TOTALTECH

HVAC • PLUMBING • ELECTRICAL TRAINING

HVAC • PLUMBING • ELECTRICAL TRAINING CENTER

909 Murfreesboro Pike, Nashville, TN 37217
TotalTechSchool.com | 615.459.8024

CONTENTS

Total Tech is authorized by the Tennessee Higher Education Committee. This authorization must be renewed each year and is based on an evaluation by minimum standards concerning quality of education, ethical business practices, health and safety, and fiscal responsibility.

STAFF

Don Miller, Institutional Director

Don Miller is Institutional Director of Total Tech, LLC. His work in the HVAC industry for the past 39 years has included the County of Orange in Southern California, where he maintained commercial split systems and commercial chillers. He owned and operated his own air conditioning service company for eight years in Tulsa, Oklahoma where he worked on both residential and commercial equipment. He accepted a position with Carrier Mid South in Nashville, Tennessee in 2003 where he worked as Customer Assurance Manager. Don founded Total Tech, LLC in 2006. Don's certifications include CMS in Controls Specialist from the Refrigeration Service Engineers Society (RSES), NATE Certifications in Heat Pump, Air Conditioning, Gas Furnaces and Senior Efficiency Analyst. He was also awarded the RSES Imperial Eastman Award for Controls Specialist in 1994.

David Allen, Deputy Director

David Allen has over 14 years of experience in the residential plumbing field. With humble beginnings as an apprentice at a family members plumbing company, he quickly realized how much he enjoyed the trade and thought that this could be more than just a job. He made the commitment to learn the trade and thereby would better not only himself but his family also.

David's Plumbing career has served him well over the years, but when the opportunity came open for him to grow his career even further, he seized it. David assists in overseeing the day to day operations of the facility and is open to help in any capacity.

Bryan Witzel,Strategic Operations Manager

Bryan Witzel is a 30-year Veteran of the United States Army. During his tenure in the Army he spent 2 1/2 years acting as Repair and Utilization NCO/Maintenance technician for his organization. His duties required him to maintain the dormitories that housed the units single soldiers. Bryan was responsible for up to three buildings. He conducted general maintenance tasks for the various interior and exterior areas repairing any HVAC, Plumbing, or Electrical issues. He also worked in the training and teaching of soldiers. He conducted large group, small group, and individual training sessions. He planned, created, and designed training programs for the soldiers under his charge.

Bryan had been a Total Tech Plumbing Instructor for a year when an opening came up for someone with logistical capabilities and who could assist in taking Total Tech to the next level.....Bryan was the perfect man for the job.

STAFF

Shawna Miller, Administrative Director

Shawna Miller has been associated with the HVAC industry for over 20 years. She and her husband, Don Miller (founder of Total Tech), were owners of an HVAC mechanical contracting company in Oklahoma, where she was responsible for answering and scheduling calls, accounting, and human resources. Shawna has in-field experience, working with Don on-site and assisting with repairs during this time. She also has a background in banking and office administration. She attended Middle Tennessee State University for 2 years while pursuing her Financial Institution Management degree, but decided to change direction when Don was in need of an Office Administrator at Total Tech. Once there, she knew she was where she was supposed to be. Shawna is the school Registrar and handles all school inquiries and student enrollments. She also handles all accounts payable, accounts receivable, and financial reporting. She wears a lot of hats at Total Tech and loves every minute of it! Working with others who have a desire to better their lives or change career paths is extremely rewarding to her. Working at Total Tech is much more than a job... it's her calling!

Shawna and Don have been married for 24 years and have 5 children and 9 grandchildren.

Kathy Witzel, Senior Support Specialist

Kathy Witzel has had a career in the Information Technology field for over 20 years. During that time, she obtained Microsoft Certification, as well as training in Network Administration and Wireless Technology. She is an active duty veteran spouse and has held Managerial positions in Digital Training Facilities for active duty service members while stationed in Europe. She has provided technical support and customer service during her professional career as well as mentoring Army spouses and soldiers as a Senior Spouse. She is passionate about assisting service members and their families in their transition into civilian life. She attended Kaplan University (now known as Purdue Global University), where she was on the President's list.

Kathy has been very happily married to her husband, Bryan, for nearly 30 years. They have 7 children and 3 grandchildren.

