Learn to design and build to the Passive House high performance building standard.

For upcoming courses and registration go to passivehousecanada.com/training
The Passive House Standard is recognized internationally as the proven best way to build for comfort, affordability and energy efficiency of residential, institutional and commercial buildings.

Leaders in Passive House design and construction training

We have trained thousands of students across Canada in Passive House design and construction, and continually update and revise our course material to reflect the advancement of the Passive House Standard in Canada and internationally.

Our courses run throughout the year in cities across the country and can be tailored to organizational interests. Our course conductors are industry professionals immersed day to day in Canadian Passive House projects, and are accredited by the international Passive House Institute.

Be part of the growing community of industry leaders changing our built environment for the better.

In-house training

We work with local governments, and architectural and engineering firms across Canada who want customized in-house Passive House training. We can tailor content for any department to ensure your team has the skills and knowledge required to deliver the buildings of tomorrow, today.

Professional development learning credits

Our courses are accredited with several professional architectural and planning associations across Canada, and most of our masterclasses qualify for Passive House Institute credit points towards certification renewal.

Whether you’re a designer, architect, planner, builder, policy maker or homeowner, we have a course to suit your desired skills and knowledge-level.

Which course is right for me?

• If you are looking for an introduction to the concept of Passive House design, we recommend taking the one day Introduction to Passive House course.

• If you want a more advanced introduction and detailed understanding of the Passive House Standard, we recommend Part A of the Passive House Design and Construction course.

• If you are planning to design or build a Passive House building, you will need to take Parts A and B of the Passive House Design and Construction course.

• Part C of the Passive House Design and Construction course is a self-paced online module, to prepare you to write the Certified Passive House Designer/Consultant exam.

• We offer a 2-day in-class exam preparation course for those seeking Passive House Designer or Consultant certification.

• If you are a tradesperson or building contractor, the five day Tradesperson course has been developed to provide the knowledge and practical skills required to build to the Passive House Standard.

• If you have completed the Passive House Design and Construction course and/or are already designing and building to the Passive House Standard, and wish to deepen your knowledge, we offer a range of Passive House Masterclasses.

Please contact us with any questions regarding what course is right for you. Email training@passivehousecanada.com

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Introduction to Passive House Design and Construction Course  |  1 day

This course will provide you with an understanding of the principles of Passive House building, including:

• Passive House design fundamentals
• Super insulated envelopes
• Methods for achieving extreme air tightness
• Passive House quality windows
• Leading ventilation design principles
• Passive House economics and costs

Recommended for:
Construction industry professionals, architects, designers, local government, real estate agents, developers, home owners, sustainability enthusiasts and anyone interested in learning the basics of energy efficient building.

Passive House Design and Construction Course  |  7 days in class

This course is offered in three modules. They can be taken separately or can be taken together in a combination, depending on your learning objectives.

Part A (4 days in class)
Provides a comprehensive foundation in Passive House design and construction, covering the technical, social, economic and policy elements of the Standard.

Recommended for:
Architects, engineers, designers, contractors, builders, cityplanners, policy makers, building officials and manufacturers.

Part B (3 days in class)
Designed to enable you to take on your first project using the Passive House Planning Package (PHPP) software.

Recommended for:
Anyone directly involved in the design and construction of Passive House buildings. We also recommend you take Part B if you intend to write the Certified Passive House Designer/Consultant exam.

Part C (self-paced online module)
Includes exercises and information to prepare you to write the Certified Passive House Designer/Consultant exam.
**Certified Passive House Designer/Consultant Exam Preparation Course | 2 days**

We recommend the exam preparation course to anyone taking the Certified Passive House Designer/Consultant exam for the first time.

Subjects covered:
- Insulation and airtightness
- Thermal bridging and windows
- Passive House design exercise
- Ventilation and heating
- Economics
- Spot the mistakes exercises

Please note that the Passive House Institute requires examinees to supply a valid PHPP registration number when writing the exam. PHPP software can be purchased on our website: passivehousecanada.com/phpp-and-design-ph-software

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**Passive House Trades Course | 5 days**

This course provides the knowledge and practical skills building contractors need to build to the world’s most efficient energy standard.

It focuses on building enclosure optimization and provides a foundation in Passive House principles, while stressing the importance of construction fundamentals and proper sequencing.

Participants will learn building techniques that minimize thermal bridging and maximize airtightness, using a variety of materials. An introduction to common Passive House mechanical systems will be provided, including heat and energy recovery ventilators, heat pumps and solar thermal. The course days take place in a lab/classroom and will include a blower door test.

