



# VOCATIONAL TRAINING INSTITUTE

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## School Catalog

# **Effective October 1, 2019**

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*The mission of Vocational Training Institute is to provide students with the skills they need for successful careers in fast growing industries nationwide. We want to provide students with quality training and materials in order for them to become successful in their industries.*

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# Welcome to Vocational Training Institute in Phoenix, Arizona

Heating, Ventilation, Air Conditioning, Electrical Controls, and Refrigeration (HVAC/R) technicians are currently in high demand. Millions of people rely on heating, air conditioning and refrigeration units in their homes and businesses. In addition, the restaurant, hotel, corporate and supermarket industry use HVAC/R technicians to handle their cooling, heating, refrigeration and electrical control systems such as those used to transport and store food, medicine and any other perishables.

Welders who keep up to date on the latest technology and get certified are in high demand with employers. Additionally, welding skills are highly transferable among employers and states. Once you are certified in one state, it is relatively easy to work in any other state. Welding skills are also transferrable among industries because the basic skills are the same across the board. There are few industries where welding is not involved in some part of their process. Welding is essential in industrial processes, construction, ship- and boatbuilding, auto manufacturing and repair, agricultural equipment, industrial maintenance and repair, oil and gas pipelines and a host of other industries.

Nationwide there are many high-tech industries that provide cutting-edge employment opportunities in the HVAC/R fields. VTI will prepare each student as an entry level technician, graduating with the necessary experience to get their "foot in the door" to companies that provide services in heating, air conditioning, refrigeration and welding.

Some of the career paths available for welders include: Welder, assembler, machine operator, construction or manufacturing welding technicians or supervisors, welding inspector, engineer, robotics repair and maintenance, technical sales, project management and specialized welding areas.

VTI's Welding Training Program provides training for entry level welding apprenticeship in the welding field, working with students to obtain skills needed to complete the required certifications for their welding careers.

Vocational Training Institute also has bilingual training courses and reading materials, with curricula tailored to help the community with available courses that are in English and Spanish. Training modules are designed with real systems, and students learn how to perform real service procedures for maintenance and installation. Our instruction and training prepare students from a contractor's point of view, and therefore after completion of the theory and hands-on, real-world training, students have the confidence to join the industry and begin working in the field.

# History

Vocational Training Institute has three shareholders, Laurence J. Zielke, Michael L. Howell and Luis Armendariz. Dr. Zielke holds his Bachelor of Arts from Centre College, a nationally ranked top 50 liberal arts college, and his Juris Doctorate from the Louis D. Brandeis School of Law at the University of Louisville. Mr. Howell owns and operates construction companies and assisted living communities in the Southeastern United States. Luis Armendariz, school president, has operated proprietary schools across the country for 16 years and has a Master in Business Administration (MBA) and has a National Project Management Certification.

Marco Reguerin, an Army veteran who founded the institution, has taught HVAC/R (heating, ventilation, air conditioning, and refrigeration) for 27 years. He is an HVAC/R professional, approved by the Air Conditioning Contractors of America (ACCA) and has completed their Educational Program in Instructor Certification (EPIC). Marco is also certified and licensed through the North America Technician Excellence (NATE) as a residential instructor with a Master Mechanical License in the state of Virginia and Arizona. He has over 5,000 hours of vocational training in the HVAC/R field and 27 years of experience as a technician. He is a licensed HVAC/R contractor and teaches his students with real insight of a working technician. In 1987, Marco Reguerin founded an adult vocational technical institute in Virginia. In 2010, Marco founded Vocational Training Institute to assist students in developing their skills, knowledge, and personal goals for employment and professional growth in the HVAC/R mechanical and electrical control technology fields, doing so through the practical application of theory and hands-on experience.

Steve Russell Director of Education has served in various roles and responsibilities serving 4 years as an HVAC/R/, Welder, Plumbing helper which started in High School (1978) later serving a 5 Year UA Steamfitter Welding Apprenticeship which included HVAC/R and Plumbing. After completion of his apprenticeship Steve attended Western Illinois University obtaining a degree in Electro-Mechanical Engineering. Steve has over 15 years' experience in education for the UA and various Technical Schools.

His field Experience includes new and existing installation, Repair and Design build For both HVAC/R and Plumbing, for Residential, Commercial, Industrial and Governmental, his Roles are quite versed from; Helper, Truck Driver, Apprentice Mechanic, Journeyman Mechanic, Master Mechanic, Foreman, Superintendent, Estimator, Senior Estimator, Chief Estimator, Operations Manager, and Business Owner of 2 large HVAC Contracting Companies in Iowa and Illinois, and currently in Arizona. His Specific Trades Include; Master Mechanical, Master Plumbing, Master Hydronic, Master Refrigeration, Master HVAC

Andrew Burns Welding Instructor possesses 10 years of knowledge and skills learned from his welding field experience and technical training at Southern Technical College in Florida. Andrew obtained an Associates of Science degree in Welding Technology with high honors. The field experience includes working in various commercial restaurants such as Darden Corporation welding with various types of metals. Special projects worked on are Disney Christmas parades, VA hospital in Lake Nona and the Daytona Beach Pier. Andrew is goal orientated and passionate about training students for their careers in welding.

The programs at VTI teach the basic theory of HVAC/R, and/or Welding to train students to perform service, maintenance, and installation to obtain entry-level employment or apprentice opportunities in the HVAC/R and welding fields. The school also functions as an authorized testing center for the EPA Universal and R410A exams by ESCO Institute.

# Facility

VTI has one location in Phoenix, AZ that provides all the hands-on training on-site. The school consists of approximately 14,000 square feet of classroom space where live lectures incorporate instruction on actual systems and their components. There is a workshop lab that has system modules for students to practice diagnostics and troubleshooting procedures to accurately service, maintain, and repair real equipment used in the work field. The students practice in a modern lab consisting of approximately 4,160 square feet.