FACULTY

Joshua Maxwell, HVAC Instructor

Joshua Maxwell has an extensive background in Communications. He obtained his Bachelor of Science degree in Mass Communications in 2003 from Murray State University and then went on to pursue and obtain his Master's degree in the same in 2009. He served as Adjunct Faculty at Murray State University from 2010 - 2013 teaching Advanced Editing. He began his career at Hopkinsville Community College where he was a Television Production Manager, along with serving as Adjunct Faculty from 2010 - 2011 teaching Audio Visual Basics. During his tenure at the College he also served as CEO/Owner of West Kentucky Video/Mid America Visions where he produced television and radio commercials for local and regional companies. In 2012, Joshua became the Senior Creative Services Producer/Show Editor for WSMV News Channel 4. He was the Editor and Segment Producer for News and More at Midday. He also handled Commercial Production which included writing, shooting, and editing for clients in the market. Joshua also served as Adjunct Faculty at Austin Peay University from 2015 - 2017 teaching Public Speaking. He is a published co-author of The Kitty League: Images of Baseball.

Joshua had always had a fascination with HVAC and decided to pursue those "inner voices" in 2016. He obtained a position with The Comfort Group Nashville as an HVAC Service Technician where he worked with Residential and Commercial equipment. He performed routine maintenance, worked with automation control systems, chillers, boilers, and cooling towers. He attended technical trade school in HVAC and received his Certificate in Electrical-HVAC.

Joshua has a drive to continually learn and grow, and has a heart for people, which makes him a perfect fit for the Total Tech team. Total Tech is fortunate to have such a knowledgeable and caring instructor on their staff.

FACULTY

Kevin Ballard, Plumbing Instructor

Kevin Ballard began his Plumbing career at the age of 22. He knew the trades were a way to make a good living, so he decided to go to work for a Residential Plumbing company in Vermont where he worked for 14 ½ years. After this length of time putting in very long days on most occasions, Kevin desired to get into more regular work hours, so he went to work for Middlebury College in the Maintenance Department where he was employed for 5 years. After residing in Vermont for 41 years he was ready for a change and decided to make Tennessee his home. Once he relocated he gained employment at East Tennessee State College where he worked Plumbing in the Maintenance Department. He was there for 2 years and desired to move to Middle Tennessee. He received an employment opportunity with Hiller Plumbing Heating Cooling Electrical where he has been for 16 ½ years working in Residential and Commercial Plumbing. After working 38 years in the field he was looking to slow down and had a desire to pass his extensive knowledge on to the next generation of Plumbers coming into the trade. When the position came open for a Plumbing Instructor, he was the perfect candidate for the position. Total Tech is fortunate to have such a knowledgeable Plumber on staff to educate students in the Plumbing trade.

In his spare time, Kevin enjoys working on automobiles and completing carpentry projects.

David Hunte, Plumbing Instructor

David spent 4 years in the U.S. Navy and then went on to spend 18 years in the U.S. Army as an M1 Abrams Mechanic, Maintenance Supervisor, and Military Occupation Specialty Instructor. He spent 4 years in the field as a Plumbing Service Technician where he gained invaluable knowledge in the trade. David has a passion to teach others and puts himself 100% into his students every day. The Total Tech team is fortunate to have him.

FACULTY

Michael Spaulding, Electrical Instructor

Michael Spaulding is a 20-year Veteran of the United States Army. During his tenure in the Army he had 4-years combined experience of working on Electrical Installation, Service and Repair in stateside and overseas locations. Michael's responsibilities at the various locations included the installation, maintenance, and troubleshooting of Electrical, Plumbing, and HVAC services for soldiers living in residential areas. He has been a leader and instructor of soldiers most of his career and has a heart for teaching and helping others.

Michael's experience in the Electrical field, his instructional talents, and his ability to solve problems allows him to have a unique ability and role as an instructor at Total Tech. He puts others above himself and gives everything he has to the students, which makes him invaluable to the Total Tech team.

Steven Black, Electrical Instructor

Steven Black began his career in the electrical trade while in the Air Force, where he diagnosed and repaired electrical issues on base. After four years of active duty he retired and has been serving in the Air National Guard for the past four years. Steven enjoyed the electrical trade so much that after his active duty service he continued his career as a civilian. He worked for two years at Hiller Plumbing Heating Cooling Electrical in both their residential and commercial divisions. Steven has experience with high voltage distribution, commercial and residential construction and service, and fire alarm systems.

