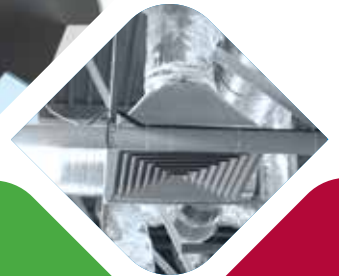


2018 - 2019 COURSE SCHEDULE



HRAI 50
YEARS
1968-2018
YOUR ENVIRONMENT • OUR EXPERTISE



FROM EXPERIENCED TO CERTIFIED

**NEW EDUCATION OPPORTUNITIES
AVAILABLE - SEE INSIDE FOR
DETAILS**



RESIDENTIAL COURSES



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 - \$735.00 + taxes

Non-Member - \$985.00 + taxes

Based on
CSA F-326
Standard

SCHEDULE

EAST		ONTARIO		WEST	
Dartmouth, NS	October 2 - 4	Barrie	November 21 - 23	Brandon, MB	November 14 - 16
Dartmouth, NS	January 15 - 17	London	October 2 - 4	Calgary, AB	March 19 - 21
Fredericton, NB	October 23 - 25	Mississauga	September 11 - 13	Edmonton, AB	November 19 - 21
St. John's, NL	October 29 - 31	Mississauga	January 8 - 10	Regina, SK	November 20 - 22
St. John's, NL	March 26 - 28	Mississauga	March 6 - 8	Regina, SK	March 5 - 7
		Oshawa	February 5 - 7	Vancouver, BC	December 11 - 13
		Ottawa	October 17 - 19	Winnipeg, MB	October 29 - 31
		Ottawa	February 5 - 7	Winnipeg, MB	January 29 - 31
		Sault Ste. Marie	March 26 - 28		



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 Ontario Building Code and CSA F-326.

HRAI Member - \$635.00 + taxes

Non-Member - \$885.00 + taxes

Based on
CSA F-326
Standard

SCHEDULE

EAST		ONTARIO		WEST	
Dartmouth, NS	February 11 - 13	London	November 27 - 29	Edmonton, AB	December 11 - 13
Fredericton, NB	January 15 - 17	Mississauga	March 20 - 22	Winnipeg, MB	April 2 - 4
		Ottawa	February 19 - 21		

Register today! www.hrai.ca/hrai-training



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 - \$870.00 + taxes

Non-Member - \$1,125.00 + taxes

SCHEDULE

EAST		ONTARIO		WEST	
Dartmouth, NS	November 6 - 9	Barrie	March 4 - 7	Brandon, MB	March 26 - 29
Fredericton, NB	February 11 - 14	Kingston	October 23 - Nov. 2	Calgary, AB	January 22 - 25
St. John's, NL	December 11 - 14	Kingston	Feb. 26 - Mar. 1	Edmonton, AB	November 23 - 24, 30 & December 1
Dartmouth, NS	March 4 - 7	London	December 4 - 7	Edmonton, AB	March 5 - 8
		Mississauga	September 25 - 28	Regina, SK	October 22 - 25
		Mississauga	January 15 - 18	Saskatoon, SK	November 13 - 16
		Mississauga	April 2 - 5	Swift Current, SK	February 25 - 28
		Sault Ste. Marie	April 9 - 12	Vancouver, BC	November 6 - 9
		Oshawa	January 22 - 25	Victoria, BC	February 25 - 28
		Ottawa	November 6 - 9	Winnipeg, MB	October 16 - 19
		Ottawa	March 18 - 21	Winnipeg, MB	February 19 - 22
				Yorkton	March 18 - 21



