

## **Invensys Controls Uni-Line® Technical Knowledge, Level 2 Courses** NATE® Recognized

*(North American Technicians Excellence)*

For more information regarding NATE recognized courses with Invensys Controls or to request training in your area, log into our Customer Toolbox at: [www.toolbox.invensyscontrols.com](http://www.toolbox.invensyscontrols.com)



**NATE-Recognized**

### **Heating Basics – Ignition Controls**

**Course ID: 3084-0001, NATE Recognized hours: 1 hour**

GAS HEATING SERVICE

Overview of ignition systems and control boards including hot surface, intermittent pilot, and direct spark ignitions. Sequence of heating events of electronics including thermostats, main gas valves, ignitors and control functions.

### **Heating Basics – Gas Valves**

**Course ID: 3084-0002, NATE Recognized hours: 1 hour**

GAS FURNACE SERVICE / GAS HEATING SERVICE / HYDRONICS – GAS SERVICE

Overview of the types of gas valves used in heating systems. Includes basic characteristics of natural gas and propane, inlet and outlet pressure, pressure measurements, thermocouples, step open, slow open, and standard open gas valves.

### **Commercial Refrigeration Basics**

**Course ID: 3084-0003, NATE Recognized hours: 2 hours**

AIR CONDITIONING / AIR DISTRIBUTION / HEAT PUMP / REFRIGERATION LT. COMM. / REFRIGERATION COMM. SERVICE & INSTALATION

Technical overview of basic commercial refrigeration temperature, pressure and defrost controls. Topics include refrigeration thermodynamics, reversing valves, discharge temperature control, super-heat, sub-cooling, and cut-in & cut-out modes.

### **Heating and Cooling Basics – Thermostat Control**

**Course ID: 3084-0004, NATE Recognized hours: 2 hours**

AIR CONDITIONING / AIR DISTRIBUTION / HEAT PUMP / GAS HEATING / OIL HEATING SERVICE & INSTALLATION

Overview of thermostats and how they control HVAC systems. Features will be discussed such as humidity control, enthalpy control, balance point, staging, differentials, and communications with Zoning and Indoor Air Quality Products.

### **Ventilation Basics - Zoning and Indoor Air Quality**

**Course ID: 3084-0005, NATE Recognized hours: 2 hours**

AIR CONDITIONING / AIR DISTRIBUTION / HEAT PUMP / GAS HEATING / OIL HEATING SERVICE & INSTALLATION

Overview of Zoning and Indoor Air Quality equipment used in HVAC systems. Zoning features include regular & bypass dampers, equipment design and setting up DIP switches. IAQ topics include ultraviolet systems, humidifiers, energy and heat recovery ventilators, and filters.