



PLMB4 – Plumber Apprenticeship Level 4

Trades

Effective Term & Year: Winter 2026

Program Outline Review Date: 2031-09-01

Program Area: Trades Apprenticeship Training

Description:

This 8-week program delivers the skills, knowledge and training required for Level 4 of the 4 Level Plumber Apprenticeship Program. Topics covered include installing sanitary and storm drainage systems, private sewage systems, water service and distribution, hydronic heating and cooling systems, specialized systems and natural gas and propane 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.

Credentials Granted:

Upon successful completion of the 8-week Level 4 Plumber Apprenticeship program, students receive:

- Level 4 Technical Training credit of the Plumber Apprenticeship program from SkilledTradesBC
- College of the Rockies Plumber Apprenticeship Level 4 Certificate

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

Program Duration: 8 weeks

Instructional Activity and Hours:

Activity	Hours
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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	82%
Practical Skills	18%

Admission Requirements:

Sponsored Plumber apprentice who has successfully completed Level 3 Plumber apprentice technical training.

Prior Learning and Recognition:

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):

Online resources provided by the instructor

Program Competencies and Technical Training Content:

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

PLUMB 401 Perform Routine Trade Activities

- Interpret drawings and specifications for piping system layouts

PLUMB 402 Install Plumbing Fixtures and Appliances

- Commission and service fixtures and appliances

PLUMB 403 Use Communication Techniques

- Use mentoring techniques

PLUMB 404 Install Sewers and Sewage Treatment Systems

- Test maintenance holes, catch basins, and piping for sewers
- Service maintenance holes, catch basins, and piping for sewers
- Install sewage treatment systems and components
- Test sewage treatment systems and components
- Service sewage treatment systems and components

PLUMB 405 Install Drainage, Waste and Vent (DWV) Systems

- Service sanitary and storm drainage systems

PLUMB 406 Install Water Services and Distribution Systems

- Test, commission, and service water service and distribution systems

PLUMB 407 Install Pressure Systems

- Install piping for pressure systems
- Install equipment for pressure systems
- Test, commission, and service pressure systems

PLUMB 408 Install Hydronic Systems

- Test, commission, and service hydronic systems, components, and controls

PLUMB 409 Install Water Treatment Equipment

- Install water treatment equipment
- Test, commission, and service water treatment equipment

PLUMB 410 Install Specialized Systems

- Install piping for specialized systems
- Install equipment and components for specialized systems

- Test, commission, and service specialized systems

PLUMB 411 Apply Electrical Concepts

- Apply single phase motor theory
- Apply three phase motor theory
- Interpret the Canadian Electrical Code (CEC)

PLUMB 412 Plan Gas-Fired Appliance System Installations

- Select regulations, valves and valve train components
- Plan a project

PLUMB 413 Install Gas-Fired Systems

- Install regulators, valves and valve trains
- Install air supply systems
- Commission fuel/air delivery systems

Evaluation and Assessment:

PLUMBER APPRENTICESHIP LEVEL 4

COTR COURSE	SUBJECT COMPETENCIES	THEORY WEIGHTING	PRACTICAL WEIGHTING
PLUMB 401	Perform Routine Trade Activities	4%	0%
PLUMB 402	Install Plumbing Fixtures and Appliances	4%	0%
PLUMB 403	Use Communication Techniques	4%	0%
PLUMB 404	Install Sewers and Sewage Treatment Systems	10%	0%
PLUMB 405	Install Drainage, Waste, and Vent (DWV) Systems	4%	0%
PLUMB 406	Install Water Services and Distribution Systems	4%	0%
PLUMB 407	Install Pressure Systems	12%	25%
PLUMB 408	Install Hydronic Systems	5%	25%
PLUMB 409	Install Water Treatment Equipment	12%	10%
PLUMB 410	Install Specialized Systems	8%	0%
PLUMB 411	Apply Electrical Concepts	11%	0%
PLUMB 412	Plan Gas-Fired Appliance System Installations	11%	40%
PLUMB 413	Install Gas-Fired Systems	11%	0%
Total		100%	100%

In-school theory/practical subject competency weighting

85%

15%

Final in-school percentage score

Apprentices must achieve a minimum 70% as the final in-school percentage score to be eligible to write the Interprovincial Red Seal Exam

IN-SCHOOL %

All apprentices who complete Level 4 of the Plumber program with a FINAL level mark of 70% or greater will write the Interprovincial Red Seal examination as their final assessment.

SkilledTradesBC will enter the apprentices Plumber Red Seal Interprovincial examination mark in SkilledTradesBC Portal. A minimum mark of 70% on the examination is required to pass.

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 2.1.4 Course Audit
- Policy 2.4.1 Credential Framework
- Policy 2.4.3 Students with Documented Disabilities
- Policy 2.4.4 Student Rights, Responsibilities and Conduct
- Policy 2.4.8 Academic Performance
- Policy 2.4.9 Student Feedback and Concerns
- Policy 2.4.11 Storage of Academic Works
- Policy 2.5.3 Student Appeal
- Policy 2.5.5 Prior Learning Assessment and Recognition (PLAR)

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.