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 - \$870.00 + taxes

Non-Member - \$1,125.00 + taxes

SCHEDULE

EAST		ONTARIO		WEST	
Dartmouth, NS	April 9 - 12	Kingston	February 5 - 8	Calgary, AB	April 2 - 5
Fredericton, NB	April 30 - May 3	London	Jan. 29 - Feb. 1	Edmonton, AB	April 15 - 18
St. John's, NL	May 13 - 16	Mississauga	October 23 - 26	Saskatoon, SK	November 26 - 29
		Mississauga	February 19 - 22	Regina, SK	December 10 - 13
		Oshawa	March 19 - 22	Vancouver, BC	March 12 - 15
		Ottawa	November 20 - 23	Winnipeg, MB	April 23 - 26

Register today! www.hrai.ca/hrai-training



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 - \$550.00 + taxes

Non-Member - \$780.00 + taxes

SCHEDULE

EAST		ONTARIO		WEST	
Dartmouth, NS	May 28 - 29	London	April 16 - 17	Edmonton, AB	April 30 - May 1
Fredericton, NB	June 11 - 12	Mississauga	April 24 - 25	Winnipeg, MB	May 7 - 8
		Ottawa	May 1 - 2		



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 - \$870.00 + taxes

Non-Member - \$1,125.00 + taxes

SCHEDULE

EAST		ONTARIO		WEST	
Dartmouth, NS	Jan. 29 - Feb. 1	Kingston	January 22 - 25	Calgary, AB	Feb. 26 - March 1
Fredericton, NB	May 13 - 16	London	March 26 - 29	Winnipeg, MB	December 3 - 6
		Mississauga	November 20 - 23	Vancouver, BC	January 21 - 24
		Sault Ste. Marie	April 15 - 18		
		Ottawa	April 23 - 26		

Register today! www.hrai.ca/hrai-training



Indoor Air Quality (IAQ for Residential & Small Commercial

This 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 - \$550.00 + taxes

Non-Member - \$780.00 + taxes

SCHEDULE

EAST		ONTARIO		WEST	
Dartmouth, NS	May 30 - 31	London	February 12 - 13	Edmonton, AB	May 2 - 3
Fredericton, NB	June 13 - 14	Mississauga	October 2 - 3	Winnipeg, MB	May 9 - 10



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



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 - \$325.00 + taxes

Non-Member - \$440.00 + taxes

SCHEDULE

EAST		ONTARIO		WEST	
Dartmouth, NS	February 14	London	October 1	Edmonton, AB	December 14
		Kingston	October 29	Winnipeg, MB	December 11
		Mississauga	September 14		
		Mississauga	February 8		
		Ottawa	May 3		

Register today! www.hrai.ca/hrai-training

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 - \$735.00 + taxes

Non-Member - \$985.00 + taxes

SCHEDULE

ONTARIO

Mississauga	November 13 - 15
Mississauga	May 7 - 9



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 - \$735.00 + taxes

Non-Member - \$985.00 + taxes

SCHEDULE

ONTARIO

Mississauga	December 4 - 6
Mississauga	May 22 - 24

HRAI also offers onsite training, please email training@hrai.ca or call 1-800-267-2231 ext. 237 for details.

5

Ways to Register

Online

hrai.ca/hrai-training

E-mail

training@hrai.ca

Phone

800-267-2231 x237

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.

More
Courses
Available

Get discounts on the following courses with an HRAI Membership. Call 800-267-2231 ext. 237 or email training@hrai.ca for more information.

Canadian Institute for Energy Training (CIET)

- Advanced Building Recommissioning
- Certified Building Commissioning Professional
- Pump System Optimization
- Prep Course to the NRCan Foundation Level Exam
- Prep Course to the NRCan ERS v15 Energy Advisor Exam

International Ground Source Heat Pump Association (IGSHPA)

- IGSHPA Accredited Geothermal Installer Course
- IGSHPA Certified Residential Geothermal Designer Course

HRAI Building Officials Course

- Building Officials Guide to Understanding HVAC Building Code Requirements

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 BUILDING OFFICIALS

Simplify load calculation and plans submission process

FOR THE SALESFORCE

Sell better options to customers, separating you from the competition

Education
GRANTS
Available
Up to 80% of cost

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: Canada Job Grant