

FALL 2015

HEATING SYSTEMS INSTALLATION & SERVICE

This course will introduce the student to gas-fired, oil-fired, and electric heating systems. Topics include: Forced-air and hydronic heating systems, including heat exchangers, blowers, furnaces and controls, combustion principles, air and fuel ratios, and efficiency, chimneys, vents, and flues. Also covered, boilers, pumps, valves and heating basics. Students will work with natural draft, forced draft, and induced draft units, and the service procedures for each type. Successful students should be able to service heating units and have a reasonable understanding of how they work. **Tuition: In-county \$80, Out-of-county \$85, Out-of-State \$90. All students pay \$495 course fee. (T)**

CEI 712 9A: M, W, 8/24 – 10/14/15 (no class 9/7/15)

6 – 9:30 15 sessions

Location: Colonel Richardson H.S. (Federalsburg)

Instructor: Bob Philips

CEI 712 9B: T, Th, 8/25 – 10/13/15

6 – 9:30 15 sessions

Location: Colonel Richardson H.S. (Federalsburg)

Instructor: Bruce Willoughby

EPA SECTION 608 CERTIFICATION

This course is designed for experienced persons in the field of heating, ventilation, air conditioning and refrigeration, and is approved by the EPA to certify technicians in accordance with Section 608 of the Clean Air Act. Topics will consist of focused questions, and text on types I, II, and III certification and the core, and other specific information dealing with the content of the EPA exams. The final two hours will consist of the exam. (Text included.) **Tuition: In-county \$50, Out-of-county \$55, Out-of-State \$60. All students pay \$175 course fee. Materials included.**

CEI 716 9A: Sat, 9/19 – 9/26/15

8:30 – 3:00 pm, 2 sessions

Location: Wye

Instructor: Bob Phillips

HEAT PUMPS

This course will address the theory and operation of heat pumps. Topics include: basic heating and cooling using the refrigeration cycle, how the reversing valve works, air-to-air and geothermal units and the similarities and differences between them. Additionally, the student will learn heat pump applications, outside ambient effects, defrosting, and supplemental heat, heat pump controls and components will be covered along with efficiency and practice expectations and performance. Service procedures will be covered as well as the growing trend of “Hybrid” systems using fossil fuel as backup instead of electric. Successful students should be able to service these systems on their own.

Tuition: In-county \$80, Out-of-county \$85, Out-of-State \$90. All students pay \$495 course fee. (T)

CEI 713 9A: M, W, 10/19 – 12/16/15

(no class 10/28, 11/11 and 11/25/15)

6 – 9:30 15 sessions

Location: Colonel Richardson H.S. (Federalsburg)

Instructor: Bob Philips

CEI 713 9B: T, Th, 10/20 – 12/10/15

(no class 11/26/15)

6 – 9:30 15 sessions

Location: Colonel Richardson H.S. (Federalsburg)

Instructor: Bruce Willoughby

SPRING 2016

COMMERCIAL REFRIGERATION SYSTEMS

This course is an overview of commercial refrigeration systems; it covers the various applications, installations, troubleshooting as well as service and repair. Topics include: Medium and low temperature systems, multiple evaporator systems, food service units, walk-in and reach-in boxes and freezers, defrost controls, and operating controls, refrigeration leaks and repairs, components replaced, systems evacuated and dehydrated, oil and refrigerant charge installed, systems tested and adjusted. Successful students should be able to service and troubleshoot most types of commercial refrigeration systems.

Tuition: In-county \$80, Out-of-county \$85, Out-of-State \$90. All students pay \$495 course fee.
(T)

CEI 714 9A: M, W, 1/11 – 3/9/16

No class 1/18, 2/3, and 2/15/16

6 – 9:30 pm 15 sessions

Location: Colonel Richardson H.S. (Federalburg)

Instructor: Bob Philips

CEI 714 9B: T, Th, 1/12 – 3/3/16

No class 1/19/16

6 – 9:30 pm 15 sessions

Location: Colonel Richardson H.S. (Federalburg)

Instructor: Bruce Willoughby

DUCT WORK & SHEET METAL

This course will cover basic sheet metal fabrication and installation procedures. This course will be offered in a modern state of the art sheet metal shop. Topics include: Air ducts, Types of duct systems, registers, diffusers, grills, dampers and controls, fitting, and transition layout and fabrication, standard joining methods and installation methods. Also covered will be the tools and equipment used to fabricate and install sheet metal duct. Insulating inside and outside will be covered as well as the basic airflow principles and delivery.

Tuition: In-county \$80, Out-of-county \$85, Out-of-State \$90. All students pay \$495 course fee.
(T)

CEI 715 9A: M, W, 4/4 – 5/23/16

6 – 9:30 15 sessions

Location: TBA

Instructor: TBA

CEI 715 9B: T, Th, 4/5 – 5/24/16

6 – 9:30 15 sessions

Location: TBA

Instructor: TBA