Steven is happily married and has 1 child. He enjoys helping and giving back to others, so he is a perfect fit for the Total Tech team, and the team is lucky to have him.

MISSION & VALUES

Our Mission: To Bring the Most Competent Tradesmen to the Most Complex Workforce by the most Passionate Instructors in the World.

The current trend in today's job market is shifting from the office to the trades. The installation and service industry needs workers to fulfill the workload placed on it. A common problem in every major metropolis is acquiring qualified tradesmen that can be trusted with the business assets to perform their work with honesty, integrity, and professionalism. Most traditional trade schools do not instill in their students all of the necessary ingredients that make up a competent tradesman. The competent tradesman must understand system operation, system diagnostics as well as customer retention and business acumen. The competent tradesman's advantage is a quality education that brings practical application to these basic business concepts.

Today's workforce must be versatile enough to meet the industry's needs. The tradesman must wear several hats to be successful and to fulfill the company's financial goals. This means he/she must blend sales with service. The competent tradesman understands the value of marketing the service company in a way that benefits the customer. Understanding the cost of customer acquisition helps the tradesman understand why it is important to perform a complete service for the customer. This means not developing tunnel vision with just the problem at hand, but looking at the whole system to find possible hidden underlying problems that may exists and suggest honest solutions.

The information boom has bombarded us with facts and opinions from every imaginable source. An opinion on any subject is as close as the smartphone. This flood of information can carry with it a dark side. Ill- conceived or half-baked ideas can cloud the understanding of well-meaning technicians with poor practices that lead to system inefficiencies and possible property damage. The competent tradesman must evaluate the source of his/her information to test its validity. Professionalism is the industry standard that the information dispenser uses as a litmus test for best practices and procedures. A qualified instructor practices bona fide procedures that meet industry's standards. The effective instructor has already traveled the course of his/her students; going through times of uncertainty and making mistakes gives the learned instructor patience and humility. This experience connects the instructor with the students and makes them believe the instructor is human enough to make mistakes, and does not hold them to an unattainable level.

FACILITY

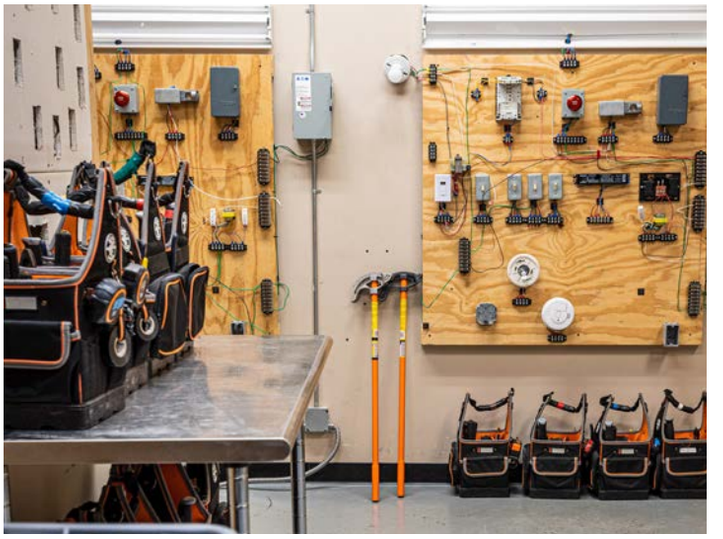
TOTAL TECH'S 15,000 SQUARE-FOOT FACILITY UTILIZES STATE-OF-THE-ART EQUIPMENT IN BOTH THE CLASSROOMS AND THE LABORATORIES.

HVAC Replacement Lab

Classroom

Plumbing Lab

Electrical Lab



HVAC Service Lab

PLUMBING SERVICE PROTOCOL

Plumbing students learning procedures for joining various types of pipe and tubing.

Plumbing students troubleshooting on an installed hot water tank.

ELECTRICAL SERVICE PROTOCOL

Students setting breaker panels and breakers into boxes.

Student working with instructor on troubleshooting electrical issues in the breaker panel.

