



HRAI also offers onsite training,  
please email [training@hrai.ca](mailto:training@hrai.ca)  
or call 1-800-267-2231 ext. 237 for details.

## 5 Ways to Register

### Online

[hrai.ca/hrai-training](http://hrai.ca/hrai-training)

### E-mail

[training@hrai.ca](mailto:training@hrai.ca)

### Phone

800-267-2231 x230

### Fax

905-602-1197

### Mail

2350 Matheson Blvd. E., Suite 101  
Mississauga, ON L4W 5G9

*To register by e-mail, fax or mail, please print/complete a  
Registration Form (available online) and forward to HRAI.*



**2017/2018**  
COURSE SCHEDULE

**2017/2018**  
COURSE SCHEDULE  
WESTERN CANADA

**FROM EXPERIENCED  
TO CERTIFIED**

**Enhance your credibility and instill confidence with customers, utilities and building officials across Canada with HRAI's training and certification programs.**

**Set your HVAC company & career apart from the competition through Post HVAC Trades Training.**

**FOR DESIGNERS**

Shorten and streamline the HVAC design and planning approval process.

**FOR TECHNICIANS/  
CONTRACTORS**

Strengthen your relationship with customers, utilities and building officials.

**FOR THE SALESFORCE**

Sell better options to customers, separating you from the competition.

**FOR BUILDING  
OFFICIALS**

Simplify load calculation and plans submission process.



## Mechanical Ventilation Installation - Level I

\*\* This course covers the installation and commissioning practices for all types of mechanical ventilation systems with or without heat/energy recovery, house as a system principles and basic ventilation system design.

**The Best Part:** Graduates of this course will be eligible to attend the Residential Mechanical Ventilation Level II: Design Course.

**HRAI Member - \$700.00 + taxes**  
**Non-Member - \$920.00 + taxes**

Based on  
CSA F-326  
Standard

### Schedule

Brandon, MB	November 15 - 17
Calgary, AB	January 31 - February 2
Edmonton, AB	September 19 - 21
Regina, SK	November 21 - 23
Saskatoon, SK	October 24 - 26
Vancouver	November 1 - 3
Winnipeg, MB	September 26 - 28
Winnipeg, MB	January 23 - 25

## Mechanical Ventilation Design - Level II

This course focuses on the actual design of the ventilation system including duct design methods. Instructors will cover detailed design methods for depressurization prediction (design), depressurization testing, duct design (ventilation systems), and outdoor air connections to forced warm air systems.

**The Best Part:** Graduates of this course will obtain a detailed overview of the ventilation requirements for designing and installing ventilation equipment as noted in the National Building Code and CSA F-326.

**HRAI Member - \$600.00 + taxes**  
**Non-Member - \$820.00 + taxes**

Based on  
CSA F-326  
Standard

### Schedule

Edmonton, AB	March 26 - 28
Winnipeg, MB	February 27 - March 1

## Radiant Hydronics Design

\*\* This certification program concentrates on how to design basic residential radiant hydronic heating systems. HRAI strongly recommends individuals attending this course have prior knowledge of Residential Heat Loss & Heat Gain Calculations and experience in calculating friction losses in ducts or pipes.

Learn how to convert heat load calculations into water flow rates and fluid temperatures, pipe sizes, flow velocities, head losses, surface temperatures, floor coverings, tube spacing and controls.

**The Best Part:** This course will be invaluable to persons installing and designing new or modifying existing hot water radiant heating systems in residential buildings.

**HRAI Member - \$830.00 + taxes**  
**Non-Member - \$1050.00 + taxes**

### Schedule

Calgary, AB	November 21 - 24
Vancouver, BC	February 6 - 9
Winnipeg, MB	October 30 - November 2

## Commissioning

This course will instruct participants on the proper commissioning (start-up) of residential HVAC air and water systems. The course will also cover the following topics: flows and pressures within a forced air or hydronic system, ventilation system commissioning and house depressurization. HRAI recommends that individuals interested in attending this course have prior training in Residential Mechanical Ventilation, Heat Loss & Heat Gain and Air System Design.

**The Best Part:** This course will be invaluable to those installing, servicing and commissioning new or existing residential mechanical systems.

**HRAI Member - \$525.00 + taxes**  
**Non-Member - \$730.00 + taxes**

### Schedule

Calgary, AB	May 8 - 9
Winnipeg, MB	June 5 - 6

## Heat Loss & Heat Gain Calculations

\*\* This course takes students through step by step calculations to help determine the required or appropriate appliances after understanding the heat loss and heat gain in a building envelope. The calculation includes examining above and below grade HLHG, air leakage and ventilation and the influence that people, appliances and window shading have on the system.

**The Best Part:** With the successful completion of this course, participants will be recognized by municipal building officials and plans examiners for having the technical competency needed to perform residential load calculations and select the appropriate HVAC appliances.

