



**TECHNICAL
SAFETY BC**

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TRAINING PROGRAM RECOGNITION GUIDELINES

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1. Introduction

Technical Safety BC places a high level of reliance on recognized training providers to deliver training programs that are technically current and provide industry with a workforce that is safe and competent. It is imperative that training providers maintain a level of confidence in the skills and knowledge of the candidates they train and certify.

Division 2 and section 4 (1) (c) of the Gas Safety Regulation requires an individual who performs regulated work in respect to a gas system or gas equipment to successfully complete a training program recognized by the provincial safety manager.

To qualify for program recognition by Technical Safety BC, the training program must be recognized by a provincial safety manager.

The purpose of this document is to outline the requirements and guidelines for achieving program recognition for training providers from Technical Safety BC. The procedures outlined in this document clarify the conditions under which a training provider can gain and retain program recognition for a training program.

These guidelines are provided for training providers, instructors and administrators involved in delivering training programs sanctioned by Technical Safety BC. These procedures are subject to enhancement and revision as required. All changes will be communicated to the recognized training providers and posted on Technical Safety BC's website www.technicalsaftybc.ca.

2. Background and Intent

Most programs are based on two fundamental elements: theoretical training and practical application, which are typically evaluated based on a practical assessment and/or written examination.

Where a practical assessment is required, the assessment should be based on demonstrated knowledge and understanding of the course content.

To assist training providers in acquiring program recognition and to provide consistency across the province, Technical Safety BC has developed these minimum guidelines.

3. Instructor Requirements

Instructors identified as part of the program recognition application must meet the requirements of Technical Safety BC.

The instructors approval will be based on:

- knowledge of the subject matter for which they are instructing
- and, a certificate of qualification equal to or greater than the level of instruction (unless otherwise approved by the provincial safety manager).

Instructors require a minimum of 5 years' experience working in the industry for which the training program is being recognized. This experience requirement may be varied based



on; type of experience and scope of exposure to the industry, other related credentials and specialized experience.

The provincial safety manager may allow an instructor to be approved without having a certificate of qualification or minimum 5 years' experience where conditions warrant (e.g. manufacturer's technical representatives delivering equipment-specific training for a special purpose certificate).

Technical Safety BC recommends that instructors also possess one of the following:

- Recognized Train the Trainer Certificate
- Instructor Diploma or Equivalent
- Bachelor's Degree in Education
- Master's Degree in Education

4. Authorized Representative

The training provider must designate an authorized representative who is responsible for ensuring that all of the program criteria are met. The training provider's authorized representative is the point of contact in all matters related to maintaining their program recognition from Technical Safety BC.

5. Program Recognition Documents for Submission

The training provider must submit a [program recognition application](#) to Technical Safety BC for review and acceptance. Technical Safety BC will require the following documents be submitted electronically:

- The purpose of the course (specifically details related to the regulatory requirement the course is intended to meet)
- Program admission requirements
- The program and/or course outline
- Mode of training (e.g. online, self-paced, webinar, live, instructor-led, etc.)
- The training material, instructor's guide and if possible the lesson plan

Note: Training materials which are branded or have a copyright by another institution or organization may require an appropriate sign-off letter indicating the materials use is authorized.

- A list of all instructors that deliver the program and their credentials
- A list of any exam invigilators used other than the program instructor
- Examination protocols utilized to administer and ensure exam security
- Total minimum hours of classroom instruction
- Total minimum hours of lab/shop instruction (if applicable)
- Written examinations
- Practical assessments
- Information regarding the grading structure and minimum course passing grade
- Attendance requirements for classroom instruction, lab work and field training



- Information detailing the lab/shop facilities, tools and equipment. (if applicable)

6. Learning Environments

Theory

Theory instruction is an integral part of each program and should be supported through an appropriate learning environment. Dependent on the training program and duration, the following factors will be considered during the onsite assessment process:

- Comfortable seating and tables suitable for learning
- Compliance with the local and national fire code, occupational safety requirements and municipal zoning bylaws for technical instruction and education facilities
- Multimedia equipment
- Whiteboard with marking pens and erasers
- Lighting controls to allow easy visibility of multimedia projections, while allowing students to take notes
- Windows must have shades or blinds to adjust sunlight
- Heating/Air conditioning for comfort all year round
- The acoustics in the room must allow the students to be able to hear the instructor
- Adequate eating area as per WorkSafeBC requirements (4.84 OHS Regulation and Guidelines)
- Adequate washroom facilities as per WorkSafeBC requirements (4.84 OHS Regulation and Guidelines)

Note: These conditions do not require verification by a Technical Safety BC representative if the training provider is approved by either the Industry Training Authority (ITA), Private Training Act (PTA), BC Education Quality Assurance (BC EQA) or meets the requirements of the University Act of BC.

