The Occupational Hygiene Association of Ontario presents:

**PDC – March 11, 2020**

**Spring Symposium/AGM – March 12, 2020**

Centre for Health and Safety Innovation, Mississauga

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**Wednesday, March 11 (PDC)**

8:00 am - 4:30 pm

*OHАО Presents: ASHRAE Courses: Avoiding IAQ Problems and V in HVAC – What, Why, Where How and How Much*

**Thursday, March 12 (Spring Symposium and AGM)**

7:30 am – 4:30 pm

*OH-Related Topics and Case Studies, OHАО Annual General Meeting*

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**Centre for Health and Safety Innovation, 5110 Creekbank Rd, Mississauga**

(Dixie and Eglinton Area –click on the address above for directions)

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To register please visit the OHАО website at [www.ohao.org](http://www.ohao.org) or if you are looking at the digital copy click here to go directly to the registration page.

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You should retain a copy of the program and your payment receipt to document your attendance for maintenance points. Your receipt will include the topics covered and contact hours. If you need another form of confirmation please contact [office@ohao.org](mailto:office@ohao.org)

Occupational Hygiene Association of Ontario (www.ohao.org)

Telephone: 905-567-7196 Facsimile: 905-567-7191
Avoiding IAQ Problems

Course Description - Based on ASHRAE's IAQ Guide, *Best Practices for Design, Construction and Commissioning*, this course provides a systematic overview of the key objectives that must be met to achieve good indoor air quality. A review of the most common causes of IAQ problems in buildings, as well as the process management strategies that owners and design teams can use during design, construction and turnover to help avoid IAQ problems are discussed. The course discusses the state-of-the-art strategies to prevent IAQ problems related to moisture and mold in building assemblies, outdoor contaminants, moisture and dirt in air handling systems, material emissions, outdoor air monitoring and control and more. Case studies and examples are provided to help make the IAQ Guide easy to use on your next project.

Learning Objectives
- Know the most common causes of IAQ problems in buildings
- Understand how to limit moisture and mold in buildings
- Identify the types of outdoor contaminants, their entry routes, and control methods
- Identify IAQ impacts of cleaning and maintenance
- Recognize how design and installation details can lead to unexpected IAQ problems in HVAC systems
- Assess the accuracy and applicability of various outdoor air monitoring and control methods
- Know how to apply filtration and gas-phase air cleaning to address specific contaminant sources

Course Agenda
- Manage the design and construction process to achieve good IAQ
- Control moisture in building assemblies
- Limit entry of outdoor contaminants
- Control moisture and contaminants related to mechanical systems
- Limit contaminants from indoor sources
- Capture and exhaust contaminants from building equipment and activities
- Reduce contaminant concentrations through ventilation, filtration, and air cleaning


Course Description - This course teaches the basics of the ventilation and provides the current concepts behind the new ANSI/ASHRAE Standard 62.1-2019, *Ventilation for Acceptable Indoor Air Quality*. Ventilation (V) is the third leg in the three-legged stool of HVAC. We need heat (H) to stay warm when it is cold outside, and we like air-conditioning (AC) to keep us cool when it is hot outside. What’s about V? What is ventilation, why do we ventilate, where does ANSI/ASHRAE Standard 62.1 apply, how must ventilation air be distributed, and how much air do we need? Topics will include minimum requirements for cleaning outdoor air, designing HVAC systems, determining the ventilation rate quantity, commissioning, and operations and maintenance.

This course focuses on the basic requirements of ASHRAE Standard 62.1-2019 and covers the scope, application, and multiple compliance paths available in the standard, including the ventilation rate.
procedure, indoor air quality procedure, and natural ventilation procedure. Many of the standard’s general requirements apply regardless of the procedure used. The different application conditions for the ventilation rate procedure are also described, along with changes particular to the 2019 version of ANSI/ASHRAE Standard 62.1. This course is highly recommended for all HVAC designers and engineers.

