



GASB2 – Gasfitter B Level 2

Trades

Effective Term & Year: Winter 2025

Program Outline Review Date: 2030-09-01

Program Area: Trades Apprenticeship Training

Description:

This 10-week program delivers the skills, knowledge and training required for Level 2 of Gasfitter Level B. Program competencies include theory and practical techniques in the following areas: fundamentals of gas utilization; electrical concepts related to gas fitting; gas-fired appliance systems and equipment; fuel/air delivery systems; and distribution systems. Upon successful completion apprentices meet Technical Safety BC requirements to obtain Technical Safety BC Certificate of Qualification. Safe work practices are important in this trade and are emphasized, reinforced and practiced throughout the program.

Credentials Granted:

Certificate of Apprenticeship Gasfitter B program from SkilledTradesBC

Certificate of Qualification Gasfitter B from Technical Safety BC

Certificate of Completion College of the Rockies

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

Program Duration: 10 weeks

Instructional Activity and Hours:

Activity	Hours
Instructional Hours (hrs/wk)	28

Directed Studies (hrs/wk)	2
Total (hrs/wk)	30
Total Program Hours	300

Content Weighting:

Activity	Percentage
Theory	75
Practical Skills	25

Admission Requirements:

Successful completion of Gasfitter B Level 1

Prior Learning and Recognition:

Credit cannot be awarded for this program through Prior Learning Assessment and Recognition.

Program Transfer Credit:

Textbooks and Required Resources:

CAN/CSA B149.1 current

CAN/CSA B 149.2 current

CAN/CSA C22.1 current

Safety Standards General Regulations

Gas Safety Regulation

Program Competencies and Technical Training Content:

GASB 201 Use Common Occupational skills

- Use technical instruments and testers, codes, regulations, and standards
- Organize work and maintain records

GASB 202 Apply Fundamentals of Gas Utilization

- Interpret heating, cooling and process systems
- Apply knowledge of mechanical safety devices
- Apply alternate-fuel theory

GASB 203 Apply Electrical concepts

- Use principles of electricity and electronics
- Use electrical wiring diagrams and schematics and the Canadian Electrical Code
- Apply single and three phase motor theory
- Apply Variable Frequency (VFD) and Electronically Commutated motors (ECM) technology
- Apply wiring practices
- Troubleshoot electrical circuits
- Apply communication and networking technology

GASB 204 Plan Gas-Fired Appliance System Installations

- Select regulators, valves and valve train components
- Plan propane system installations
- Size venting systems and air supply systems
- Select gas-fired appliances, burners, and flame safeguards
- Select combustion, safety and operating controls
- Select automation and instrumentation control systems
- Plan a project

GASB 205 Install Gas-Fired Systems

- Install regulators, valves and valve train components
- Install LPG, LNG, CNG vaporizing and mixing systems
- Install venting, air supply systems and draft control systems
- Install automation and instrumentation control systems
- Install boilers and ancillary equipment
- Install air heating appliances and equipment

GASB 206 Commission Gas-Fired Appliances and Equipment

- Commission fuel/air delivery systems
- Perform appliance start-up procedures
- Interpret gas metering devices
- Perform combustion analysis
- Commission boilers and ancillary equipment
- Commission furnaces and ovens
- Program temperature, pressure and operating controls
- Commission draft control systems
- Training and handover of gas-fired equipment

GASB 207 Maintain and Service Gas-Fired Appliances and Equipment

- Service gas distribution systems
- Service gas burners and ancillary equipment
- Maintain boilers and ancillary equipment
- Maintain gas-fired appliances
- Maintain gas-fired refrigeration equipment
- Service fuel/air delivery systems
- Service and repair control systems
- Decommission and disconnect gas-fired appliances and equipment

Evaluation and Assessment:

Gasfitter B Level 1

COTR COURSE	SUBJECT COMPETENCIES	THEORY WEIGHTING	PRACTICAL WEIGHTING
GASB 201	Use Common Occupational Skills	2%	0%
GASB 202	Apply Fundamentals of Gas Utilization	30%	0%
GASB 203	Apply Electrical Concepts	20%	5%
GASB 204	Plan Gas-Fired Appliance System Installations	22%	5%
GASB 205	Install Gas-Fired Systems	8%	0%
GASB 206	Commission Gas-Fired Appliances	12%	90%
GASB 207	Maintain and Service Gas-Fired Appliances and Equipment	6%	0%
Total		100%	100%
In-school theory & practical subject competency weighting		75%	25%
Final in-school percentage score			
Apprentices must achieve a minimum 70% for the final in-school percentage score to be eligible to write the Technical Safety BC Certificate of Qualification Exam.		IN-SCHOOL %	
In-School Percentage Score		80%	
Combined theory and practical subject competency multiplied by			
Standardized Level Exam Percentage Score		20%	
The exam score is multiplied by			
Final Percentage Score		FINAL%	

Pass Requirements:

SkilledTradesBC will enter the apprentices' Gasfitter Class B Technical Safety Certificate of Qualification exam percentage score into SkilledTradesBC Portal. A minimum percentage score of 70% on the exam is required for a pass.

All apprentices who complete Level 2 of the Gasfitter Class B program with a FINAL level percentage score of 70% or greater will write the Technical Safety BC Certificate of Qualification exam as their final assessment.

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.