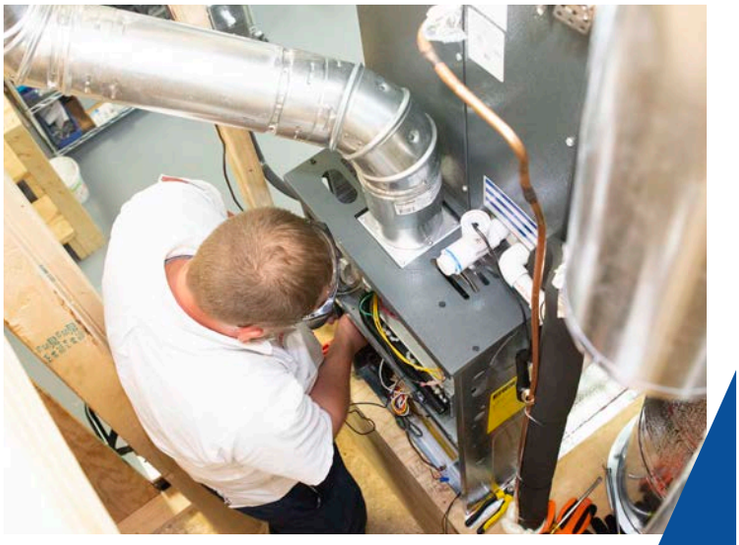
HVAC SERVICE PROTOCOL

Students learn proper thermostat wiring procedure on Total Tech's thermostat trainer.

Students completingTotal Tech Troubleshooting Guides for HVAC diagnostics.

HVAC REPLACEMENT PROTOCOL

Students learn how to clock a gas meter for proper installation.



Student installing a new gas furnace and doing final checks.

2022 CALENDAR

HVAC CLASSES

HVAC Service Protocol

February 2022
HVAC Service Four Week Course
January 31st - March 1st 7:00am – 12:00pm OR 12:30pm - 5:30pm
(No Classes Will Be Held February 18th or February 21st to Observe President's Day)

March 2022
HVAC Service Two Week Course**
March 7th - March 18th 7:00am – 5:30pm

March 2022
HVAC Service Four Week Course
March 21st - April 15th 7:00am – 12:00pm OR 12:30pm - 5:30pm

April 2022
HVAC Service Four Week Course
April 18th - May 13th 7:00am – 12:00pm OR 12:30pm - 5:30pm

May 2022
HVAC Service Four Week Course
May 16th - June 14th 7:00am – 12:00pm OR 12:30pm - 5:30pm
(No Classes Will Be Held May 27th or May 30th to Observe Memorial Day)

June 2022
HVAC Service Four Week Course
June 16th - July 15th 7:00am – 12:00pm OR 12:30pm - 5:30pm
(No Classes Will Be Held July 1st or July 4th to Observe Independence Day)

July 2022
HVAC Service Four Week Course
July 18th - August 12th 7:00am – 12:00pm OR 12:30pm - 5:30pm

Classes limited to 12 students.
*Class schedule subject to change. Check website for current schedule.

2022 CALENDAR

HVAC CLASSES

HVAC Service Protocol

August 2022
HVAC Service Four Week Course
August 15th - September 13th 7:00am - 12:00pm OR 12:30pm - 5:30pm
(No Classes Will Be Held September 2nd or September 5th to Observe Labor Day)

September 2022
HVAC Service Four Week Course
September 15th - October 13th 7:00am - 12:00pm OR 12:30pm - 5:30pm
(No Classes Will Be Held October 10th to Observe Columbus Day)

October 2022
HVAC Service Two Week Course**
October 17th - October 28th 7:00am – 5:30pm

November 2022
HVAC Service Four Week Course
October 31st - December 1st 7:00am - 12:00pm OR 12:30pm - 5:30pm
(No Classes Will Be Held November 11th to Observe Veteran's Day)
(No Classes Will Be Held November 23rd - November 25th to Observe Thanksgiving)

December 2022
HVAC Service Four Week Course
December 5th - January 5th 7:00am - 12:00pm OR 12:30pm - 5:30pm
(No Classes Will Be Held December 23rd - December 27th to Observe Christmas)
(No Classes Will Be Held January 2nd to Observe New Year's Day)

January 2023
HVAC Service Four Week Course
January 9th - February 3rd 7:00am - 12:00pm OR 12:30pm - 5:30pm

Classes limited to 12 students.
*Class schedule subject to change. Check website for current schedule.

