



Full Courses

These NATE recognized training courses are perfect for today's busy schedule. Courses are designed to provide technicians with a quality learning experience at three levels: Foundation, Intermediate and Advanced. You can study at your own pace and at any time of the day or night. Spend as much time as needed on a certain page or subject. Just as with traditional face to face (F2F) courses, we offer instructor support as well. If you have any questions for the facilitator, just send an e-mail and you'll have an answer within 24 hours. ***Purchasing a seat gives you 60 days of system access***, which allows ample time to absorb the information, complete assignments provided by the course or the instructor and take the final exam.

Each course contains 6 modules that cover specific HVACR concepts by incorporating a presentation that utilizes some or all of the following; text reading assignments, web site tours, applied exercises, online quizzes, industry terminology definitions, video clips, animations, images and downloadable handouts. Each module finishes with a 20 question module specific exam. All courses are finished after completing a 25 question comprehensive final exam. Each course is the equivalent of 1.5 semester credits and also carry 18 NATE CEUs. The NATE CEUs are recognized training hours applicable to NATE recertification.

101 HVAC/R Fundamentals

Foundation

Course #fund101f

Cost: \$165

This course is designed to explore the common aspects of HVAC/R technology. Discussion will focus on such topics as heat transfer methods, basic terminology and definitions, and applied physics for HVAC/R systems. This course is NATE recognized for 18 hours of continuing education units (CEUs) applicable to NATE recertification. Six modules cover:

- Introduction to the industry
- HVAC/R measurements
- Heat energy
- Pressure
- Gas works
- Air works

102 HVAC/R Safety

Foundation

Course #fund102f

Cost: \$165

This course covers the basic safety considerations of the HVAC/R workplace. This course is NATE recognized for 18 hours of continuing education units (CEUs) applicable to NATE recertification. Presentations and coursework are in six modules that cover:

- Hazard communication (labels and MSDS)
- Personal protective equipment (PPE)
- Personal safety in confined space and ladders
- Electrical lockout / tagout
- Fire extinguishers and compressed gas safety
- Back protection and HVAC/R hazardous materials

111 HVAC/R Electrical DC Theory Plus

Foundation

Course #elec111f

Cost: \$165

Basic electrical theory such as Ohms Law, circuit schematic symbols, circuit characteristics, will be discussed as it specifically applies to DC & AC circuits in the HVAC/R industry. This course is NATE recognized for 18 hours of continuing education units (CEUs) applicable to NATE recertification. Six modules cover:

- Introduction to the industry
- What is energy
- Atomic theory
- Basic circuits
- Parallel circuits
- Power

112 HVAC/R Electrical AC Theory Plus

Intermediate

Course #elec112i

Cost: \$185

A continuation of the Electrical 111 course, concepts presented and discussed are oriented towards alternating current production and application, specifically to devices utilized in HVAC/R systems. This course is NATE recognized for 18 hours of continuing education units (CEUs) applicable to NATE recertification. Six modules cover:

- Magnetism
- Alternating current
- Loads, resistive and Inductive
- Capacitors
- Impedance and power distribution
- Transformers

113 HVAC/R Electrical Common Components *Advanced*

Course #elec113a

Cost: \$205

This course covers common control components found in HVAC/R systems. A logical continuation of the 112 course. Presentations and examples are given for specific devices and their electrical sequence of operation in normal HVAC/R applications. The final modules discuss wiring and schematic reading. This course is NATE recognized for 18 hours of continuing education units (CEUs) applicable to NATE recertification. The six modules cover:

- Control Methods, Temperature & Pressure
- Residential Heat / Cool Thermostats @ Low Voltage
- Really Good Relay Stuff
- Contactors go / Starters go with protection
- Power wiring
- Odds and ends around a schematic

114 HVAC/R Electrical Motors

Advanced

Course #elec114a

Cost: \$205

This course is dedicated to common single- phase and small three-phase electric motors. Presentations focus on basic motor theory, common types of motors, starting components and protection devices. This course is NATE recognized for 18 hours of continuing education units (CEUs) applicable to NATE recertification. Six modules cover:

