Introduction to Energy Efficiency

This is a self-paced online course made up eight modules plus a final assignment. Six modules and the final capstone activities are required and two modules are optional. The final capstone consists of three parts including a quiz and two submitted assignments. The course takes approximately 5-7 hours to complete, including the final assignment.

To complete the course, you must complete all required modules and all three parts of the final assignment.

Module 1-A: Introduction to Energy Efficiency

Approximately 15 minutes; **Required module**

Introduces basic building science and how buildings function as a system, including enclosure, airtightness, mechanical systems, and the difference between low- and high-performance buildings.

Module 1-B: Introduction to the Energy Step Code (ESC)

Approximately 30 minutes; **Required module**

Provides an overview of the ESC, its goals, steps for Part 9 and Part 3 buildings, and the difference between performance and prescriptive pathways.

Module 1-C: Introduction to the Zero Carbon Step Code (ZCSC)

Approximately 30 minutes; **Required module**

Explains emissions levels (EL-1 to EL-4), paths to compliance, and how operational carbon emissions are measured for Part 9 and Part 3 buildings.

Module 1-D: Metrics, Compliance, and Permitting

Approximately 30 minutes; **Required module**

Covers key performance metrics (TEUI, TEDI, GHGi, airtightness), documentation requirements, and the role of energy modelling in demonstrating compliance.

Module 2: Additional Resources

Time varies depending on depth of review; Optional module

Provides links, reference material, and suggestions for further learning.

Module 3: Adopting the ESC and ZCSC

Approximately 20 minutes; Optional module

This module describes how municipalities adopt higher ESC Steps or ZCSC Levels through local bylaws and a Building Official's potential role in this process.

Module 4: Applying the ESC and ZCSC

Approximately 30 minutes; **Required module**

This module includes four scenarios with questions about how the ESC and ZCSC apply. It walks through design review, pre-construction, mid-construction, and occupancy stage decision making for Building Officials.

Module 5: Step Code Compliance Checklist

Approximately 15 minutes; **Required module**

This module explores the sections of a Part 9 Compliance Checklist. Each section includes an image with an interactive review of the components for that section.

Final Assignment – Capstone

Approximately 2-3 hours; **Required**

The three-part capstone brings together concepts learned throughout the course. It includes a short quiz and two assignments reviewing design documents and checklists. The assignments are submitted to BOABC's instructors and participants will receive feedback on their submissions.