HVAC CLASSES

HVAC Replacement Protocol

Classes Held from 7:30am - 4:00pm

March 14th - March 18th
April 11th - April 15th
April 18th - April 22nd
April 25th - April 29th
May 16th - May 20th
June 20th - June 24th
July 18th - July 22nd
August 15th - August 19th
September 19th - September 23rd
October 17th - October 21st
November 14th - November 18th
December 12th - December 16th

Classes limited to 6 students.
*Class schedule subject to change. Check website for current schedule.

PLUMBING CLASSES

Plumbing Service Protocol

February 2022
Plumbing Service Four Week Course
January 31st - March 1st 7:00am - 12:00pm OR 12:30pm - 5:30pm
(No Classes Will Be Held February 18th or February 21st to Observe President's Day)

March 2022
Plumbing Service Two Week Course**
March 7th - March 18th 7:00am - 5:30pm

March 2022
Plumbing Service Four Week Course
March 21st - April 15th 7:00am - 12:00pm OR 12:30pm - 5:30pm

April 2022
Plumbing Service Four Week Course
April 18th - May 13th 7:00am - 12:00pm OR 12:30pm - 5:30pm

May 2022
Plumbing Service Four Week Course
May 16th - June 14th 7:00am - 12:00pm OR 12:30pm - 5:30pm
(No Classes Will Be Held May 27th or May 30th to Observe Memorial Day)

June 2022
Plumbing Service Four Week Course
June 16th - July 15th 7:00am - 12:00pm OR 12:30pm - 5:30pm
(No Classes Will Be Held July 1st or July 4th to observe Independence Day)

July 2022
Plumbing Service Four Week Course
July 18th - August 12th 7:00am - 12:00pm OR 12:30pm - 5:30pm

Classes limited to 8 students.
*Class schedule subject to change. Check website for current schedule.

PLUMBING CLASSES

Plumbing Service Protocol

August 2022
Plumbing Service Four Week Course
August 15th - September 13th 7:00am - 12:00pm OR 12:30pm - 5:30pm
(No Classes Will Be Held September 2nd or September 5th to Observe Labor Day)

September 2022
Plumbing Service Four Week Course
September 15th - October 13th 7:00am - 12:00pm OR 12:30pm - 5:30pm
(No Classes Will Be Held October 10th to Observe Columbus Day)

October 2022
Plumbing Service Two Week Course**
October 17th - October 28th 7:00am - 5:30pm

November 2022
Plumbing Service Four Week Course
October 31st - December 1st 7:00am - 12:00pm OR 12:30pm - 5:30pm
(No Classes Will Be Held November 11th to Observe Veteran's Day)
(No Classes Will Be Held November 23rd - November 25th to Observe Thanksgiving)

December 2022
Plumbing Service Four Week Course
December 5th - January 5th 7:00am - 12:00pm OR 12:30pm - 5:30pm
(No Classes Will Be Held December 23rd - December 27th to Observe Christmas)
(No Classes Will Be Held January 2nd to Observe New Year's Day)

January 2023
Plumbing Service Four Week Course
January 9th - February 3rd 7:00am - 12:00pm OR 12:30pm - 5:30pm

Classes limited to 8 students.
*Class schedule subject to change. Check website for current schedule.

ELECTRICAL CLASSES

Electrical Service Protocol

January 2022
Electrical Service Four Week Course
January 10th - February 8th 7:00am - 12:00pm OR 12:30pm - 5:30pm
(No Classes Will Be Held January 14th or January 17th to Observe Martin Luther King Day)

February 2022
Electrical Service Four Week Course
February 10th - March 11th 7:00am - 12:00pm OR 12:30pm - 5:30pm
(No Classes Will Be Held February 18th or February 21st to Observe President's Day)

March 2022
Electrical Service Four Week Course
March 14th - April 8th 7:00am - 12:00pm OR 12:30pm - 5:30pm

April 2022
Electrical Service Four Week Course
April 11th - May 6th 7:00am - 12:00pm OR 12:30pm - 5:30pm

May 2022
Electrical Service Four Week Course
May 9th - June 7th 7:00am - 12:00pm OR 12:30pm - 5:30pm
(No Classes Will Be Held May 27th or May 30th to Observe Memorial Day)

June 2022
Electrical Service Four Week Course
June 9th - July 8th 7:00am - 12:00pm OR 12:30pm - 5:30pm
(No Classes Will be Held July 1st or July 4th to Observe Independence Day)

Classes limited to 12 students.
*Class schedule subject to change. Check website for current schedule.