# Owners & Directors

Owner.....Laurence Zielke  
Owner.....Michael Howell  
Owner .....Luis Armendariz

# Faculty & Staff

School President & SCO.....Luis Armendariz  
Director of Education.....Steven Russell  
Instructor .....Andrew Burns  
Instructor.....Jose Luis Serrato  
Instructor.....Michael Franz  
Instructor.....Donald Peterson  
Campus Administrator and SCO .....Geraldine Paez  
Lab Technician.....Austin Russell  
Lab Technician.....Arno Paez  
Student and Career Services.....Adrina Martinez  
Community Relations Director.....Stephen Davis  
Admissions Representative.....James Payton  
Admissions Representative.....Marshal Kaelin  
Admissions Representative.....Steve Delap  
Admissions Coordinator.....Brooke Payton

Steven Russell has been in the HVAC industry for over 30 years. He graduated with a bachelor degree in Electromechanical Engineering from Western Illinois University, and holds the following certifications and distinctions:

HARV Mechanical Licensed  
Master Plumbing License  
Master Refrigeration Certified

Master Hydronic Certified  
Arizona Mechanical Licensed  
Master HVAC Certified

UA Pipe Fitters Certification  
Quick pen estimating auto bid certified  
UA steamfitter apprenticeship  
UA CFC Certification (type universal)  
OSHA 40 Certified  
Hazmat Certified

Backflow Certified  
Platform Lift Certified  
Boiler and Combustion Certified  
Trane Unitary Controls Certified  
Aerco Boiler Certified  
Lochinvar Boiler Certified

Steven Russell also was a Mechanical contractor, chief estimator for one of the largest HVAC/R mechanical contractors in Florida and has been teaching HVAC/R for over 15 years.

Andrew Burns has been in the HVAC and welding industry for over 20 years and teaching HVAC AND WELDING for over 10 years.

Jose Luis Serrato has been in the HVAC industry for 8 years and has been teaching and training in the field for over 6 years.

Donald Peterson has been in the HVAC industry for 6 years and has been teaching and training in the field for over 3 years.

Michael Franz has been in the HVAC industry for 5 years and has been teaching and training in the field for over 2 years.

### **Admission Requirements**

To be admitted, an applicant must meet the following requirements:

- Be at least 18 years of age **or**
- Be 17 years of age and have a parent or guardian co-sign the enrollment agreement

Prior to enrolling, prospective students receive information on the program and its courses, and tour the school's facilities. There are instructors on-site to help answer any questions about the program for the prospective student to make a decision to enroll.

If a prospective student decides to enroll into a program, he or she will complete an enrollment agreement and will be given a school catalog to read about the school, descriptions of courses, and school policies. After reviewing the catalog, applicants who meet the admissions requirements outlined above will be admitted to VTI.

Vocational Training Institute does not discriminate on the basis of gender, sexual orientation, familiar status, religion, age, disability, race, color or nationality or ethnicity origin in the administration of its admission policies, educational policies, scholarship and/or other administered programs.

## Programs

The school offers three programs: the HVAC/R Entry Level Technician Training Program consisting of 200 clock hours; the HVAC/R Technician Training Program consisting of 600 hours; and the Welding program consisting of 287 hours.

### HVAC/R Entry Level Technician Training Program

#### 200 Clock Hours / 26 days or 10 weeks

*Objective:* The school's Entry Level Technician Training Program provides training for entry level "apprentice to first-year journeyman" employment in the construction maintenance and Heating, Ventilation, Air Conditioning and Refrigeration (HVAC/R) industries.

*Description:* Students who enroll in the course will acquire the skills and knowledge associated with the installation, maintenance and servicing of HVAC/R equipment in 200 clock hours over the course of approximately 4 weeks. Students will have a thorough understanding of the heating and cooling cycles and various phases of the fundamental principles of controls and electrical systems associated with HVAC systems. Students also will study the principles and concepts associated with the EPA Section 608 Universal Certification and, if successfully pass the EPA Universal examination, will graduate with their EPA Universal Certification, R410A Safety Certification, OSHA 10-Hour Survey Card, and Vocational Training Institute Diploma.

*Purpose:* This program is designed to familiarize students with the basic principles of Heating, Ventilation, Air Conditioning and Refrigeration. VTI provides lecture lessons accompanied by textbooks and Power Point graphics in our classrooms, and hands-on laboratory activities and performance profiles completed in our HVAC/R lab. VTI emphasizes technical service, diagnostic and troubleshooting procedures of mechanical and electrical systems, providing a basic understanding of tools and instruments used in the HVAC/R field.

*Topical Outline:* This program consists of the following courses designed to assist students in developing their skills and knowledge in the HVAC/R field:

Course Number	Course Name	Hours
COR108	Basic Employability Skills	14
COR101	Basic Safety & OSHA 10 Hour Safety	10
COR105	Introduction to Construction Drawings	5
COR107	Basic Communication Skills	4

HVAC310	EPA608	24
HVAC301	Introduction to HVAC Trade	10
HVAC307	Introduction to Cooling	44
HVAC312	R410A Safety	10

<b>Course Number</b>	<b>Course Name</b>	<b>Hours</b>
HVAC306	Basic Electricity	20
HVAC303	Basic Copper and Plastic Piping Practices	6
HVAC304	Soldering and Brazing	26
HVAC305	Basic Carbon Steel Piping Practices	5
HVAC308	Introduction to Heating	14
HVAC309	Introduction to Air Distribution Systems	8
<b>TOTAL HOURS:</b>		<b>200</b>

**DAY**

Class meets from 6:45 a.m. to 5:15 p.m. each day, Monday through Friday, with an anticipated duration of approximately 4 weeks.

**EVENING (exact same program description and courses as the Day)**

Class meets from 6:00 p.m. to 10:00 p.m. each day, Monday through Friday, with an anticipated duration of approximately 10 weeks.

### **COR101: Basic Safety and OSHA 10 HR Safety (Hours: 10)**

This course complies with OSHA-10 training requirements and explains the safety obligation of workers, supervisors and managers to ensure a safe work place. This course discusses the causes and results of accidents and the impact of accident costs.

### **COR105: Introduction to Construction Drawings (Hours: 5)**

Students are introduced to the different types of plans and how they represent a finished building. This course shows the parts of blueprints in detail, including symbols, the title block, and gridlines.