This course is currently offered by BCIT at the Burnaby campus, British Columbia.

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“Learning about one of the most advanced building standards in the world amongst Vancouver’s finest architects, builders, engineers and tradespersons, was humbling and truly inspiring!”

PIERRE-ANDRE SANTIN
Certified Passive House Consultant

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**Alta Lake Passive House**
WHISTLER, BC

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### PHPP v9 Masterclass | 1 day

With the release of v9, PHPP has undergone its biggest upgrade since 2007. In this course participants will explore the new features and updates of the software. Case studies will enhance and reinforce learning.

- Explore the new Primary Energy Renewable assessment method and the new Certification Classes
- Learn how to use the new variants tool to compare different designs in the same PHPP
- Assess the economic viability of whole building designs or individual measures, including step-by-step retrofits
- Discover how to quickly identify and rectify errors in all PHPP worksheets

**Recommended for:**
Intermediate and advanced PHPP users.

### Intro to designPH | 2 days

designPH was developed to simplify the design process for achieving the Passive House standard. The designPH plug-in for SketchUp provides a 3D modeling interface that works together with the Passive House Planning Package (PHPP). Users can create a building model, assign building components, and select a location. Once a compliant design is achieved, key building characteristics can be exported for integration into PHPP.

In this masterclass, participants will learn how to use designPH for the design and certification of Passive House buildings. Participants will be guided step-by-step through the building design process, from building model creation to exporting to PHPP. A major focus will be on iterative design to achieve the Passive House criteria. A case study will provide participants with practical experience in completing and documenting a designPH model for building certification.

**Course Requirements:**
Laptop with PHPP v8.5, Google SketchUp 8, designPH v.1.0.0, and MS Excel (or equivalent), all preloaded. For further details on designPH visit: designph.org

### Multi-Family Passive House Buildings Masterclass | 1 day

This course will explore topics specific to multi-family Passive House buildings using the Passive House Planning Package (PHPP) to model particular aspects. Participants will find prior knowledge of PHPP helpful.

**Subjects covered:**
- Working with multiple PHPPs
- Ventilation requirements and options
- Defining the thermal envelope
- TFA calculation
- 3D thermal bridges
- Lighting, sanitary pipes and curtain walls
- Cladding penetrations
- Kitchen and dryer exhaust
- Mixed use buildings and parkades
- Building certification options

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For upcoming courses and registration go to passivehousecanada.com/training
Thermal Bridging Calculations Masterclass | 2 days

In this course participants will learn the fundamentals of thermal bridging calculations for wood-framed construction. Participants will be given the opportunity to perform calculations and have them reviewed in class.

Course objectives:

• Gain better understanding of heat loss in buildings due to thermal bridging
• Understand what comprises a high quality junction detail
• Assess degree of thermal bridging in a junction qualitatively
• Learn basic commands in the steady state numerical analysis software THERM
• Create 2D thermal models of junction details
• Set up the steady state models to output correct results
• Calculate heat flows in THERM
• Quantify the degree of thermal bridging at junctions
• Account for thermal bridging in building energy modeling software

Recommended for:
Architects, developers, self-builders, thermal modelers and other building professionals.

Prerequisites:
Participants must have a familiarity with Excel and basic building heat loss calculations.

Building Enclosures for High Performance Buildings | 1 day

The construction industry is starting to see many new and innovative building enclosures, as a result of the increasing popularity of high performance buildings. These are being incorporated into the full spectrum of building types, including single family homes, taller wood frame and non-combustible high-rise buildings. This full day seminar will focus on walls, roofs and window systems, with numerous case studies.

At the end of the course participants will:

• Understand enclosure design fundamentals for high-performance and Passive House buildings, including the control of heat, air, water and vapour.
• Be familiar with many different higher R-value wall and roof designs, and the various material selection and detailing considerations for each.
• Understand and be able to assess the merits of exterior insulation and alternate cladding attachment strategies for high R-value walls.
• See how different prefabricated steel, concrete and wood wall systems have been incorporated into building enclosure designs.
• Recognize various different air barrier systems and materials, and understand how to detail different air barrier approaches.
• Be aware of the strategies and solutions for large building airtightness testing.
• Understand the technical properties for glass, insulating glazing units and window frames for use in high-performance buildings.

Got a question?
Email us at training@passivehousecanada.com or call 250-940-2465.