Learning Objectives
1. Explain the three major types of contaminants in the air and give an example of a source for each
2. List the five major requirement sections of ASHRAE Standard 62.1-2019
3. Understand that different approaches to HVAC design using the ventilation rate procedure result in different quantities of outdoor air at the outdoor air intake
4. Contrast the ventilation rate procedure, the indoor air quality procedure, and the natural ventilation procedure

Course Agenda
1. Why do we ventilate and where did the numbers come from? (Introductory material)
   1. Fundamental IAQ principles
      a) Acceptable indoor air quality
      b) Indoor air quality has two components—health and perception
         - Health effects can be acute or chronic
         - Perception is influenced by environment and culture
   3. What’s in the air?
      - Gases
      - Particles
      - Organisms
   4. What are the sources of the things in the air?
      - Outdoors
      - Buildings
      - People
      - Equipment
   5. How do people respond to the indoor environment?
   6. ASHRAE 62.1-2019
      a) Section 4, Outdoor Air Quality, Design Requirements
      b) Section 5, Systems and Equipment, Design Requirements
      c) Section 6, Procedures
         - Ventilation Rate Procedure
            o Single Zone
            o 100% Outdoor Air
            o Multiple Zone Recirculating
         - IAQ Procedure
         - Natural Ventilation Procedure
         - Exhaust
   d) Section 7, Construction and System Start-Up, and Section 8, Operations and Maintenance
   7. Wrap-up and descriptions of more advanced courses

This is a full day PDC, it is not possible to sign up for only one of the two sessions.

Printed materials will be provided and optional reading material lists will be provided prior to the course.

Total Contact Hours: 6
**Spring Symposium – Thursday, March 12, 2020, 7:30 am- 4:30 pm**

**OH-Related Topics and Case Studies**

*Please note the Spring Symposium will be a full day including the OHAO AGM after lunch*

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<td>7:30 am – 7:55 am</td>
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| 7:55 am - 8:00 am | President’s Welcome  
Jeff Mallany                                                        |
| 8:00 am - 9:00 am | Designated Substance Surveys: New EACO Guidance Document  
Erin Kennealy, WSP                                                  |
| 9:00 am – 10:00 am | Exposure Matters in Hazard Assessment: Examples from The IARC Monographs  
Amy Hall, Senior Researcher, Veteran’s Affairs, Government of Canada |
| 10:00 am – 10:20 am | Refreshment Break  
Meet Your Colleagues and Refreshment Break                          |
| 10:20 am – 11:20 am | Overview of the new E2 Regulations, 2019  
Rob Read, Environment and Climate Change, Government of Canada       |
| 11:20 am – 12:20 pm | Canadian Society of Safety Engineering (CSSE) and the Global Sustainability Initiative  
Peter Sturm, CSSE                                                   |
| 12:20 pm - 1:05 pm | Lunch                                                                |
| 1:05 pm – 2:05 pm | Occupational Hygiene Association of Ontario Annual General Meeting |
| 2:05 pm – 3:05 pm | The Ontario Designated Substances Assessment – Practical Guidance  
Warren Clements CIH, CRSP and Jessica Barua CIH, CRSP, WSPS           |
| 3:05 pm – 3:20 pm | Refreshment Break  
Meet Your Colleagues and Refreshment Break                          |
| 3:20 pm – 4:20 pm | CSA Standards Updates  
Dave Shanahan, CSA                                                   |
| 4:20 pm - 4:25 pm | Closing Remarks                                                      |

Total Contact Hours: 6
2020 OHAO PDCs and Spring Symposium Registration Fees

Professional Development Course 1
Wednesday, March 11 PDC – OHAO Presents ASHRAE Courses

Registrations received by March 2

- Member - $450.00 + HST
- Non-Member - $600.00 + HST

Registrations received after March 2

- Member - $475.00 + HST
- Non-Member - $650.00 + HST

Spring Symposium and Annual General Meeting
Thursday, March 12 Spring Symposium and AGM - OH-Related Topics, AGM

Registrations received by March 2

- Member - $200.00 + HST
- Non-Member - $300.00 + HST
- Student - $40.00 + HST

Registrations received after March 2

- Member - $240.00 + HST
- Non-Member - $340.00 + HST
- Student - $40.00 + HST

Members may attend the Lunch and AGM only free of charge but you must still register.

Discounts
- If you register for the PDC and the Symposium you will receive a 10% discount on your registration fees. Discounts are pre-calculated in the combination price option.

Cancellations – Cancellations must be received in writing by March 2, 2020. Cancellations received after March 11 will be subject to a $50.00 administration fee. No shows forfeit the full registration fee. Substitutions are permitted.

Accommodations: If you need accommodation there is a Marriott Residence Inn, 5070 Creekbank Rd, directly across the street from the Centre for Health and Safety Innovation.