### **COR107: Basic Communication Skills Hours (Hours: 4)**

During this course, students are provided with techniques for communicating effectively with co-workers, employers and potential employers, through concepts of attitude, work ethic, teamwork, telephone skills and interpersonal skills.

### **COR108: Basic Employability Skills (Hours: 14)**

This course identifies the roles of individuals and companies in the construction industry. Students are introduced to critical thinking and problem-solving skills, and computer systems and their industry applications.

### **HVAC301: Introduction to HVAC Trade (Hours: 10)**

This course provides an overview of basic concepts and environmental concerns relating to heating, ventilating, and air conditioning in the commercial and residential areas. Information is presented regarding the responsibilities and leadership abilities in relation to organizing and directing workers and operations.

### **HVAC303: Basic Copper & Plastic Piping Practices (Hours: 6)**

This course teaches the applications, preparation, and joining of copper and plastic piping to: correctly measure the diameter of copper tubing, cut and ream copper tubing using a tubing cutter, correctly bend copper tubing, using bending tools, make a swage joint in a section of copper tubing, make and join flare connections, join two sections of tubing using a compression fitting, and cut and join two sections of plastic pipe using appropriate fittings.

### **HVAC304: Soldering and Brazing (Hours: 26)**

Tools, materials and safety precautions are covered and step-by-step procedures for soldering and brazing are depicted.

### **HVAC305: Basic Carbon Steel Piping Practices (Hours: 5)**

During this course, the student is introduced to methods and procedures used in ferrous metal piping practices, including identifying types of carbon steel pipe, pipe sizes and weights, and pipe fittings, as well as learning to cut, ream, thread and assemble steel pipe.

### **HVAC306: Basic Electricity (Hours: 20)**

Students are introduced to electricity, electrical circuits, and the electrical components of HVAC systems. Students use Ohm's law to calculate current, voltage and resistance; use the power formula to calculate how much power is consumed by a circuit; and understand how to use a multimeter and ammeter.

### **HVAC307: Introduction to Cooling (Hours: 44)**

This course provides an overview of the basic refrigeration cycle and the major components, accessories, and control devices of a cooling system. Students learn to use temperature and pressure measuring instruments to make readings at key points in the refrigeration cycle while understanding the temperature and pressure relationships at key points in the refrigeration cycle. Students learn to identify compressors, condensers, evaporators, metering devices, controls and accessories. Students also understand how to use a sight glass and moisture/liquid indicator to determine the operating conditions of an air conditioning system and service valves to gain access to an air conditioning system in order to measure pressures using a gauge manifold set.

### **HVAC308: Introduction to Heating (Hours: 14)**

In this course, students are taught the operation and maintenance of gas, oil, and electric furnaces while learning the components of a gas furnace and oil furnace and the purpose and function of each component. Students can use a manometer to measure and adjust manifold pressure on a gas furnace, including filter replacement, cleaning of components and temperature measurements. Students are able to identify symptoms of combustion problems in an oil furnace and learn to perform preventative maintenance procedures on an oil furnace.

### **HVAC309: Introduction to Air Distribution Systems (Hours: 8)**

Students are taught the properties of air distribution systems in order to become familiar with the operation, layouts, types of equipment, and installation practices used for air distribution systems installed in the different regions of the country. Students learn to assemble duct and fittings and assemble flexible duct. Students also learn installation of insulation and vapor barriers on metal ducts while explaining the installation of fittings and transitions used in duct systems, and the installation of diffusers, registers, and grills used in duct systems. Students can use a manometer to measure static pressure, velocity pressure and total pressure in a duct system. The use of velometers to measure the velocity of airflow at the output of air system supply diffusers and registers is also covered.

### **HVAC310: EPA 608 (Hours: 24)**

EPA-Approved Section 608 certification is needed to service building air conditioning and refrigeration systems. Technicians receiving a Universal Certification are certified to recover refrigerant during the maintenance, service or repair of small appliances, high- pressure equipment and low-pressure equipment. Upon successful completion, students are certified to work on any type of air conditioning and refrigeration equipment except for motor vehicle air conditioning.

### **HVAC312: R410A Safety (Hours: 10)**

Students study to receive their R410A Safety Certification.

## **HVAC/R Technician Training Program**

**600 Clock Hours / 24 weeks or evening 30 weeks**

**Pre-Requisites: None**

*Objective:* The school's HVAC/R Technician Training Program provides training for entry level "apprentice to first-year journeyman" employment in the construction maintenance and Heating, Ventilation, Air Conditioning and Refrigeration (HVAC/R) industries.

*Description:* Students who enroll in the course will acquire the skills and knowledge associated with the installation, maintenance and servicing of HVAC/R equipment in 600 clock hours over the course of approximately 24 weeks. Students will have a thorough understanding of the heating and cooling cycles and various phases of the fundamental principles of controls and electrical systems associated with HVAC systems. Students in this program will receive more troubleshooting and installation technique time in the hands-on environment of the lab. Students also will study the principles and concepts associated with the EPA Section 608 Universal Certification and, if successfully pass the EPA Universal examination, will graduate with their EPA Universal Certification, R410A Safety Certification, OSHA 10-Hour Survey Card, and Vocational Training Institute Diploma.

*Purpose:* This program is designed to familiarize students with the basic principles of Heating, Ventilation, Air Conditioning and Refrigeration. VTI provides lecture lessons accompanied by textbooks and Power Point graphics in our classrooms, and hands-on laboratory activities and performance profiles completed in our HVAC/R lab. VTI emphasizes technical service, diagnostic and troubleshooting procedures of mechanical and electrical systems, providing a basic understanding of tools and instruments used in the HVAC/R field.

*Topical Outline:* This program consists of the following courses designed to assist students in developing their skills and knowledge in the HVAC/R field:

### **Orientation HVAC/R Mechanical and Electrical System Introduction – (4 hours)**

Safety, rules, program expectations and general mechanical and electrical procedures will be covered.