The theory component must consist of in-class and/or online training that meets the minimum hour requirements identified in this document, or for which the training program has been recognized.

Practical Training

The lab is primarily a teaching aid where students gain practical experience in the safe operation, troubleshooting and repair of equipment and apply the theoretical knowledge acquired.

Due to the requirements of practical skill development required for some programs, it is essential that the training facility/location has access to the required equipment and tools and that they are maintained in good condition.

The equipment will vary with the degree of technical expertise required to deliver the training and satisfy the performance objectives set out for the program. The list of equipment and tools must be approved by the provincial safety manager.



Student Review and Appeal Process

Training programs should consider a process for students to request a review of course content, testing or examination procedures and the resolution of complaints. The reviews should be restricted to issues pertaining to the course content, administration of tests or examinations such as test procedures, conduct of the instructor, inadequate facilities or other issues that obstructed the student in successfully completing the course.

The failure of a properly administered test or examination should not be subject to the review and appeal process, however, the student should be able to request a re-mark of a test or examination. The results of a re-mark should not be reviewable or appealable.

7. Specific Program Details

Training Programs for Non-Apprenticeship Class A Gas Fitter Certificate of Qualification

To satisfy the requirements of GSR section 6(1)(a), training programs are required to include all topics identified in the most current syllabus and must consist of at least 240 hours of theory (in-class and/or online) and 60 hours of lab/shop practical training.

An applicant for a class A gas fitter's certificate of qualification must have held a class B gas fitter's certificate of qualification for at least 2 years.

Lab/shop facilities to include, as a minimum:

- Multimeters
- Clamp-on ammeters
- Signal generator 4-20 mA, 0-10 V
- Electronic flue gas analyzers capable of displaying CO₂, CO, O₂, NO_x, stack temperature, excess air, combustion efficiency
- Liquid filled manometers
- Digital manometers
- Incline manometers
- Draft/magnehelic gauges
- Flame Safeguard Trainers
- VFD Trainer (includes VFD and 3 phase motor)
- Tools and Equipment to purge a piping system 4 inches or larger in diameter
- PLC Trainer (programs should include Allen Bradley, Mitsubishi or Siemens)
- Fuel/Air Ratio Control (FARC) Trainer (required if hot water or steam boiler valve train does not include an electronic-type fuel air-ratio control system.)
- Necessary hand and power tools to service DFMA's, steam and hot water boilers
- DFMA (modulating, installation to include ability to alter external static pressure)
- Complete Hot Water Boiler (c/w burner, blower, valve train and controls)
- Complete Steam Boiler (c/w burner, blower, valve train and controls)



- Packaged Power Burner (c/w burner, blower, valve train and controls) Modulating Input

Note: Although any appliance with an input that exceeds 120 kW falls within the scope of a Class A gas fitter certification, Technical Safety BC recommends that facilities delivering Class A gas fitter training programs utilize appliances with inputs equal to or greater than 1,000 MBH.

Training Programs for the Class A Gas Fitter Apprenticeship

To satisfy the requirements of GSR section 6(1)(a), training programs are required to include all topics identified in the most current syllabus and must consist of 2 levels of training with at least 261 hours of theory (in-class and/or online) and 39 hours of lab/shop practical training for level one, and at least 251 hours of theory (in-class and/or online) and 49 hours of lab/shop practical training for level two.

An applicant for a class A gas fitter's certificate of qualification must have held a class B gas fitter's certificate of qualification for at least 2 years.

Apprenticeship training programs are required to be approved by the Industry Training Authority (ITA).

Lab/shop facilities to include, as a minimum:

Class A Level One Apprenticeship

- Multimeters
- Clamp-on ammeters
- Signal generator 4-20 mA, 0-10 V
- Electronic flue gas analyzers capable of displaying CO₂, CO, O₂, NO_x, stack temperature, excess air, combustion efficiency
- Liquid filled manometers
- Digital manometers
- Incline manometers
- Draft/magnehelic gauges
- Flame Safeguard Trainers
- VFD Trainer (includes VFD and 3 phase motor)
- Tools and Equipment to purge a piping system 4 inches or larger in diameter

Class A Level Two Apprenticeship

- Multimeters
- Clamp-on ammeters
- Signal generator 4-20 mA, 0-10 V
- Electronic flue gas analyzers capable of displaying CO₂, CO, O₂, NO_x, stack temperature, excess air, combustion efficiency