ELECTRICAL CLASSES

Electrical Service Protocol

July 2022
Electrical Service Four Week Course
July 11th - August 5th 7:00am - 12:00pm OR 12:30pm - 5:30pm

August 2022
Electrical Service Four Week Course
August 8th - September 6th 7:00am - 12:00pm OR 12:30pm - 5:30pm
(No Classes Will Be Held September 2nd or September 5th to Observe Labor Day)

September 2022
Electrical Service Four Week Course
September 7th - October 4th 7:00am - 12:00pm OR 12:30pm - 5:30pm

October 2022
Electrical Service Four Week Course
October 5th - November 2nd 7:00am - 12:00pm OR 12:30pm - 5:30pm
(No Classes Will Be Held October 10th to Observe Columbus Day)

November 2022
Electrical Service Four Week Course
November 7th - December 8th 7:00am - 12:00pm OR 12:30pm - 5:30pm
(No Classes Will Be Held November 11th to Observe Veteran's Day)
(No Classes Will Be Held November 23rd - November 25th to Observe Thanksgiving)

December 2022
Electrical Service Four Week Course
December 12th - January 12th 7:00am - 12:00pm OR 12:30pm - 5:30pm
(No Classes Will Be Held December 23rd - December 27th to Observe Christmas)
(No Classes Will Be Held January 2nd to Observe New Year's Day)

January 2023
Electrical Service Four Week Course
January 16th - February 10th 7:00am - 12:00pm OR 12:30pm - 5:30pm

Classes limited to 12 students.
*Class schedule subject to change. Check website for current schedule.

2022 HOLIDAY SCHEDULE

January 14th	No Classes due to Martin Luther King Day
January 17th	No Classes due to Martin Luther King Day
February 18th	No Classes due to President's Day
February 21st	No Classes due to President's Day
May 27th	No Classes due to Memorial Day
May 30th	No Classes due to Memorial Day
July 1st	No Classes due to Independence Day
July 4th	No Classes due to Independence Day
September 2nd	No Classes due to Labor Day
September 5th	No Classes due to Labor Day
October 10th	No Classes due to Columbus Day
November 11th	No Classes due to Veterans Day
November 23rd - 25th	No Classes due to Thanksgiving
December 23rd - 27th	No Classes due to Christmas
January 2nd	No Classes due to New Year's Day

Course Name: HVAC Service Protocol

Course Costs: Tuition =$4,425.00 + Books = $100.00 + Supplies = $200.00 = Total Tuition = $4,725.00

Prerequisites: High School Diploma or GED or a "passed" Wonderlik Scholastic Level Exam with a minimum score of 15. Mechanical aptitude and a drive to learn are mandatory.

Introduction: Today's service contractors require competent tradesmen to sustain profitability in an ever-evolving business climate. This requirement pushes technical trade schools to deliver graduates who possess specific skill sets that include people smart, business smart, and equipment smart. The HVAC Service Protocol training program is designed around this specific philosophy. Producing graduates which show desirable traits of humility, eagerness, and competency is the focus of this course. These 3 traits are essential to growing long term successful service technicians. HVAC Service Protocol Class is a thirty (30) day course designed to guide the attendee through 24 real-world service call scenarios. Each service scenario has specific applicable classroom theory taught by trained experienced instructors. The service call classroom theory covers system component operation and applicable basic physics of refrigerant enthalpy, air psychrometrics, and electrical properties. To help the attendee understand the people aspect of the service industry some technician soft skills are blended in with each service call scenario.

