




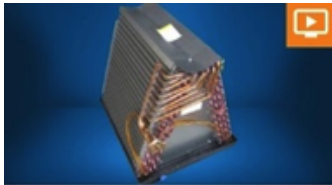




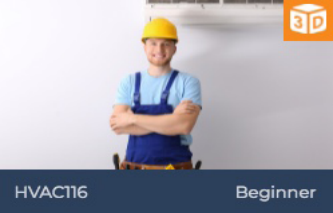
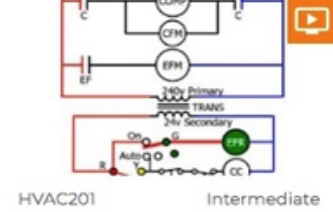




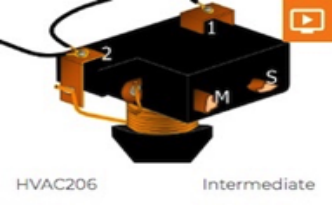
THE BLUE COLLAR VIRTUAL TRADE SCHOOL

CURRENT CATALOG - HVAC

COURSE	INDUSTRY	TYPE	CODE	DESCRIPTION
<p>What is HVAC?</p>  <p>HVAC050 Beginner</p>	HVAC	Video	HVAC050	Introductory course covers general information on the industry, systems and components, and explains how an HVAC system heats and cools a house.
<p>HVAC Systems</p>  <p>HVAC051 Beginner</p>	HVAC	Video	HVAC051	This course is an introduction to common HVAC systems that heat or cool a structure. It explains how specific systems work including heat pumps, mini-splits, packaged units, electric furnaces, and window air conditioning units.
<p>HVAC System Parts</p>  <p>HVAC052 Beginner</p>	HVAC	Video	HVAC052	This is a beginner's course on what happens inside an HVAC unit.
<p>NATE Ready-to-Work Exam Prep</p>  <p>HVAC100 Beginner</p>	HVAC	Video	HVAC100	Be introduced to the fundamental knowledge and job skills needed by technicians starting out in the HVAC field.
<p>Refrigeration Systems Intro</p>  <p>HVAC101 Beginner</p>	HVAC	Video	HVAC101	Connect your knowledge of the physics of refrigeration to the inner-workings of real refrigeration and AC systems. Connect new knowledge to real-world examples.
<p>Temperature, Pressure & Heat</p>  <p>HVAC102 Beginner</p>	HVAC	Video	HVAC102	Learn the physics and terminology behind mechanical refrigeration systems that make them work. Begin to apply that knowledge by using charts and gauges.




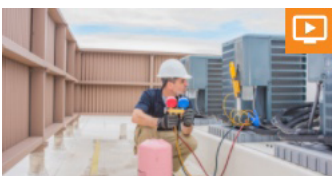


COURSE	INDUSTRY	TYPE	CODE	DESCRIPTION
Basic HVAC Tools  HVAC103 Beginner	HVAC	Video	HVAC103	Explore the basic tools of the HVAC technician and the best techniques in using them. Discover essential supplies and methods to improve organization and efficiency.
Leak Check And Evacuation  HVAC104 Beginner	HVAC	Video	HVAC104	Learn three methods of leak detection, leak detectors available today, EPA regulations for leak repairs, and basic evacuation methods and tools.
Charging Part 1: Tools and Rules  HVAC105 Beginner	HVAC	Video	HVAC105	Learn system charging procedures, including how to use disposable refrigerant tanks and how to evaluate the system's state through condenser split, saturation temperature and superheat. Understand the effects of high/low charge in addition to effectively using charging charts.
Charging Part 2: Subcooling and Superheat  HVAC106 Beginner	HVAC	Video	HVAC106	Learn system charging procedures, including how to use disposable refrigerant tanks and how to evaluate the system's state through condenser split, saturation temperature and superheat. Understand the effects of high/low charge in addition to effectively utilizing charging charts.
HVAC Safety Basics  HVAC107 Beginner	HVAC	Video	HVAC107	Be instructed on HVAC best practices and procedures on various safety topics and the risks involved.
Evaporators and Condensers  HVAC108 Beginner	HVAC	Video	HVAC108	Discover the importance of the evaporator and condenser, their terminology and quantifiers, design types and functions, and how to diagnose and correct basic problems.






