|----------------------------------|------------------|---------------------|
| PLUMB 201   | Use Tools and Equipment          | 5%               | 0%                  |
| PLUMB 202   | Perform Routine Trade Activities | 25%              | 40%                 |

|              |  |             |             |
|--------------|--|-------------|-------------|
| PLUMB 203    | Install Plumbing Fixtures and Appliances       | 15%         | 0%          |
| PLUMB 204    | Install Drainage, Waste and Vent (DWV) Systems | 30%         | 40%         |
| PLUMB 205    | Install Hydronic Systems                       | 15%         | 20%         |
| PLUMB 206    | Plan Gas-Fired Appliance System Installations  | 10%         | 0%          |
| <b>Total</b> |  | <b>100%</b> | <b>100%</b> |

**In-school theory/practical subject competency weighting** 75% 25%

**Final in-school mark**  
 Apprentices must achieve a minimum 70% for the final in-school mark to be eligible to write the Plumber Standardized Level Exam. **IN-SCHOOL %**

**In-school Mark**  
 Combined theory and practical subject competency multiplied by 80%

**Standard Level Exam Mark**  
 The exam score is multiplied by 20%

**Final Level Mark** 100%

**Pass Requirements:**

1. Successful completion of the in-school training is defined as a final overall minimum of 70% to meet SkilledTradesBC standards.
  - Students must maintain an acceptable level of attendance, complete all assigned projects and pass all exams to successfully complete the program.

**Students must provide their own:**

- CSA approved personal protective equipment (PPE)
- CSA approved hardhat, blue in colour
- Steel-toed work boots
- Safety glasses
- Coveralls
- Reference materials
- Pen, pencils, coloured pencils, etc.
- Three-ringed binders and paper (lined and unlined)
- Geometry set
- Calculator
- Gloves

**Academic Policies:**

College of the Rockies policies related to courses can be found at <https://cotr.bc.ca/about-us/college-policies/> and include the following:

- Policy 2.4.3 Students with Documented Disabilities
- Policy 2.4.4 Student Conduct (plagiarism, other cheating, behavioral misconduct)
- Policy 2.4.8 Academic Performance
- Policy 2.5.3 Grade Appeal
- Policy 2.4.9 Student Concerns Re Faculty

## Program Grade

| COM  | NCG                               |
|--|-----------------------------------|
| Completed to the defined standard – 70% or greater | No Credit Granted – less than 70% |

### Program Changes:

Information contained in program outlines is correct at the time of publication. Content of the program is revised on an ongoing basis to ensure relevance to changing educational, employment, and marketing needs. The instructor endeavours to provide notice of changes to students as soon as possible. The instructor reserves the right to add material to programs.

### Industry Training:

The program competencies and technical training content delivered in this program follow the SkilledTradesBC Program Outline for this trade.

### Safety Catalog:

WorkSafeBC regulations apply to all trades programs. Students are expected to follow all safe work practices and have high regard for the safety of others as well as of themselves. Students are responsible to wear personal protective equipment (PPE) as directed. At a minimum, students must provide and wear approved safety footwear and eyewear at all times in the shop. Additional PPE may be required for specific tasks. Students are expected to wear clothing suitable for working safely in the shop.