



Sheet Metal Workers' International Association  
Local Union 265



## SMART Local 265 Course Guide

Journeyman Upgrade Classes

# Continuing Education



**TAB – Testing Adjusting and Balancing**

This course will cover Air and Water balancing.

Course will cover the following:

*Prerequisites:*

None

### **BIM – AutoCAD**

This class will utilize Autodesk AutoCAD.

#### *Prerequisites:*

None

### **BIM – Revit**

This class will utilize Autodesk Revit and provide the basic skills to create and maintain a building model to use for renderings, working drawing, and coordination of disciplines

#### *Prerequisites:*

None

### **BIM – Trimble Robotic Total Station**

This class will utilize Trimble

#### *Prerequisites:*

None

### **BIM – Trimble Autobid Sheet Metal**

This class will utilize Trimble's estimating software.

#### *Prerequisites:*

None

### **BIM – Bluebeam Revue**

#### *Prerequisites:*

None

**Fire Life Safety Technician Level 1**

*Prerequisites:*

None

**Fire Life Safety Supervisor Level 1**

*Prerequisites:*

Fire Life Safety Technician Level 1

**Fire Life Safety Technician Level 2**

*Prerequisites:*

None

**Fire Life Safety supervisor Level 2**

*Prerequisites:*

Fire Life Safety Technician Level 2

**Welding- GMAW**

*Prerequisites:*

None

**Welding- SMAW**

*Prerequisites:*

None

**Welding- GTAW**

*Prerequisites:*

None

**OSHA 1926 Construction 30 Hour**

**Prerequisites:**

None

**OSHA 1910 General Industry 30 Hour**

**Prerequisites:**

None

## ICRA

Infection Control Risk Assessment

ICB certification exam follows course completion

**This class can be applied towards ICB recertification CEU's.**

### Prerequisites:

None

## Microsoft Visio

This course provides an overview to Microsoft Visio. This class will introduce you to the creation of line diagram wiring schematic drawings.

### Prerequisites:

None

## HVAC Service – Residential Heating

This course will cover the basic operations of residential equipment. Course will cover the following:

- Natural gas / propane / fuel oil equipment
- 80% - 90% - modulating gas furnaces / Boilers
- Standing pilot / spark ignition / hot surface ignitors (HSI) systems
- Gas regulator / manifold pressure adjustments
- Clocking a gas meter / Temperature rise / ESP (External static pressure)
- Motors and capacitors
- Flame safety (Flame rectification)
- IFC (integrated furnace controls)
- Heat exchangers
- Gas piping sizing
- Venting categories 1 and 4 appliances
- Sequence of operations / Troubleshooting
- Installation and Codes
- Gas heating lab

### Prerequisites:

None

## HVAC Service – Rooftop Units

This course will cover the basic operations of RTU's (rooftop units). Course will cover the following:

- Gas regulator / manifold pressure adjustments
- Motors and capacitors
- Motor and fan drives / belts
- Sequence of operations / Troubleshooting
- Compressors
- Economizers
- Maintenance
- Installation and Codes
- RTU heating lab

### Prerequisites:

None

## HVAC Service - Combustion Analysis

This course will cover combustion analysis of gas heating equipment. Course will cover the following:

- Combustion analysis
- Natural gas / propane / fuel oil combustion
- Air/flue ratio - adjustments
- Combustion analyzers
  - Testo
  - Bacharach
- Furnace and boiler combustion testing
- Gas equipment combustion specifications
- Combustion analysis lab
- Certification exam (optional)

### Book:

\$12.00-dollar

### Exam (optional):

\$35.00-exam

### Prerequisites:

HVAC Service - Heating / Service Technician / Instructor consent



## HVAC Service – MUA

This course will cover the operation of MUA (make-up air units). Course will cover the following:

- Indirect / Direct fire MUA
- Regulators / Regulator springs
- Accessories
- Maxitrol controls
  - Modulating valves / regulator
  - Amplifiers
- MUA lab

### Prerequisites:

HVAC Service - Heating / Service Technician / Instructor consent

## HVAC Service – Refrigerant Management

Section 608 of the Federal Clean Air Act requires that all persons who maintain, service, repair or dispose of appliances that contain regulated substances be certified in proper refrigerant handling techniques. The course will cover:

- EPA regulations
- Recover / Recycle / Reclaim
- Recover tanks / machines
- Recover lab
- Refrigerant management / logs

Web-site information:

[https://www.epa.gov/sites/production/files/2015-08/documents/section\\_608\\_of\\_the\\_clean\\_air\\_act.pdf](https://www.epa.gov/sites/production/files/2015-08/documents/section_608_of_the_clean_air_act.pdf)

## ICE

The Industry Competency Exams (ICE).

There are three exams that are offered. Residential, Light Commercial A/C and Heating, Commercial Refrigeration.

To earn a Residential ICE Certification, a technician would need to pass the CORE and at least one specialty section.

- **Residential**
  - Core

Specialty Sections:

- Air Conditioning
- Air Distribution
- Heat Pumps
- Gas Heating
- Oil Furnace
- **Light Commercial A/C and Heating**
- **Commercial Refrigeration**

Web-site information:

<http://www.natex.org/site/471/Training-Testing/ICE-Proctors/Overview>

Exam:

\$35.00-exam

Prerequisites:

HVAC experience

## NATE Exams

North American Technician Excellence (NATE). In order to be NATE certified you must pass the CORE and one specialty exam. Installation specialty exams only count for the installation certification. Service specialty exam will earn you for both installation and service certifications.

- Core

### Installation specialties

- Air Conditioning
- Air Distribution
- Air to Air Heat Pump
- Gas Heating

### Service specialties

- Air Conditioning
- Air Distribution
- Air to Air Heat Pump
- Gas Heating
- Hydronic Gas
- Hydronic Oil
- Light Commercial Refrigeration
- Oil Heating (Air)

Passing the service specialties exams will give you both installation and service certifications.

Web-site information:

<http://www.natex.org>

### Exam:

\$100.00-exam

### Prerequisites:

HVAC experience

## Manufacturer Training

This year Honeywell will be a part of our Night Training. There are several different 1 night training seminars for you to attend.

### *Honeywell*

#### *Honeywell LCBS*

LCBS -Light Commercial Building Solution

<https://buildingcontrols.honeywell.com/Building-Automation-Systems/LCBS-Connect>

#### *Honeywell JADE*

Economizer controller

<https://buildingcontrols.honeywell.com/products/Jade-Economizer>

#### *Honeywell T775*

The T775 is an electronic stand-alone controller.

<https://customer.honeywell.com/resources/techlit/TechLitDocuments/63-0000s/63-7147.pdf>

#### *Honeywell V.F.D.*

Variable frequency drive

<https://buildingcontrols.honeywell.com/Variable-Frequency-Drives>