**COURSE 101 - (91 Hours)****Mechanical Refrigeration Components & Electrical Controls Function**

The first course in the program teaches the fundamentals of heating, ventilation, air conditioning, refrigeration, electrical controls, and indoor air quality. It is designed to familiarize the student with the basic principles of heating, refrigeration, and electricity as applied to HVAC/R systems. An emphasis is placed on the function and installation of heating and refrigeration equipment components and controls.

**COURSE 102 - (150 Hours)****Electrical Distribution, Controls Configuration & Operational Function**

This course will teach about the function of electrical controls, the interpretation of electrical diagrams and symbols, and the use of instruments for electrical troubleshooting procedures. This course provides both theory and hands-on experience with specially designed electrical control laboratories.

**COURSE 103 - (37 Hours)****Instruments, Devices, and Tools Application for Mechanical & Electrical System Troubleshooting**

In this course, the student will learn about instrumentation in refrigeration systems, as well as air systems, with practice using the tools and devices that are essential for both electrical and mechanical troubleshooting procedures. The student will work with real systems to demonstrate proper instrumentation.

**COURSE 104 - (12 Hours)****R-410a Certification Exam Preparation**

This course prepares the student to become certified with the R-410a refrigerant universal license. This license is a requirement to work with the refrigerant R-410a, which will allow the student to perform real procedures in service and maintenance for refrigeration systems using this particular refrigerant.

**COURSE 105 - (20 Hours)****Refrigerant Transition & Recovery Certification (CFC Universal License for EPA, Section 608)**

This course prepares students to pass the Certification Exam, Section 608, for the E.P.A (Environmental Protection Agency). This universal license is a requirement by the Federal Government in accordance with the Clean Air Act, which approves technicians to perform service and maintenance procedures for systems of air conditioning and refrigeration. VTI will help students obtain this license with the necessary information through training materials and hands-on labs in recovery, pressurization, and handling of the refrigerants.

**COURSE 106 - (38 Hours)****Technical Service Procedures for Troubleshooting Mechanical & Electrical Systems**

Gain experience and practice on real systems with the various labs made available for this course. Learn to identify problems of electrical and mechanical systems, and apply the proper instrumentation technics to accurately perform service procedures.

**COURSE 107 - (70 Hours)****Heating Systems - Heat Pumps, Electric Heat, Gas Heat and Oil Heat**

After taking this course, the student will have the knowledge for mechanical and electrical controls; operating principals of heat pumps, gas furnaces, boilers, and electrical heating systems. The student will practice recognizing and explaining the purpose of major components in electrical heating systems with a thorough understanding of the schematics, symbols, and sequence of operation.

**COURSE 108 - (20 Hours) Introduction to Chillers**

This course will teach the student about chiller systems and the difference of components and refrigerants for high pressure and low pressure systems. The student will practice preventative maintenance on a cooling tower, as well as the installation of the air cooling tower.

**COURSE 109 - (60 Hours)****Introduction to Commercial Refrigeration**

This course gives an overall understanding of walk-in coolers, reach-in coolers, mechanical and electrical component functions, and recognition and installation procedures. This will be done through theoretical and practical hands-on experience in actual walk-in coolers, freezers, reach-in refrigeration units, and electrical and mechanical troubleshooting techniques using the proper instruments to do the service.

**COURSE 110 - (28 Hours)****Introduction to Commercial and Industrial Control Functions & Principals for Three Phase Electrical Systems**

The student will review and practice the basic fundamentals of electricity that apply to three phase electrical systems. The practice labs for this course are designed to allow the student to interpret three phase electrical diagrams for installing and wiring electrical controls, as well as troubleshoot and test electrical circuits with proper instrumentation technics.

**COURSE 111 - (20 Hours)**  
**Construction Blueprint Reading**

The student will be familiarized with blueprint reading with practice interpreting symbols for building drawings. The course will provide labs for students to practice dimensioning and identifying mechanical and electrical drawings.

**COURSE 112 - (50 Hours)**  
**Introduction to Solar Photovoltaic**

This course will teach the theory of solar energy and offer the student to gain experience in the wiring and installation of solar panels for photovoltaics systems. Students will practice design configurations, electrical wiring, module assembly, and functions of components, service, maintenance, and troubleshooting procedures.

**Welding Training Program**

**287 Hours/ 6 weeks or evenings 14 weeks**  
**Pre-Requisites: None**

*Objective:* The school's Welding Training Program provides training for entry level welding apprenticeship in the welding field, working with students to obtain skills needed to complete the required certifications for their welding careers.

*Description:* Students who enroll in the welding course acquire the skills and knowledge associated with a variety of welding techniques and practices. Students learn over the 287 clock hours to perform many types of welding positions such as 1F, 2F, 3F, and 4F. Students also learn techniques for 1G, 2G, 3G and 4G welding applications. In addition, students receive the OSHA 10 Safety Survey Card as well their Vocational Training Institute Diploma.

*Purpose:* This program introduces students to fundamentals of the welding trade. VTI provides lecture lessons accompanied by textbooks and Power Point presentations in our classrooms and hands on welding in our laboratory. VTI emphasizes welding practices and procedures to exemplify the most current welding practices with emphasis on safety.

**COR 101: OSHA 10 Safety (Hours: 10)**

This course complies with Osha 10 training requirements and explains the safety obligation of workers, supervisors, and managers to ensure safe work practices in the construction trades. This course discusses the causes and results of

accidents and the impact of accident costs.

**COR 105: Introduction to Construction Drawings (Hours: 5)**

Students are introduced to the different types of plans and how they are represented a finished building. This course shows the parts of blueprints in detail, including symbols, the title block, and gridlines with special emphasis on welding blueprints and symbols.

**COR 107: Basic Communication Skills (Hours: 5)**

Students are provided with techniques for communicating effectively with co-workers, employers and potential employees, through concepts of attitude, work ethic, teamwork, telephone skills and interpersonal skills.

**COR 108: Basic Employability Skills (Hours: 17)**

This course identifies the roles of individuals and companies in the welding and construction industry. Students are introduced to critical thinking and problem-solving skills, and computer systems and their industry applications.