- Liquid filled manometers
- Digital manometers
- Incline manometers
- Draft/magnehelic gauges
- PLC Trainer (programs should include Allen Bradley, Mitsubishi or Siemens)
- Fuel/Air Ratio Control (FARC) Trainer (required if hot water or steam boiler valve train does not include an electronic-type fuel air-ratio control system.)
- Necessary hand and power tools to service DFMA's, steam and hot water boilers
- DFMA (modulating, installation to include ability to alter external static pressure)
- Complete Hot Water Boiler (c/w burner, blower, valve train and controls)
- Complete Steam Boiler (c/w burner, blower, valve train and controls)
- Packaged Power Burner (c/w burner, blower, valve train and controls) Modulating Input

Note: Although any appliance with an input that exceeds 120 kW falls within the scope of a Class A gas fitter certification, Technical Safety BC recommends that facilities delivering Class A gas fitter training programs utilize appliances with inputs equal to or greater than 1,000 MBH.

Training Programs for Non-Apprenticeship Class B Gas Fitter Certificate of Qualification

To satisfy the requirements of GSR section 7(1)(b), training programs are required to include all topics identified in the most current syllabus and must consist of at least 240 hours of theory (in-class and/or online) and 60 hours of lab/shop practical training.

Students enrolled in this program must hold a provincially recognized trade qualification in Plumbing, Steamfitting, Refrigeration or Sprinklerfitting.

Lab/shop facilities to include, as a minimum:

- Multimeters
- Electronic flue gas analyzers capable of displaying CO₂, CO, O₂, NO_x, stack temperature, excess air, combustion efficiency
- Liquid filled manometers
- Digital manometers
- Incline manometers
- Necessary hand and power tools to service furnaces, boilers and domestic water heaters
- Category 1 and 4 forced-air furnaces
- Category 1 and 4 hot water boilers
- Tankless water heaters
- Storage type water heaters
- Residential range
- Residential dryer



- Unit heater
- Direct-vent fireplace
- All appliances to have an input of 120 kW or less

Training Programs for the Class B Gas Fitting Apprenticeship

To satisfy the requirements of GSR section 7(1)(b), training programs are required to include all topics identified in the most current syllabus and must consist of 2 levels of training with at least 261 hours of theory (in-class and/or online) and 39 hours of lab/shop practical training for level one, and at least 256 hours of theory (in-class and/or online) and 44 hours of lab/shop practical training for level two.

Apprenticeship training programs are required to be approved by the Industry Training Authority (ITA).

Lab/shop facilities to include, as a minimum:

Class B Level One Gas Fitter Apprenticeship

- Threading machines (power drive with threading attachment)
- Oxy/acetylene cutting outfits
- Brazing equipment
- Flaring tools
- Tubing benders

Class B Level Two Gas Fitter Apprenticeship

- Multimeters
- Electronic flue gas analyzers capable of displaying CO₂, CO, O₂, NO_x, stack temperature, excess air, combustion efficiency
- Liquid filled manometers
- Digital manometers
- Incline manometers
- Necessary hand and power tools to service furnaces, boilers and domestic water heaters
- Category 1 and 4 forced-air furnaces
- Category 1 and 4 hot water boilers
- Tankless water heaters
- Storage type water heaters
- Residential range
- Residential dryer
- Unit heater
- Direct-vent fireplace
- All appliances to have an input of 120 kW or less



Gas Appliance Service Training Programs

To satisfy the requirements of GSR section 11(1)(a), training programs shall include all topics identified in the current exam syllabus and shall consist of at least 114 hours of theory (in-class and/or online) and 30 hours of lab/shop practical training.

Lab/shop facilities to include, as a minimum:

- Multimeters
- Electronic flue gas analyzers capable of displaying CO₂, CO, O₂, NO_x, stack temperature, excess air, combustion efficiency
- Liquid filled manometers
- Digital manometers
- Incline manometers
- Necessary hand and power tools to service furnaces, boilers and domestic water heaters
- Category 1 and 4 forced-air furnaces
- Category 1 and 4 hot water boilers
- Tankless water heaters
- Storage type water heaters
- Residential range
- Residential dryer
- Unit heater
- Direct-vent fireplace
- All appliances to have an input of 82 kW or less

Recreational Vehicle Installation and Service Training Programs

To satisfy the requirements of GSR section 13(1)(b), training programs shall include all topics identified in the current exam syllabus and shall consist of at least 125 hours of theory (in-class and/or online) and 30 hours of lab/shop practical training.

Lab/shop facilities to include, as a minimum a recreational vehicle equipped with:

- Furnace
- Water heater
- Range
- All appliances must meet the requirements of CSA Z240.4.2
- Flue gas analyzer capable of measuring CO₂, CO, O₂, stack temperature and excess air

Liquefied Petroleum Gas (LPG) Vehicle Conversion Training Programs

To satisfy the requirements of GSR section 14 (1), training programs shall include all topics identified in the current exam syllabus and shall consist of at least 12 hours of theory (in-class and/or online) and 9 hours of lab/shop practical training.



