Description

This course contains the requirements of the Alberta Building Code (ABC) 2014 pertaining to heating and air-conditioning, solid-fuel-burning appliances, and ventilation of private swimming pools, including parts of Sections 9.21, 9.32, and 9.33 of Part 9, Housing and Small Buildings, and Section 6.2 of Part 6, Heating, Ventilating and Air-conditioning.

Objectives

- Determine the general ventilation regulations for buildings during the non-heating season.
- Determine the requirements for mechanical ventilation systems for heating-season ventilation.
- Determine the general regulations and the temperature design requirements.
- Determine the general requirements for the installation of heating and air-conditioning appliances.
- Describe the installation requirements for air duct systems.
- Describe the installation requirements for radiators and convectors, piping for heating and cooling systems, and refrigerating and air-conditioning systems, and regulations applying to chimneys and venting equipment.
- Identify the design and installation requirements as outlined in Part 9 of the ABC and in CSA B365, and identify specific terms used in the regulations.
- Describe the combustion process in solid-fuel-burning appliances, the difference between heat and temperature, how heat energy is transferred, and the general design of common types of appliances.
• Analyze the requirements for venting of and air supply for solid-fuel-burning appliances to ensure combustion takes place in a safe manner.

• Analyze the required clearances for solid-fuel-burning appliances.

• Analyze the construction and equipment requirements for a private swimming pool.

• Analyze the ventilation requirements for a private swimming pool.

• Describe various hydronic heating systems, the basic design requirements, and the source for standards.

• Identify terms and their definitions contained in regulations, standards, and various other publications.

• Describe the selection of suitable equipment and the necessary safety devices; how the system is to be cleaned and tested; and what is required of the installer.

• Identify the Code requirements for water- and steam-heating equipment.

• Identify the Code requirements for circulating pumps.

• Identify the Code requirements for expansion tanks.

• Describe the requirements for the installation and insulation of distribution piping.

• Describe the requirements for specific types of piping and their installation.

• Identify acceptable fittings and their installation.

• Identify acceptable valves and their installation.

• Identify control installation requirements.

• Identify the installation requirements for hydronic heating units.

• Determine how radiant heating systems are to be installed.

• Identify the general requirements for domestic-water heating.

• Determine effects of auxiliary systems on the building environment.
Delivery Method

Course 100133 is a self-paced, print-based correspondence course. You may work through the learning material at your own pace, but must complete the course within six months.

Advisor

A course advisor is available to answer your questions and discuss any issues you may have regarding the course material. This person will help you through any difficulties you may experience with the material, and will support your success in accomplishing the course objectives. It is a good idea to touch base with your advisor regularly, to be sure you are on track. You can contact your course advisor by email or by telephone.

Structure

The course material is divided into bands, which are subdivided into modules. Each module begins with an introduction and a list of learning objectives, to provide an overview of what you will learn. The learning objectives are again presented one at a time within each module. There is a self-test at the end of each learning objective section. Complete all the self-tests to ensure that you understand the course material, and to prepare for the final exam.

You should complete the course in the order in which the material is presented. An understanding of the concepts presented in one module may be required in subsequent modules.

This course contains four bands and 15 modules. When you have successfully completed all the modules, you will be ready to take the final exam.

Required Reading Resources

You must obtain the following publications to complete this course:

- Alberta Building Code 2014
- CSA B214, Installation Code for Hydronic Heating Systems
Alberta Building Code is available from the National Research Council Canada (NRC):

**Email:** CONSTPubSales-Ventes@nrc-cnrc.gc.ca
**Phone:** 1-800-672-7990 or 1-613-993-2463
**Fax:** 1-613-952-7673
**Mail:** Publication Sales M-23A, National Research Council, 1200 Montreal Road, Ottawa, ON, K1A 0R6

**Evaluation**

To receive credit for this course, you must earn a grade of at least 80 percent on the final exam. The exam is 2 hours long and has 50 multiple-choice questions. It is open book, which means you may refer to your course materials and related documents during the exam.

You may complete the final exam online, under the supervision of a proctor. You and your proctor will be emailed the passwords for the secure software download. To choose the online exam option, you must mail or fax a completed Online Examination and Proctor Consent form to the Safety Codes Council at least 48 hours before the time when you wish to write the exam.

You may, instead, choose to write the exam in a paper-based format at the Safety Codes Council office, or at another location under the supervision of a proctor. To receive a hard copy of the exam, you and the proctor must complete a Proctor Consent form and mail or fax it to the Safety Codes Council office at least one week before the date when you wish to write the exam. The exam will be sent directly to your proctor.