**WELD 101: Introduction to Welding (Hours: 5)**

Students are provided with basic knowledge in welding practices, the trade of welding and apprentice programs. Student will also be oriented to the welding laboratory and facilities and learn the different processes in welding applications and identification of hazards in the welding industry.

**WELD 102: Oxyfuel Cutting (Hours: 20)**

This module introduces students to the methods and procedures of the oxyfuel cutting process. Students will learn safety procedures, equipment setup, fuel gas types, flow rates, and techniques. Hands-on practice and the completion of cutting-related performance tasks complete the learning process.

**WELD 105: Base Metal Preparations (Hours: 12)**

Introduces the students to the methods and procedures related to preparing base metal for welding. Students will learn safety procedures, welding joint preparation, specifications, identification of physical characteristics, mechanical properties, and cleaning techniques related to common base metals.

**WELD 106: WELD Quality (Hours: 10)**

Introduces students to the methods and procedures to produce high quality welds. Students will become familiar with welding codes and provisions, discontinuities, examination practices, and weld procedure testing. Students will

then complete a visual inspection on a fillet and/or groove weld and complete an inspection report to document the results.

**WELD 108: SMAW Electrodes and Uses (Hours: 3)**

Introduces the students to the selection, classification, and use of electrodes for arc welding. Students will become familiar with the various types of electrodes, their uses, identification, handling, and proper storage.

**WELD 109: SMAW Beads and Fillet Welds (Hours: 72)**

Introduces the methods and procedures related to SMAW beads and fillet welding. Students will learn safety procedures, equipment setup, how to strike an arc, and how to produce weave beads and stringer beads. Hands on practice and the completion of welding related performance tasks complete the learning process.

**WELD 110: Joint Fit-Up and Alignments (Hours: 8)**

Introduces the students to the techniques and procedures to perform proper joint fit-up and inspection. Students will become familiar with using codes, specifications, special tools, and measuring devices to ensure quality during welding.

**WELD 111: SMAW-Groove Welds with Backing (Hours: 60)**

Introduces the students to the method of procedures related to the SMAW groove welding process. Students will learn safety procedures, welding joint preparation, specifications, identification of physical characteristics, mechanical properties, and cleaning techniques of SMAW groove welds.

**WELD 112: SMAW-Groove Welding Open Root Welds Plate(Hours: 60)**

Introduces students to the methods and procedures of SMAW open-root groove welding process. Students will learn about safety procedures and groove joint preparation, and practice open-root groove welding techniques.

**Equipment & Materials Provided to students**

When enrolling into VTI programs for HVAC/R Technician Training, the Entry- Level Technician Training, or the Welding Program there are items mandatory for the student to possess to ensure they are able to participate in the hands-on labs, and that each student follows the safety rules. The student will be provided with the following materials for class:

## HVAC/R

Safety goggles  
Work gloves  
Multi-meter  
Manifold Gauge  
Wire splicer  
Screwdrivers (Phillips & Flat)  
Channel locks  
Wire cutter  
Tool bag

## Welding

Curved Handle, Carbon Steel Wire Brush  
Half Round File, Chipping Hammer, Cone Chisel  
8-Mig Pliers, Weld Fillet Gage, Steel Blades  
Tip Cleaner, Tank Wrench, Spark Lighter  
Helmet RD48 Auto Darkening, Front Cover Plate  
Gas welding and cutting goggles, Slip Joint Pliers  
Molded Polycarbonate Visor, Corded Ear Plugs  
Cowhide Welding Gloves, Disposable Respirators  
Measuring Tape, Black Welders Cap, Adjustable Wrench

- **Books for 200 Hour Program:**
- NCCER Core Curriculum
- NCCER HVAC Technician Level 1
- Introduction to Basic Refrigeration Cycle
- HVAC/R Introduction to Electrical Controls
- Refrigerant Transition and Recovery
- **Books for 600 Hour Program:**
- Introduction to Basic Refrigeration Cycle
- HVAC/R Introduction to Electrical Controls
- Refrigerant Transition and Recovery
- Introduction to Commercial Refrigeration
- Mechanical & Electrical Service Procedure Lab
- **Books for 287 Hour welding Program:**
- **Welding 287 Hour Program**
- NCCER Welding Training Guide
- NCCER Core

## Resource Area

The school has a learning resources center for student use, including numerous periodicals, text books, and online materials accessed through a computer.

## Graduation Requirements

Students will be awarded with a Diploma of Completion for HVAC/R Entry Level Technician Training when they have met the following requirements:

- Completed 200 hours of training in the program
- Final grade reflects an overall GPA average of 70% or above
- All financial obligations to the school are fulfilled
- GI Bill® beneficiaries cannot have their enrollment extended due to absences or make up assignments

Students will be awarded with a Diploma of Completion for HVAC/R Technician Training when they have met the following requirements:

- Completed 600 hours of training in the program
- Final grade reflects an overall average of 70% or above
- All financial obligations to the school are fulfilled

Students will be awarded with a Diploma of Completion for Welding when they have met the following requirements:

- Completed 287 hours of training in the program
- Final grade reflects an overall average of 70% or above
- All financial obligations to the school are fulfilled

GI Bill beneficiaries cannot have their enrollment extended due to absences or **have** make up assignments.

### **Graduate Employment Opportunities**

Graduates of VTI will be prepared to seek employment as an entry-level HVAC/R Technician or Welder with any company that provides HVAC/R and/or welding services.

### **Requirements for Graduate to Practice**

There is no licensure requirement after graduation to practice as an HVAC/R technician or Welder working under a licensed contractor's licensure; however, rules and regulations vary from contractor to contractor concerning internal policy and procedure requirements to work for a particular contractor. Notwithstanding the foregoing, VTI graduates are expected to follow the rules and regulations that govern the HVAC/R or Welding industry acquiring the certifications needed in order to practice. Requirements for graduates to uphold and practice are as follows:

- United States Department of Labor Standards for Occupational Safety and Health Administration (OSHA Law & Regulations)
- Clean Air Act, Section 608 of the Environmental Protection Agency (E.P.A)

**Centers for Certification and Testing.** Cost for a one time testing fee for the R410A and EPA Universal Section 608 Certification is covered by the institution.