COURSE	INDUSTRY	TYPE	CODE	DESCRIPTION
 <p>HVAC109 Beginner</p>	HVAC	Video	HVAC109	Explore the core functions of metering devices, the types of valves used on HVAC systems today, and how to identify them. Learn the function and application of the thermal expansion valve (TEV) and TEV bulb.
 <p>HVAC110 Beginner</p>	HVAC	Video	HVAC110	Learn how heat pumps work as dual purpose devices for heating and cooling and why they are more efficient than heaters and air conditioners. Experience how the components of heat pumps work together in piston-type and thermostatic expansion valve type heat pumps for heating, cooling, and defrost modes.
 <p>HVAC111 Beginner</p>	HVAC	Video	HVAC111	Discover the basic functions and types of compressors. Learn how to test and maintain them.
 <p>HVAC112 Beginner</p>	HVAC	Video	HVAC112	Learn the common purpose, components and operation of water chillers. Discover the design and differences between types of water chillers.
 <p>HVAC113 Beginner</p>	HVAC	Video	HVAC113	Annual maintenance cleaning, voltage checks, condensate removal and burner inspections are required to achieve maximum efficiency and avoid major issues. This course covers the maintenance needed, both forced air and hydronic.
 <p>HVAC114 Beginner</p>	HVAC	Video	HVAC114	This is a beginner's course that focuses on the materials that make up the ventilation system and improve indoor air quality.
 <p>HVAC115 Beginner</p>	HVAC	Video	HVAC115	This course covers the things that aren't considered major parts but play a major role. It explores different kinds of thermostats, what a condensate pump does, common installation supplies, and the materials needed to braze line sets.

COURSE	INDUSTRY	TYPE	CODE	DESCRIPTION
HVAC Technicians  HVAC116 Beginner	HVAC	Video	HVAC116	Explore what an HVAC technician does, the certifications they have to obtain, and the conditions they have to put up with. Then you get to be an HVAC technician for a day with a 3D simulation featuring a morning, afternoon, and evening service call.
Symbols and Diagrams  HVAC201 Intermediate	HVAC	Video	HVAC201	Learn to translate HVACR systems into symbols on a wiring diagram. Be prepared to translate any manufacturer's schematic style.
Thermostats and Heating Controls  HVAC202 Intermediate	HVAC	Video	HVAC202	Explore the types, functionalities, and application of thermostats and how to view them on a wiring diagram. Learn how to trouble-shoot common issues found in the field.
Meters, Switches, Loads, and Circuits  HVAC203 Intermediate	HVAC	Video	HVAC203	Learn how to use the most common meters in HVAC today to trouble-shoot a circuit. Discover three different types of circuits and where switches are placed.
HVAC Motors  HVAC204 Intermediate	HVAC	Video	HVAC204	Gain knowledge of the inner-workings and components of shaded pole, split phase, permanent split capacitor (PSC), and three phase motors. Grasp how to check for a voltage imbalance on a three phase motor.
Contactors and Motor Starters  HVAC205 Intermediate	HVAC	Video	HVAC205	Discover how to select a contactor, the troubleshooting process of a faulty contactor, and how motor starters function, as well as multimeter usage.
Compressor Relays and Capacitors  HVAC206 Intermediate	HVAC	Video	HVAC206	Explore types and components of relays used in motors and when to use them. Discover the uses and differences in capacitors in motors, the advantage of solid state capacitors, and how to replace a start capacitor.

COURSE	INDUSTRY	TYPE	CODE	DESCRIPTION
Troubleshooting Motors  HVAC207 Intermediate	HVAC	Video	HVAC207	Learn to troubleshoot HVAC motors, exploring various issues and what can be done to fix them.
Refrigeration System Accessories  HVAC221 Intermediate	HVAC	Video	HVAC221	Explore the function, location, style, and application of the auxiliary mechanisms of the refrigeration system.
Diagnosing Compressor Problems  HVAC222 Intermediate	HVAC	Video	HVAC222	Learn diagnostic tools to determine common compressor problems, focusing on slugging and flooding. Additionally, learn how to fix and prevent these issues, as well as how use Diagnostic and Corrective action charts.
Diagnosing AC Systems  HVAC223 Advanced	HVAC	Video	HVAC223	Learn to troubleshoot common AC system problems using a step-by-step method that enables you to locate faulty system components. Apply this method in eleven scenarios to deepen your knowledge and skill.
Res AC Troubleshooting: Indoor Components  HVAC301 Advanced	HVAC	Sim	HVAC301	Master troubleshooting with life-like scenarios of common electrical and mechanical faults of a typical split residential AC system.
Res AC Troubleshooting: Components, Mechanical, Major Loads	HVAC	Sim	HVAC302 HVAC303 HVAC304	3-Part/Outdoor Master Troubleshooting with life-like scenarios of common electrical and mechanical Faults, faults of a typical split residential AC system.
Gas Boiler Troubleshooting  HVAC311 Advanced	HVAC	Sim	HVAC311	Master troubleshooting of residential gas boilers with Gas practice scenarios covering twenty common service faults.