**HRAI Member - \$830.00 + taxes**  
**Non-Member - \$1050.00 + taxes**

### Schedule

Brandon, MB	March 6 - 9
Calgary, AB	October 17 - 20
Edmonton, AB	December 12 - 15
Regina, SK	March 20 - 23
Saskatoon, SK	March 6 - 9
Vancouver, BC	January 15 - 18
Victoria, BC	October 17 - 20
Winnipeg, MB	October 17 - 20

Based on  
CSA F-280-12  
Standard

## Indoor Air Quality (IAQ) for Residential & Small Commercial

This completely revised course introduces participants to the basic concepts of Indoor Air Quality (IAQ), reviewing contaminants/air pollutants and the elements of house and small commercial construction, including their effects on ventilation. Instructors will discuss proper design and control of IAQ including how to operate and maintain buildings, mechanical and electrical systems to ensure good indoor environmental quality.

Attendees will receive an overview of instrument categories/test and sampling kits to solve IAQ problems and learn the systematic process of engaging in an indoor environmental quality survey.

**HRAI Member - \$525.00 + taxes**  
**Non-Member - \$730.00 + taxes**

### Schedule

Calgary, AB	October 11 - 12
Winnipeg, MB	May 23 - 24

## Air System Design

\*\* HRAI recommends that individuals interested in attending this course have prior knowledge of Residential Heat Loss & Heat Gain Calculations. Participants are taken through a series of theoretical and practical exercises to understand the proper methods of residential air distribution systems designs. This includes layouts and design of duct systems, sizing of supply and return air ducts, and grills. Walk away with real world installation options including worksheets to ease the design process.

**The Best Part:** This course is invaluable to persons installing and designing new or modifying existing air distribution systems in residential buildings.

**HRAI Member - \$830.00 + taxes**  
**Non-Member - \$1050.00 + taxes**

### Schedule

Calgary, AB	December 5 - 8
Edmonton, AB	January 23 - 26
Regina, SK	April 17 - 20
Vancouver, BC	March 6 - 9
Winnipeg, MB	April 3 - 6

## Introduction to Residential HVAC Equipment

This course is designed to cover various topics on residential HVAC equipment including: introduction to equipment metrics & basics, furnaces, air conditioners, heat pumps, water heaters, boilers, radiator baseboard heaters and HRV & ERVs,

**Who would benefit from this course?** HVAC Technicians, Sales Associates, Counter Personnel, Dispatchers & others working in the HVAC companies

For Technical &  
Non Technical  
Staff

**The Best Part:**

- Get performance metrics & available features for residential HVAC equipment & how to select the right HVAC equipment model based on metrics & key features.
- Review & understand sample equipment specification sheets to learn how equipment performance metrics are typically presented in manufacturers' literature.

**HRAI Member - \$310.00 + taxes**  
**Non-Member - \$410.00 + taxes**

### Schedule

Calgary, AB	May 10
Winnipeg, MB	June 7

# SMALL COMMERCIAL COURSES

## Heat Loss & Heat Gain Calculations

This course instructs participants in proper calculation of small commercial heat gains and heat losses, and applies to buildings of up to 3 stories and 600 square metres per storey. Specific topics discussed are: ventilation and infiltration requirements, solar heat gains, peak time of day, outside and inside design conditions, heat transmission through structural components, occupancy loads, heat gain from inside sources and humidification.

**The Best Part:** Graduates of this course will be able to perform load design calculations for their customers who are involved in small commercial applications.

**HRAI Member - \$700.00 + taxes**  
**Non-Member - \$920.00 + taxes**

Please contact us for scheduling opportunities.  
1-800-267-2231 x237 or email amantei@hrai.ca

**Canada Job Grant:** A training program developed for employers to invest in their workforce with the help from the government. For job grant details in your province, search the web for: Job Grant Canada

## Air System Design

This course builds on the knowledge and skills acquired in the Small Commercial Heat Gain & Heat Loss Calculations course. Participants will learn to properly design commercial air distribution systems for applications of up to 3 stories and 600 square metres per storey. The course provides instruction on such topics as fan laws, duct types and their configurations, air distribution methods, layout and design of low velocity duct systems, design methods, air delivery systems and fire damper installation. Also covered is the sizing of supply and return air ducts, including the proper selection of supply and return registers and grilles, C.F.M calculations, external static pressure and sheet metal fittings.

**Please note: Duct-A-Lator is recommended for this course.**

**The Best Part:** Graduates of this course will have the opportunity to learn about small commercial requirements associated with properly designed commercial air distribution systems.

**HRAI Member - \$700.00 + taxes**  
**Non-Member - \$920.00 + taxes**

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\*\* HRAI is an approved education provider with BC Housing - Licensing and Consumer Services

**Register today!**  
[www.hrai.ca/hrai-training](http://www.hrai.ca/hrai-training)