Lab/shop facilities to include, as a minimum:

- LPG Vehicle complete with LPG containers
- Four gas analyzer
- Necessary hand and power tools to service LPG vehicles
- Necessary diagnostic equipment to service LPG vehicles
- Leak test equipment

Compressed Natural Gas Vehicle (CNG) Conversion Training Programs

To satisfy the requirements of GSR section 15 (1)(c), training programs shall include all topics identified in the current exam syllabus and shall consist of at least 12 hours of theory (in-class and/or online) and 9 hours of lab/shop practical training.

The lab/shop facilities shall include, as a minimum:

- CNG Vehicle complete with CNG cylinders
- Four gas analyzer
- Necessary hand and power tools to service CNG vehicles
- Necessary diagnostic equipment to service CNG vehicles
- Leak test equipment

Propane and LNG Transfer

Individuals who transfer propane or liquefied natural gas (LNG) must have a certificate of qualification resulting from the successful completion of a training course recognized and approved by a Provincial Safety Manager.

Each training program must be specific for the job skills required to operate or handle the transfer equipment and containers specific to that transfer type. Individuals who successfully complete the training will be allowed to perform regulated work that is restricted to only those activities for which the training has been recognized.

Upon successful completion of the training, the training provider is responsible for issuing a Record of Training (ROT) wallet card and ensuring that the training and assessment(s) adequately cover all competencies for which the training has been recognized.

The ROT must be approved by Technical Safety BC and is to contain the following information:

- Training provider name
- Training provider address and phone number
- Instructor name
- Certificate holders' name
- Certificate classification or endorsement



- Card number
- Date of issue/completion
- The course length
- The edition of any code books or standards used

Special Purpose Certificates Issued by Technical Safety BC

Section 19 of the Gas Safety Regulation (GSR) allows an individual with specialized appliance or equipment training to apply for a Special Purpose Gas Certificate of Qualification (SPCQ) issued by Technical Safety BC. This certificate type, entitles the holder to perform only regulated work specified by the certificate and only under the conditions specifically endorsed on the certificate. A SPCQ certificate holder must be employed by a licensed gas contractor, can be a licensed gas contractor themselves or under the permission of an appropriate operating permit to perform regulated work. The SPCQ entitles the holder to perform a limited scope of regulated gas work, as an example: assembly or construction of specific appliances. A SPCQ is only available to individuals when there is no other means available for an individual to perform regulated work as required by section 4 of the GSR.

Program recognition for training relating to special purpose certificates of qualification must meet the requirements of this document.

Note: for specific program details involving certificates of qualifications not listed, please contact ProgramRecognition@technicalsaftybc.ca

8. Training Program Completion Certificate/Letter

The training provider must issue a course completion certificate and/or letter to each successful candidate that contains the following information:

- Training provider name
- Instructor name
- Successful candidate's name
- Course title
- Date of completion

Applications for certifications issued by Technical Safety BC must include the training providers course completion document and meet any other requirements listed in Division 2 of the Gas Safety Regulation.

9. Facility Review

The acceptance of a course will be based on the applicants submitted documentation, a facility review and meeting with the authorized representative and/or course instructors. Technical Safety BC will provide the assessment results to the authorized representative in writing.



If necessary, the training provider may be required to implement corrective action to fill any documentation gaps or address assessment findings.

10. Audits

Approved training programs may be audited to verify compliance.

Audit reports are consultative in nature, the procedure and expectations will be communicated in advance to the training provider. However, the audits will be conducted at random times during the training program as determined by Technical Safety BC.

11. Training Provider Program Recognition Expiry

If a provincial safety manager recognizes a training program in writing, the training provider must update and keep current any of the material or documentation on record (e.g., as instructors change). This information shall be provided to Technical Safety BC as earliest as possible to: ProgramRecognition@technicalsaftybc.ca

A training provider or organization that has demonstrated compliance will have the training program recognized by Technical Safety BC. A letter of acceptance will be sent to the course provider indicating the provincial safety manager's recognition of the program for 5 years.

Recognition of a training program is not permanent and is subject to any requirements that a provincial safety manager may specify as necessary in order to maintain the "recognized" status.

For certainty, a provincial safety manager may revoke recognition of a training program if, in the opinion of the provincial safety manager, the training program is no longer adequate for the stated purpose of the training.

If you have any questions or feedback regarding program recognition, please contact ProgramRecognition@technicalsaftybc.ca .

