

Plumber Apprenticeship Level 1 – PLMB1

Trades Training

Program Outline

PROGRAM IMPLEMENTATION DATE: February 2009
 OUTLINE EFFECTIVE DATE: September 2019
 PROGRAM OUTLINE REVIEW DATE: March 2024

GENERAL PROGRAM DESCRIPTION:

This 7-week program delivers the skills, knowledge and training required for Level 1 of the four-level Plumber Apprenticeship Program. Program competencies covered include preparing piping and components, installing pipe, valves and fittings, using soldering, brazing and welding equipment, using codes and regulations, interpreting drawings and specifications and apply electrical concepts. The program includes classroom theory, demonstrations and practical hands-on training in a plumber shop setting. Safe work practices related to the plumbing trade are reinforced throughout the program.

Credentials Granted: Upon successful completion of the 7-week Level 1 Plumber Apprenticeship program, students receive:

- Level 1 Technical Training credit of the Plumber Apprenticeship program from the Industry Training Authority (ITA).

Delivery: This program is delivered face to face as a block intake.

Time for this program: 7 weeks

Typical Structure of Instructional Hours:

Instructional Activity	Duration
Theory based training (approximately per day)	70%
Practical shop floor training (approximately per day)	30%
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:

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Signature

APPROVAL SIGNATURES:

Department Head

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EDCO

Valid from: September 2019 – March 2024

Education Council Approval Date

PROGRAM PREREQUISITES AND TRANSFER CREDIT:**Prerequisites:** Sponsored Plumber Apprentice**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 1: COTR Custom Package

Pipe Trades Handbook

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

http://www.cotr.bc.ca/bookstore/cotr_web.asp?IDNumber=164 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 101 Perform Safety Related Functions

- Maintains safe work environment
- Use personal protective equipment (PPE) and safety equipment
- Perform lock-out and tag-out procedures
- Practice fire prevention

PLUMB 102 Use Tools and Equipment

- Use common tools and equipment
- Use access equipment
- Use rigging, hoisting, lifting and positioning equipment
- Rig loads for cranes
- Use soldering and brazing equipment
- Use oxy-fuel cutting equipment
- Use welding equipment

PLUMB 103 Perform Routine Trade Activities

- Use mathematics and science
- Interpret drawings and specifications
- Use codes, regulations and standards

PLUMB 104 Prepare Piping and Components

- Prepare pipe
- Join tube, tubing and pipe
- Install pipe
- Install valves
- Install fittings
- Penetrate structures

PLUMB 105 Use Communication Techniques

- Use communication techniques

PLUMB 106 Apply Electrical Concepts

- Use the principles of electricity

PROGRAM COMPETENCIES:

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

- safely use plumbing hand tools, power tools and equipment;
- select and use common plumbing materials and fasteners;
- use rigging, hoisting, lifting and positioning equipment;
- interpret blueprints, drawings and specifications;
- use soldering and brazing and oxy-fuel cutting and welding equipment;
- interpret drawings and specifications;
- use codes, regulations and standards;
- prepare piping and components;
- join tube, tubing and pipe;
- install valves, fixtures and fittings; and
- apply and use the principles of electricity.

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	70%
Practical	<u>30%</u>
Total	100%

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

PLUMBER APPRENTICESHIP LEVEL 1			
COTR COURSE	SUBJECT COMPETENCIES	THEORY WEIGHTING	PRACTICAL WEIGHTING
PLUMB 101	Perform Safety Related Functions	15%	10%
PLUMB 102	Use Tools and Equipment	10%	30%
PLUMB 103	Perform Routine Trade Activities	40%	10%
PLUMB 104	Prepare Piping and Components	15%	50%
PLUMB 105	Use Communication Techniques	5%	0%
PLUMB 106	Apply Electrical Concepts	15%	0%
	Total	100%	100%
In-School Theory/Practical Subject Competency Weighting		70%	30%
Final in-school mark Apprentices must achieve a minimum 70% as the final in-school mark score 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 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 course 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.