- ESCO Institute  
Educational Standards Corporation  
P.O Box 521  
Mt. Prospect IL 60056 [www.escoinstitute.com](http://www.escoinstitute.com) or  
[www.hvacexcellence.org](http://www.hvacexcellence.org)

### Financial Information

VTI programs are ideal for anyone who seeks to start a new career in the HVAC/R or Welding industries, or to advance their skills in these fields. VTI programs provide extensive training in theory and hands-on labs at an accelerated, full-time pace. We understand that obtaining an education is a personal and long-term decision, which is why we offer affordable payment plans that allow students to spread out their payments over the duration of their program.

#### **HVAC/R Technician Training Program (600 hours)**

Tuition	Registration Fee	Course Materials	Total Cost
\$18,545	\$50	\$348 Books \$2,052 Tools and Training Materials	\$20,995

#### **HVAC/R Entry-Level Technician Training Program (200 hours)**

Tuition	Registration Fee	Course Materials	Total Cost
\$14,195	\$50	\$350.00 Books \$350.00 Training Materials	\$ 14,945

#### **WELDING Program (287 hours)**

Tuition	Registration Fee	Course Materials	Total Cost
\$16,677.00	\$50	\$348 Books \$1,870 Tools and Training Materials	\$18,945

**Payment Options**

All students must pay the total cost for their program by cash, check or credit card. Alternatively, students if program not paid in full by cash, check or credit card, must pay through an institutional loan. Institutional loans have terms ranging from 12 months to 72 months and are without interest, unless student defaults, whereupon interest will be assigned.

VTI does not currently offer scholarships.

**Additional Financing Options**

May be available for students who wish to pay for their program with a private loan. VTI will refer students to apply for a private loan with Climb Credit, Paramount Capital Group or TFC Tuition Finance Corporation.

Post 9/11 GI Bill® Funding is accepted. Students may use their GI Bill® education benefits at VTI.

**Student Services**

The institution provides assistance to students seeking academic advisement. Choosing a new career is made easy by our friendly administration and instructors who are available to provide technical guidance and career advice based on personal experience.

For enrolled students, the school has a learning resource center for students to use that includes books and periodicals for students to reference.

**Class Schedule**

Classes start each month. The school delivers 100% of its training through a brick and mortar training facility currently. Students are required to attend class on campus to receive hours.

<b>Program 200 Hour</b>	<b>Monday- Friday</b>
HVAC/R Entry Level Technician Training Program Day Class	6:45am - 5:15pm      Total 20 days
Evening Class	6:00pm – 10:00pm      Total 14 weeks
<b>Dec 2<sup>nd</sup> to Dec 21<sup>st</sup> Class</b>	Monday through Sunday 6:45am to 5:15pm

<b>Program 600 Hour Program</b>	<b>Morning (M-F)</b>	<b>Evening (M-F)</b>
HVAC/R Technician Training	8:30am - 1:30pm Total 24 weeks	6:00pm - 10:00pm Total 30 weeks



Students who must be absent due to personal illnesses, court appearances or other emergencies, may request that their absence be excused by notifying the school and explaining the reason for the absence. VTI reserves the right to request a physician's note or other relevant evidence of good cause for the absence. An excused absence will need supporting documentation to be provided to the school. Coursework missed must be made up according to the Make-Up Work policy.

### **Cancellation & Refund Policy**

An applicant denied admission by the school is entitled to a refund of all monies paid.

**Three-Day Cancellation:** An applicant who provides written notice of cancellation within three days (excluding Saturday, Sunday and federal and state holidays) of signing an enrollment agreement prior to start date is entitled to a refund of all monies paid. The school shall provide the total refund no later than 30 days of receiving the notice of cancellation. **This Includes VA Beneficiaries**

**Other Cancellations:** An applicant requesting cancellation more than three days after signing an enrollment agreement and making an initial payment, but prior to entering the school, is entitled to a refund of all monies paid. The school shall provide the total refund no later than 30 days of receiving the notice of cancellation. **This Includes VA Beneficiaries**

### **Refund after the commencement of classes:**

1. Procedure for withdrawal/withdrawal date:
  - A. A student choosing to withdraw from the school after the commencement of classes is to provide written notice to the Director of the school. The notice is to indicate the expected last date of attendance and be signed and dated by the student.
  - B. For a student who is on authorized Leave of Absence, the withdraw date is the date the student was scheduled to return from the Leave and failed to do so.
  - C. A student will be determined to be withdrawn from the institution if the student has not attended any class for 30 consecutive class days.
  - D. Any determined refunds will be issued within 30 days of the determination of the withdrawal date.
  
2. **Tuition charges/refunds:**
  - A. Before the beginning of classes, the student is entitled to a refund of 100% of the tuition. **This Includes VA Beneficiaries**
  - B. After the commencement of classes, the tuition refund shall be determined as follows:

## **ADMISSIONS POLICIES FOR STUDENTS USING VETERAN AFFAIRS (VA) EDUCATION BENEFITS**

**In accordance with Title 38 US Code 3679 subsection (e), this school adopts the following additional provisions for any students using U.S. Department of Veterans Affairs (VA) Post 9/11 G.I. Bill® (Ch. 33) or Vocational Rehabilitation & Employment (Ch. 31) benefits, while payment to the institution is pending from the VA, or due to delayed disbursement of eligible funds from the VA under chapter 31 or 33. As such, this school will not: prevent the student’s enrollment; assess a late penalty fee to the student; require the student to secure alternative or additional funding; or deny the student access to any resources (including access to classes, resource area, or other institutional facilities) available to other students who have satisfied their tuition and fee bills to the institution. However, to qualify for this provision, such students may be required to: Produce the VA Certificate of Eligibility (COE) by the first day of class; provide a written request to be certified; provide additional information needed to properly certify the enrollment as described in other institutional policies.**

### **Veterans Refund Policy**

**Vocational Training Institute Veterans Refund Policy complies with CFR 21.4255. In the event the veteran or eligible person fails to enter the course, withdraws, or is dismissed at any time prior to completion, any unused portion of tuition, fees, and other charges is refunded. Any amount in excess of \$10 of the registration fee is subject to proration. The amount charged will not exceed the exact pro-rata portion of total charges. The length of the completed portion of the course will be prorated over its total length, and the exact proration will be determined by the ratio of the number of days of instruction completed by the student, to the total number of instructional days in the course. Refunds are made within 30 days of the last date of the student’s attendance.**

**This table does not apply to VA Beneficiaries**

<b>% of the clock hours attempted:</b>	<b>Tuition refund amount:</b>
10% or less	100%
More than 10% and less than or equal to 20%	80%
More than 20% and less than or equal to 30%	70%
More than 30% and less than or equal to 40%	60%
More than 40% and less than or equal to 50%	50%
More than 50%	No Refund is required

The percentage of the clock hours attempted is determined by dividing the total number of clock hours elapsed from the student's start date to the student's last day of attendance, by the total number of clock hours in the program.