COURSE	INDUSTRY	TYPE	CODE	DESCRIPTION
Gas Furnace Troubleshooting  HVAC321 Advanced	HVAC	Sim	HVAC321	Master troubleshooting of gas furnace and motor components in life-like service calls on typical residential issues.
Commercial AC Troubleshooting  HVAC331 Advanced	HVAC	Sim	HVAC331	Learn to troubleshoot common mechanical and electrical faults on a commercial AC unit. Respond to an urgent service call to a restaurant with uncomfortable diners.
Heat Pump Troubleshooting  HVAC341 Advanced	HVAC	Sim	HVAC341	Learn the most common service problems with residential heat pumps. Master troubleshooting of faulty heat pump components in training and challenge mode scenarios.
Rooftop Units Troubleshooting  HVAC351 Intermediate	HVAC	Sim	HVAC351	Learn troubleshooting on many common heating and cooling faults on rooftop HVAC units.
Fundamental Electrical Concepts  ELEC101 Beginner	HVAC	Video	ELEC101	This course lays the foundation for all the other electrical courses by explaining in simple terms where the fundamental concepts come from and how they all interrelate to each other.
Lockout/Tagout  ELEC112 Beginner	HVAC	Video	ELEC112	A primer on lockout/tagout procedures, this course begins with the definition and purpose of lockout/tagout procedures and concludes with eight practical steps for an effective lockout/tagout program.

COURSE	INDUSTRY	TYPE	CODE	DESCRIPTION
How to Use a Multimeter  ELEC13 Beginner	HVAC	Video	ELEC113	This course covers each of the common settings on a multimeter such as voltage, resistance, amperage, diodes, and capacitance.
EPA Section 608 Prep Course: CORE  HVAC251 Intermediate	HVAC	Video	HVAC251	The Environmental Protection Agency (EPA) Section 608 certification allows technicians to work on appliances and systems that contain regulated refrigerants. This course will help you prepare for the core exam, by covering topics such as the Clean Air Act, Montreal Protocol, ozone depletion, and refrigerant identification, blends, handling, and safety.
EPA Section 608 Prep Course: TYPE I  HVAC252 Intermediate	HVAC	Video	HVAC252	Type I of the Environmental Protection Agency (EPA) Section 608 certification allows technicians to work on small appliances such as refrigerators and small window air conditioning units. This is the second of four courses that can help you prepare for EPA Section 608 certification. This course covers recovery requirements, recovery techniques, and safety measures for small appliances.
EPA Section 608 Prep Course: TYPE II  HVAC253 Intermediate	HVAC	Video	HVAC253	Type II of the Environmental Protection Agency (EPA) Section 608 certification allows technicians to work on high pressure systems such as heat pumps and convenience store refrigerators. This is the third course of four that can help you prepare for this certification. This course covers leak detection, recovery requirements, recovery techniques, refrigeration, and safety.
EPA Section 608 Prep Course: TYPE III  HVAC254 Intermediate	HVAC	Video	HVAC254	Type III of the Environmental Protection Agency (EPA) Section 608 certification allows technicians to work on low-pressure systems such as chillers. This is the final course out of four that can help you obtain this certification. This course begins with a review of the material from the core exam, and then covers leak detection, recovery requirements, recovery techniques, refrigeration, and safety.
Service Business Basics  BUSINESS 101 WEBINAR	Business Skills for the Trades	Webinar	Business 101	Experience a day in the life of service and maintenance techs who work in the home service trades.

COURSE	INDUSTRY	TYPE	CODE	DESCRIPTION
<p>Flat Pricing vs. Time & Materials Pricing</p>  <p>BUSINESS 102 WEBINAR</p>	Business Skills for the Trades	Webinar	Business102	Learn why home service businesses charge the prices they charge and how to explain pricing to homeowners.
<p>The importance of Maintenance Plans</p>  <p>BUSINESS 103 WEBINAR</p>	Business Skills for the Trades	Webinar	Business103	Learn why homeowners should maintain their HVAC, plumbing and electrical equipment every year. Learn how to present customers with this option and build your in-home selling skills.
<p>The Art of Asking Questions</p>  <p>BUSINESS 104 WEBINAR</p>	Business Skills for the Trades	Webinar	Business104	Learn why asking questions and listening are the keys to being a successful home service technician.
<p>Basic Personal Finance Planning</p>  <p>BUSINESS 105 WEBINAR</p>	Business Skills for the Trades	Webinar	Business105	Career choices build the future for you and your family. This course gives you a path to plan for success and your future retirement.
<p>Home Service Q & A</p>  <p>BUSINESS 106 WEBINAR</p>	Business Skills for the Trades	Webinar	Business106	What questions do you have before you begin your new career in the home service industry?