- Basic electric motor theory
- Shaded pole & split-phase motors
- CSIR & CSR motors
- PSC & multiple speed motors
- Dual voltage and variable-speed motors
- Basic three-phase motors

121 HVAC/R Systems Air Properties and Measurement *Intermediate*

Course #sys121i

Cost: \$185

This course is the introduction to HVAC comfort systems. Topics covered include human comfort, psychrometrics, and an introduction to basic air distribution systems, airflow measurement methods and calculations. This course is NATE recognized for 18 hours of continuing education units (CEUs) applicable to NATE recertification. Six modules cover:

- Heat transfer concepts
- Comfort (humans and machines)
- Conditions of air
- Introduction to psychrometrics
- Using the psychrometric chart
- Air flow measurement

131 HVAC/R Oil Heat I

Intermediate

Course #heat0131i

Cost: \$185

This course is designed to introduce the concept of combustion in basic terms. The focus will be on the current direct-vent systems and the traditional high-pressure gun burner. This course is NATE recognized for 18 hours of continuing education units (CEUs) applicable to NATE recertification. Six modules cover:

- Combustion basics for oil
- Fuel storage and delivery issues
- Direct vent oil
- High pressure gun burner
- Burner components
- Combustion analysis & adjustment

133 HVAC/R Gas Heat I

Intermediate

Course #heatg133i

Cost: \$185

This course covers combustion basics for natural gas and propane fuels as found in residential and light commercial applications. Presentations cover the common types of gas heating equipment. This course is NATE recognized for 18 hours of continuing education units (CEUs) applicable to NATE recertification. Six modules cover:

- Gas combustion basics
- Common components & safety issues
- Natural draft
- Induced draft
- Direct vent
- Sealed combustion

141 HVAC/R Refrigeration I

Intermediate

Course #refrig141i

Cost: \$185

This course will serve as an introduction to the mechanical compression refrigeration cycle and the necessary components. Students will be introduced to the common components, and terms and definitions of the cycle. HVAC/R Fundamentals is recommended prior to taking this course. This course is NATE recognized for 18 hours of continuing education units (CEUs) applicable to NATE recertification. Modules cover:

- Basic refrigeration cycle physics
- Compression and compressors
- Condensation and condensers
- Expansion and metering devices
- Evaporation and evaporators
- The system makes a cycle

151 Controls

Intermediate

Course #contr151i

Cost: \$185

This course is not so “fundamental” but is where you start when just dealing with controls. A good understanding of common HVAC systems is a prerequisite of this course. This course is NATE recognized for 18 hours of continuing education units (CEUs) applicable to NATE recertification. Module topics are:

- The Building and HVAC Systems
- Air Circulation and Air Quality
- Control System Characteristics
- Process Characteristics and Control Systems
- Control System Components
- Control System Categories

161 HVAC/R Boilers I

Intermediate

Course #boil161i

Cost: \$185

This course is designed to introduce the concepts and terminology of heating and power boilers. The main focus of the course will be on commercial and industrial boilers.

- Boiler Fundamentals
- Boiler Types
- Steam and Hydronic Boilers
- Fuels and Burner Types
- Valve Identification
- Safety and Relief Valves
- Water Level Controllers
- Boiler Accidents

191 HVAC/R Hydronics I

Intermediate

Course #hydro191i

Cost: \$185

This is the initial course on hydronic heating systems. This course begins a series of courses that address hot water heating systems. This course is NATE recognized for 18 hours of continuing education units (CEUs) applicable to NATE recertification. Module topics covered:

- System concept
- Residential boilers
- Pumps and system accessories
- Hydronic controls
- System design basics

NATE Exam Prep Review

These review sessions provide an opportunity for technicians to prepare themselves for taking a NATE exam. Each section contains study material designed around the knowledge elements (KATES) used as the foundation for the exams. Each review is populated with randomly selected exams that provide immediate feedback when completed.