**Books, training materials and tools are nonrefundable.**

**Refunds** will be issued within 30 days of the date of student notification, or date of school determination (withdrawn due to absences or other criteria as specified in the school catalog), or in the case of a student not returning from an authorized Leave of Absence (LOA), within 30 days of the date the student was scheduled to return from the LOA and did not return.

**Code of Conduct**

It is the responsibility of the student to attend school regularly, demonstrate conscientious effort in class work and contribute positively to our school community by observing school rules and regulations. Students shall share the responsibility to promote the mission of the institution.

Vocational Training Institute students respect and protect the rights of peers, teachers, administrators, and everyone else involved in the educational process. Students must adhere to the following rules:

- No slander or offensive language
- Practice and model academic honesty
- Make-up assignments when absent from school
- Protect and take care of school property; no theft of school property
- Groom appropriately to meet health standards
- Dress appropriately; No sandals or open toed shoes
- No disruptions of the educational process
- Follow safety precautions for hands-on labs as directed

Students who do not comply with the above rules will be disciplined as follows:

- 1st Offense: Written Warning
- 2nd Offense: Second Written Warning
- 3rd Offense: Final Written Warning
- 4th Offense: Termination from the program

Serious violations of the Code of Conduct may result in immediate termination, at the discretion of the school Director.

**Grade Reporting & Transcripts**

Students can request a copy of their transcripts by requesting, in writing, that the school send a transcript. After doing so, the student transcript will be mailed out

within 15 business days. Students may request a copy of their academic progress upon request from the instructor or student services.

## **Grading System**

In order to achieve a passing grade for the program, the student must complete the program with a grade of 70% or higher. Students that hold an overall grade of less than 70% will be notified and counseled by the director according to the Academic Probation Policy. To complete the program, students must have a cumulative grade point average (GPA) of 70% or higher upon completion of all exams. Each exam is weighted the same to determine cumulative GPA.

### **Letter Grades by Percent**

**A:** 90-100 **B:** 80-89 **C:** 70-79 **D:** 60-69 **F:** 0-59 **W:** Withdrawal

## **Grievance Procedure**

A student may file a complaint with the institution if he/she believes there has been a violation of written campus policies, procedures, or arbitrary, capricious, or unequal application of written campus policies or procedures. To file a complaint, the student must follow the Grievance Procedure outlined below:

STEP 1: Speak with an Instructor or Administrator to try and resolve the problem informally.

STEP 2: If the problem cannot be resolved through informal discussion, submit a written complaint to the School Director or designee within one calendar week after the discussion described in Step 1. The written complaint must include a detailed description of the grievance, the desired resolution, and any available evidence and statements from other parties and witnesses.

STEP 3: The Director (or designated administrator, in the Director's absence) will investigate the complaint, interview relevant parties and provide a written report of his decision to the student within 10 business days. The report will include the facts from the investigation, the decision made, and the specific reasons for the decision.

STEP 4: Student has the right to appeal the decision, if there is additional information to be reviewed. The student has 5 days to appeal the decision.

If the student complaint cannot be resolved after exhausting the institution's grievance procedure, the student may file a complaint with the Arizona State Board for Private Postsecondary Education. The student must contact the State Board for further details.

The State Board address is: **Arizona State Board for Private Postsecondary Education**

1740 W. Adams, Ste. 3008

Phoenix, Arizona 85007  
Phone: (602) 542-5709  
Website: [www.ppse.az.gov](http://www.ppse.az.gov)

### **Leave of Absence**

If a student wishes to take a leave of absence, they must submit a written request to the institution 3 business days in advance of the first day of the requested leave, for approval. If the student is approved for a leave of absence, the duration of the leave will be determined by the School Director (or the Administrator if the Director is absent). Maximum time granted for leave should not exceed 180 business days, and a student is only allowed to take a leave of absence once during the program.

### **Make-Up Work**

Students who miss class must make-up the work and time missed. Class assignments may be made-up for full points. A make-up lecture may be granted at the discretion of the instructor, and will be scheduled by the instructor. The due date for make-up assignments is at the discretion of the instructor.

### **Possession of Weapons, Drugs, or Alcohol**

If a student is using, possessing, or distributing any kind of weapons, illegal drugs, alcohol, inhalants, or drug paraphernalia on school property, local police will be notified immediately, and the student will be expelled indefinitely from the institution.

### **Re-Enrollment**

Re-enrollment is available to students who have withdrawn or have been terminated due to failure to progress. Students who desire to return to school after termination must meet the terms and policies stated in the school enrollment agreement and school catalog. A re-entry fee of \$50 is required and any increase in tuition will be applied to the student's account. GI Bill cannot pay for a re-entry fee or any other penalty fee.

### **Termination**

Students are subject to termination if they have exceeded their allowed absences or have not raised their grade to passing during the academic probation period. A terminated student can request an appeal by submitting a request in writing to the VTI Director within 5 business days of the notice. Within 2 business days of the request, the Director will provide a written response, indicating whether the student maybe reinstated, and if so, noting the terms of reinstatement.

Students who are terminated for violating the student code of conduct policy will not be allowed to re-enroll.

