

Building Science Basics (Canada)



12 to 16 hours to complete.

3 quizzes plus practice exercises
Final test 100 questions
Passing mark on final test = 70

COURSE DESCRIPTION

This course introduces the basic premise of building science and energy efficiency: understanding the house as a system. The aim of this course is to help the learner develop an understanding of how the various components of a house are affected by the interactions of heat, air and moisture flow in a house, and how those interactions impact indoor air quality and the need for ventilation.

Objectives

Module 1: House As A System

- Explain the concept of the 'House as a System' and how it relates to building science
- Describe the various ways that heat, air and moisture flows affect a house
- Describe the neutral pressure plane

Module 2: Indoor Air Quality

- Describe the factors that impact indoor air quality
- Explain methods of evaluating a house for indoor air quality
- Explain methods of controlling moisture and pollutants in a number of situations

Module 3: Ventilation Requirements

- Describe the need for ventilation
- Describe three types of ventilation systems
- Recognize the signs of combustion spillage
- Describe radon mitigation procedures

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COURSE OUTLINE

Module 1: House As A System

Heat Flow

- Convection
- Conduction
- Radiation

Air Flow

- Wind Effect
- Stack Effect
- Combustion/
Ventilation Effect
- Neutral Pressure Plane

Moisture Flow

- Liquid Water
- Water Vapour

Module 2: Indoor Air Quality

Sources

- Airborne
- Moisture-Related

Symptoms

- Occupants
- House Structure

Solutions

- Eliminate
- Filtrate
- Ventilate

Module 3: Ventilation Requirements

Why Ventilate?

- Controlling Airflow
- Air Filtration
- Occupant Impacts

Ventilation Systems

- Exhaust Only
- Supply Only
- Balanced Systems

Combustion Spillage

- Causes
- Signs
- Risks

Radon

- Identifying
- Testing
- Controlling