

Plumber Apprenticeship Level 2 – PLMB2

Trades Training

Program Outline

PROGRAM IMPLEMENTATION DATE: February 2009
 OUTLINE EFFECTIVE DATE: September 2020
 PROGRAM OUTLINE REVIEW DATE: March 2025

GENERAL PROGRAM 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.

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 the Industry Training Authority.

Delivery: This program is delivered as a block intake.

Time for this program: 8 weeks

Typical Structure of Instructional Hours:

Instructional Activity	Duration
Theory based training (approximately per day)	75%
Practical shop floor training (approximately per day)	25%
Trades Contact Hours	28 hrs/wk

Practicum Hours (if applicable):

Type of Practicum	Duration
On-the-job Experience	N/A
Formal Work Experience	N/A
Other	N/A
Total	

Program Outline Author or Contact:

Joy Brown, Department Head

Signature**APPROVAL SIGNATURES:**

Department Head

Joy Brown

E-mail: jbrown3@cotr.bc.ca

Dean of Trades and Technology

Dr. Jack Moes

E-mail: jmoes@cotr.bc.ca

Department Head Signature

Dean Signature

EDCO

Valid from: September 2020 – March 2025

Education Council Approval Date**PROGRAM PREREQUISITES AND TRANSFER CREDIT:**

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

Flexible Assessment (FA):

Credit can be awarded for this program through FA

☐ Yes☒ No**Prior Learning Credit:**

Apprentices that have extensive work experience in a trade (in BC or elsewhere) but have never been certified must apply through the Industry Training Authority (ITA) to challenge the certification for advanced placement in a program. Refer to the ITA website (<http://www.itabc.ca/apply-apprenticeship/challenging-exams>) for details regarding the challenge procedure. Trade specific requirements can be found for each trade in the Trades Program Profiles on the ITA website.

Prior Course Number: N/A

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

Please see the instructor's syllabus or check COTR's online text calculator

<http://go.cotr.bc.ca/tuition/tCalc.asp> for a complete list of the currently required textbooks.

PROGRAM DESIGN:

Apprenticeship programs cover the general area competencies (GAC) for the program as sourced from curriculum documents provided by Industry Training Authority (ITA). The Technical Training Topics are listed under the Technical Training Content section of this document, and related competencies are listed under the Program Competencies section. College of the Rockies is accredited by ITA to deliver apprenticeship programs.

TECHNICAL TRAINING CONTENT:

- | | |
|------------------|---|
| PLUMB 201 | Use Tools and Equipment <ul style="list-style-type: none">• Use technical instruments and testers |
| PLUMB 202 | Perform Routine Trade Activities <ul style="list-style-type: none">• 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 <ul style="list-style-type: none">• Install fixtures• Install appliances |
| PLUMB 204 | Install Drainage, Waste and Vent (DWV) Systems <ul style="list-style-type: none">• Install sanitary drainage systems• Install storm drainage systems• Test sanitary and storm drainage systems |
| PLUMB 205 | Install Hydronic Systems <ul style="list-style-type: none">• 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 <ul style="list-style-type: none">• Select gas-fired appliances |
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PROGRAM COMPETENCIES:

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

- use technical instruments and testers
- use codes, regulations and standards
- use manufacturer and supplier documentation
- perform piping system layouts
- install, test, maintain and repair sanitary drain, waste, and vent systems
- install, test, maintain and repair storm drainage systems
- install, test, maintain and repair fixtures, trim and appliances
- install piping components for hydronic systems, including heating and cooling generating systems
- install hydronic transfer units
- plan and install gas-fired appliances and systems

The program competencies covered in this program follow Industry Training Authority harmonized curriculum.

See instructor's syllabus for the detailed outline of weekly readings, activities and assignments.

EVALUATION AND ASSESSMENT:

Assignments	% Of Total Grade
Theory	75%
Practical	<u>25%</u>
Total	100%

The minimum passing mark to meet ITA (Industry Training Authority) standards is 70% overall.

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%
	Total	100%	100%
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%	

STUDENT RESPONSIBILITY:

Students are expected to follow all College Policies and Practices as outlined in the program handout package. Mastery of trade specific techniques and methods necessary to a given trade requires significant supervised practice. As a result, regular attendance is necessary for success in this program. Students are expected to follow Policy 2.6.2 – "***Vocational Student Withdrawals as a Result of Absence***".

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.

The shop attendant is also the first aid attendant for the building. Students may only work in the shop during assigned times. If an incident occurs, no matter how minor, it must be reported to the shop attendant immediately.

INDUSTRY SITE VISITS:

There may be off-site field trips organized in the program as opportunity or resources are available during this program. Students **ARE REQUIRED** to arrange their own transportation for such field trips. Students are expected to follow all college policies and procedures when participating in off-campus activities.

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
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EXAM POLICY:

Students must attend all required scheduled tests and exams that make up a final grade at the appointed time and place.

Individual instructors may accommodate for illness or personal crisis. Additional accommodation will not be made unless a written request is sent to and approved by the appropriate Department Head prior to the scheduled exam.

Any student who misses a scheduled test or exam without approval will be given a grade of "0" for the exam.

PROGRAM GRADE:

Program grades are assigned as follows:

COM	Completed to defined standard > 70%
NCG	No Credit Granted < 70%

Successful completion of the in-school training for each level is defined as a final score of 70% or greater. (ITA website)

ACADEMIC POLICIES:

See www.cotr.bc.ca/policies for general college policies related to program activities, including grade appeals, cheating and plagiarism.

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.