

Building Energy Modelling and Simulation

Microcredential Part-time [School of Energy](#)

Overview

The **Building Energy Modelling and Simulation** microcredential aims to prepare students to become professional “energy modellers” who are competent in performing whole building energy simulations, and applying them to different stages of building design, operations and renovations – all within less than a year.

Delivery: online. [See details](#).

About the program

The first course, [Building Energy Modelling and Simulation Fundamentals \[1\]](#), introduces the learner to what energy modelling is, how to obtain model inputs and apply them successfully to be able to present end results. The second course, [Advanced Building Performance Simulation \[2\]](#), builds on the first course, adding the knowledge of modelling mechanical building systems (HVAC). The third course, [High Performance Building Design – Project Course \[3\]](#), consists of a capstone project where the content learned in the first two courses is applied and competency is demonstrated. Emphasis is placed on using energy modelling and simulation for decision making by design professionals.

Who it's for

Designed for working professionals interested in seeking a new learning pathway in building energy modelling, the new microcredential is intended for learners with prior education and/or relevant work experience, as well as those who have an analytical mindset and are detail-oriented.

What grads can do

This microcredential will help prepare you for a career as Building Energy Performance Consultant and Energy Modelling Expert.

Entrance Requirements

Application processing

Ongoing throughout the year.

Recommended for success

The program is intended for learners with prior education and/or relevant work experience, as well as those who have an analytical mindset and are detail-oriented.

International applicants

This program is available to international applicants who will complete the program from outside Canada or who currently have a [valid status in Canada \[4\]](#). International applicants accepted into this program are not eligible for a study permit.

Apply to program

Formal application to the microcredential is not required. Upon successful completion of the [courses](#), email the [program contact](#) with your full name, student number, and mailing address to be issued a microcredential.

Scheduled Intakes

Ongoing Flexible Learning (Part-time Studies) intakes: [January, April, and September. \[5\]](#)

Costs & Supplies

Tuition fees

Flexible Learning (Part-time Studies) tuition is charged on a course-by-course basis. Please see the [Flexible Learning Tuition & Fees \[6\]](#) page for more information on domestic and international tuitions.

Courses

Class hours

Courses are normally scheduled on weekdays in the late afternoon or evening. Please see the individual course page for specific times and dates.

Program matrix

Check [current availability of courses \[7\]](#) for this program.

Required Courses:		Credits
XBEM 3050 [8]	Building Energy Modelling and Simulation Fundamentals	3.0
XBEM 3052 [10]	Advanced Building Performance Simulation	3.0
XBEM 3054 [12]	High Performance Building Design – Project Course	3.0
Total Credits:		9.0

Check [current availability of courses \[14\]](#) for this program.

Digital badge information

For information on how to obtain your course and/or microcredential digital badge, please review our [Frequently Asked Questions \[15\]](#) page.

Transfer credit

Do you have credits from another BC/Yukon post-secondary school? Do you want to know if they transfer to courses here at BCIT? Check out BCIT's [Transfer Equivalency Database \[16\]](#) to find out.

Program Details

Program length

This self-paced program can be completed in one year.

Grading

Minimum passing grade for each course is 50%.

Program delivery

Online: This program is delivered fully online.

All courses are delivered in a synchronous, online format.

Program location

This program will be delivered [online \[17\]](#).

Graduating & Jobs

In response to industry needs, this microcredential provides people seeking careers like Building energy performance consultants (Energy Modelers) with a new learning pathway.

Contact Us

Program Assistant

Tel: 604-432-8521

Email: soepts@bcit.ca

Programs and courses are subject to change without notice.

List of links found on this page

This list includes all links found on this page for your reference.

- [1] <https://www.bcit.ca/courses/building-energy-modelling-and-simulation-fundamentals-xbem-3050/>
- [2] <https://www.bcit.ca/courses/advanced-building-performance-simulation-xbem-3052/>
- [3] <https://www.bcit.ca/courses/high-performance-building-design-project-course-xbem-3054/>
- [4] <https://www.bcit.ca/international-students/permits-visas-status/status-in-canada/>
- [5] <https://www.bcit.ca/flexible-learning/part-time-courses-programs/flexible-learning-key-registration-dates/>
- [6] <https://www.bcit.ca/admission/tuition-fees/flexible-learning/>
- [7] <https://www.bcit.ca/courses/xbem3050,xbem3052,xbem3054/>
- [8] <https://www.bcit.ca/courses/building-energy-modelling-and-simulation-fundamentals-xbem-3050/>
- [9] <https://www.bcit.ca/outlines/xbem3050/>

- [10] <https://www.bcit.ca/courses/advanced-building-performance-simulation-xbem-3052/>
- [11] <https://www.bcit.ca/outlines/xbem3052/>
- [12] <https://www.bcit.ca/courses/high-performance-building-design-project-course-xbem-3054/>
- [13] <https://www.bcit.ca/outlines/xbem3054/>
- [14] <https://www.bcit.ca/courses/xbem3050,xbem3052,xbem3054/>
- [15] <https://www.bcit.ca/explore/microcredentials/>
- [16] <https://www.bcit.ca/admission/entrance-requirements/transfer-credit/>
- [17] <https://www.bcit.ca/flexible-learning/distance-online-learning/>
- [18] <https://www.bcit.ca/international-students/>
- [19] <https://www.bcit.ca/financial-aid/>
- [20] <https://secure.bcit.ca/sis/apply/>