## **Transfer Credits**

Vocational Training Institute will not accept transfer credits from other institutions or colleges for our students not utilizing GI Bill® benefits. Furthermore, VTI will not grant previous workplace employment or life experiences as credit towards its programs for students not utilizing GI Bill® benefits.

## **Veteran's Credit for Previous Education or Training**

VA beneficiaries must report all education and training to Vocational Training Institute. Vocational Training Institute will evaluate and grant credit where appropriate with the training time shortened and the tuition reduced proportionately.

## **Transcripts**

An official transcript is maintained for each student. The transcript provides a complete record of all courses, grades, and credits earned. If you are not current on any outstanding balance, the school will not release the certificate of completion or official transcript and will not allow the student to participate in the graduation ceremony. However, there are two exceptions to this policy:

- Transcripts may be released for a student to document eligibility to sit for a licensing, certification, or registry exam.
- The transcript must be released to a potential employer.

Additionally, all state board applications and accompanying paperwork are provided upon graduation at no charge. Graduates in good standing are provided one official transcript. Any additional copies of official or unofficial transcripts can be obtained from the school director for a \$25 service fee. Please allow 15 days for processing. Official transcripts are only released to third parties and only upon receipt of a written request by the graduate.

## **Withdrawal**

Students who choose to withdraw from the program before or after classes have begun must provide the director with a signed and dated written cancellation notice. The cancellation notice must indicate the reason for withdrawal and the last date of attendance (if withdrawing after the commencement of classes) verified by the instructor. Students authorized for a Leave of Absence who do not return on the scheduled date, and students who do not attend class for 30 consecutive class days,

are deemed to have been withdrawn from the program. See the Cancellation & Refund Policy for the refund schedule.

## **Career Services**

Vocational Training Institute employs a Career Services Coordinator whose primary responsibility is to provide career assistance services to graduating students and alumni. These services include instruction in resume writing, preparation of cover letters, interviewing techniques, and networking skills. Special attention is given to developing professionalism in our graduates.

The Career Services Office continually works and communicates with potential employers attempting to match their specific employment needs to the appropriate graduate. As a result of these well-tended lines of communication, we both seek out and receive notices of a variety of available positions. Upon successful completion of the program, the student will receive a list of potential employers who may or may not have immediate openings. Note these referrals do not constitute offers of employment, as the student accepts full responsibility for any requirements from the employer regarding mental, physical or other qualifying hiring requirements.

The school provides placement assistance for its graduates but makes no promise or guarantee of employment. Graduates in good standing may continue to use any and all of our placement resources indefinitely at no charge.

## **Records**

The school maintains student record files in two ways: a locked file cabinet and an electronic student management records system. Keys to the file cabinet are only given to authorized personnel. In addition, the school's electronic student management records system maintains duplicate electronic records. The school maintains student records in this electronic student management records system. This system backs up to the secured cloud and once a month conducts tests for the accuracy of the stored information. Records maintained in the student management records system are accessed through computers that are password protected to minimize the risk against any information being leaked or stolen. VA beneficiary records are maintained for a minimum of 3 years.

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**200 HR HVAC/R Day**

**2019 Start Dates**

**Completion Date**

Jan 9	Feb 5
Jan 23	Feb 19th
Feb 13	Mar 12
Feb 27	Mar 26
Mar 20	Apr 16
Apr 3	May 1
Apr 24	May 21
May 8	Jun 5
May 22	Jun19
Jun 12	July 9
Jun 26	July 23
July 17	Aug 13
July 31	Aug 27
Aug 21	Sep 17
Sep 4	Oct 1
Sep 25	Oct 22
Oct 9	Nov 5
Oct 30	Nov 27
Nov 13	Dec 11
Dec 2	Dec 21

**200 Hour HVAC/R Nights 2019**

Jan 9	Mar 18
Mar 20	May 27
Apr 3	Jun 11
Jun 12	Oct 29
Oct 9	
Oct 30	Jan 7 2020

**600 Hour HVAC/R Entry level  
technician training**

**Start Date    Completion Date**

Jan 8 2020 - Sep 8 2020

**Day 2020  
HVAC 200 Hour Start  
and End Date**

Jan 8	Feb 4
Jan 22	Feb 18
Feb 12	Mar 10
Feb 26	Mar 24
Mar 18	Apr 14
Apr 1	Apr 28
Apr 22	May 19
May 6	Jun 2
May 27	Jun 23
Jun 10	Jul 7
Jul 1	Jul 28
Jul 15	Aug 11
Aug 5	Sep 1
Aug 19	Sep 15
Sep 9	Oct 6
Sep 23	Oct 20
Oct 14	Nov 10
Oct 28	Nov 24
Nov 18	Dec 15
Nov 25	Dec 21

**Evening 2020  
HVAC 200 Hour  
Start and End Date**

Jan 8	Mar 17
Feb 12	Apr 21
Apr 1	Jun 9
Apr 22	Jun 30
Jun 10	Aug 18
Jul 1	Sep 8
Aug 19	Oct 13
Sep 9	Nov 17
Oct 14	Dec 22

**287 HR Welding**

**Days**

**2019, 2020 Start Date  
and Completion Dates**

**WELDING Hour 287 Hour**

<b>Day Start Date</b>	<b>Completion Date</b>
Nov 13	Dec 21
Jan 8	Feb 17
Feb 26	Apr 7
Apr 15	May 23
Jun 3	July 13
July 22	Aug 31
Sep 9	Oct 19
Oct 28	Dec 7

<b>Evening Start Date</b>	<b>Completion Date</b>
Jan 8	April 16
Apr 15	Jul 23
Jul 22	Oct 29
Oct 28	Feb 18

Jan 8	April 16
Apr 15	Jul 23
Jul 22	Oct 29
Oct 28	Feb 18

The VTI reserves the right to reschedule the date when the students start if the number of students is too small.

the right to program start number of scheduled is too



# VOCATIONAL TRAINING INSTITUTE

I, \_\_\_\_\_, acknowledge that I have received  
and reviewed \_\_\_\_\_  
(student)

a school catalog on \_\_\_\_\_.  
(date)

School Official: \_\_\_\_\_

Date: \_\_\_\_\_