Technicians don't work 9-5 jobs and are often called to work at a moments notice. To accommodate these fluid and all too busy schedules, these exams are available on demand and at any time of the day or night. ***Purchasing a seat provides a full 30 days of access***, allowing technicians ample time to continually study, test and improve in the areas they feel are most needed. The online learning tools include:

- * Downloadable study handouts
- * Linked resource sites for additional study
- * Video clips on key points
- * User-friendly navigation

NATE Gas Hydronics Service Level

Review

Course #nateghy

Cost: \$70

This review program is designed to prepare technicians for the NATE Hydronics Certification exam at either the Installation or Service level. The review is done in three very comprehensive sections covering:

- * HVAC Electrical Knowledge
- * Gas Heat Specific Knowledge
- * Hydronics Knowledge

NATE Gas Furnace Service Level

Review

Course #nategfs

Cost: \$70

This review program is designed to prepare technicians for the NATE Gas Heat Certification exam at either the Installation or Service level. The review is done in three very comprehensive sections covering:

- * HVAC Electrical Knowledge
- * Air Side Knowledge
- * Gas Heat Specific Knowledge

NATE Heat Pump

Review

Course #natehp

Cost: \$70

This review program is designed to prepare technicians for the NATE Heat Pump Certification exam at either the Installation or Service level. The review is done in four very comprehensive sections covering:

- * HVAC Electrical Knowledge
- * Refrigeration Cycle Knowledge
- * Air Side Knowledge
- * Heat Pump Specific Knowledge

NATE Oil Heat Service Level

Review

Course #nateoh

Cost: \$70

This review program is designed to prepare technicians for the NATE Gas Heat Certification exam at either the Installation or Service level. The review is done in three very comprehensive sections covering:

- * HVAC Electrical Knowledge
- * Air Side Knowledge
- * Oil Heat Specific Knowledge

NATE Oil Hydronics Service Level

Review

Course #nateohy

Cost: \$70

This review program is designed to prepare technicians for the NATE Hydronics Certification exam at either the Installation or Service level. The review is done in three very comprehensive sections covering:

- * HVAC Electrical Knowledge
- * Oil Heat Specific Knowledge
- * Hydronics Knowledge

NATE Service CORE Review

Review

Course #natecs

Cost: \$70

This review program is designed to prepare technicians for the NATE Service Core Certification exam. The review covers in detail the same main topics as the NATE Service Core:

- * HVAC Fundamentals
- * HVAC Electrical Knowledge
- * HVAC Air Side Knowledge

Pre-certification Assessment (PCA)

This series of exams is designed to assess general and specific HVAC technical knowledge. The focus of this program is NATE certification; however they can also be applied to any HVAC industry examination. PCA's are designed to establish an individual's level of professionalism and technical competence. Additionally, many contractors use these assessments as a way to gauge the skills of potential new hires, providing justification for offering and/or denying employment. Purchasing a seat provides one time, single use access and must be used within 14 days. After completing the assessment a letter providing a breakdown of the results, along with a recommended study path is sent.

Exam content is randomly selected from a pool of content categories and then compiled as a total exam. The weighting of the content category depends on what exam is being taken.

Pools of content categories include:

- Customer Service
- Trade Math
- HVAC Applied Physics
- HVAC Electrical
- Air Distribution Specific
- Water Distribution Specific
- Fuel Gas Specific
- Air Conditioning Specific
- Heat Pump Specific

After you complete and submit your exam you will receive a performance report that you can print. This report will tell you where your strengths and weaknesses are based on your assessment. Your report will recommend a specific course of action to follow regarding additional study or indicate that you are prepared for your certification exam.

A pre-certification assessment should be selected by the NATE certification that you are preparing for, or if used to gauge the skill set of a potential hire, select the PCA most suited for the position being filled. ***Purchasing a seat allows for a single user assessment that must be taken within 14 days of purchase.*** The available list is shown below:

Core – Installation

Course #skillci

Cost: \$29

Core - Service

Course #skillcs

Cost: \$29

Heat Pump – Service

Course #skillhps

Cost: \$29

Gas – Service

Course #skillgs

Cost: \$29

Air Distribution – Service

Course #skillads

Cost: \$29