The Goal: This course is designed to give the attendee the skillset necessary to enter the HVAC service industry. This skillset encompasses systematic diagnostic protocol used in diagnosing mechanical, electrical, and air flow related issues found in most all residential trouble calls. The graduate will not only understand the theory of heat transfer and refrigerant flow, but also a systematic process to diagnose subtle abnormalities in system component inefficiencies that cause uncomfortable environmental conditions. The goal of this course is to prepare the novice technician to quickly acclimate themselves to the HVAC service iindustry when gainfully employed by reputable service contractors.

Bottom Line: The graduating student will be able to perform systematic diagnostic service protocols in determining mechanical, electrical, and air flow related malfunctions in residential/light commercial HVAC systems. In addition to diagnosing system abnormalities the graduate will have repaired 24 malfunctioning HVAC systems quickly, accurately, and professionally.

Coursework: In the HVAC Service Protocol course students can expect between 1-3 hours of homework to be assigned per night. Of course, the time it takes to complete the homework assignments is individually based, therefore it may take some students more/less time than others. Students must keep in mind that they will get out of the course what they put into it, so it is the full responsibility of the student to complete the daily assignments, otherwise they will most likely fall behind in the course and their grade will be negatively impacted.

Course Outline:

- Control Voltage – High and Low
- Refrigerant Level – Superheat/Sub-Cooling
- Metering Device – Purpose/Types/Diagnose/Replace
- Evaporator – Approach/Blowers/Delta-T
- System Capacity Deficiency – BTU's/Air Distribution
- Condenser – Airflow/Refrigerant
- Compressor – Malfunctions/Diagnostics/Replacement
- Drain Stoppages – Condensate
- Heat Pumps – Operation/Diagnose/Repair
- Dual Fuel Systems - Operation
- Gas Furnace – Operation/Diagnose/Repair
- Electrical – Schematics/T-Stats/Diagnose/Repair
- Zone Systems – Controllers/Dampers/Mini-Splits
- HVAC Systems - Package Units/Split Systems

Course Name: HVAC Service Protocol (Continued)

Objectives: Upon completion of the HVAC Service Protocol Training program the students will have learned the following:

- Heat transfer and its relation to suction pressure and head pressure.
- Airflow and its relation to suction pressure and system capacity.
- External Static Pressure and its relation to duct sizing and system airflow.
- Suction Superheat and its relation to evaporator efficiency, system charge, and system capacity.
- Liquid Sub-cooling and its relation to head pressure, TXV operation, and system efficiency.
- Diagnosing evaporator inefficiencies such as partial air stoppages and improper system CFM.
- Differentiating compressor, reversing valve, and metering device malfunctions.
- Determining condenser coil inefficiencies using condenser approach.
- Determining metering device malfunctions such as flooding and starving evaporators.
- Diagnosing electrical malfunctions by performing 4 simple steps.
- Diagnosing electrical shorts and grounds by "Isolate and Energize Methodology."
- Diagnosing compressor motor issues by the "Ohms Methodology."
- Proper system refrigerant recovery, evacuation, and brazing with nitrogen.
- Proper compressor change-out processes.
- Proper condenser fan motor, defrost control board, and thermostat change-out practices.
- EPA 608 training and testing.

Course Name: HVAC Replacement Protocol

Course Costs: Tuition = $2,150.00 + Books & Supplies = $200 = Total Tuition = $2,350.00

Prerequisites: High School Diploma or GED or a "passed" Wonderlik Scholastic Level Exam with a minimum score of 15. Mechanical aptitude and a drive to learn are mandatory.

Introduction: HVAC Replacement training is a (5) day course that will prepare students for proper removal and installation of new equipment. The life span of a new system is determined by the knowledge and the ability to follow proper procedures for installing the equipment. This course is designed to help prevent service call backs and to know the equipment will run to designed specifications for years to come. Each day students will be taught applied theory for the hands-on training they will have for that day. They will understand brazing techniques, recovery process, evacuation and more. This is a (40) hour course and will consist of on-site training, along with our brief online video sessions each evening that will prepare students for the following day. They will begin Monday night and go through Thursday night. Students will be tested on each video. Each quiz, along with lab sessions are what will determine their overall score for the class.

Percentage Total	Total Tech Level
50% to 61.9%	Tech Level 1
62% to 72.9%	Tech Level 2
73% to 83.9%	Tech Level 3
84% to 94.9%	Tech Level 4
95% to 100%	Tech Level 5

The Goal: The goal of this course is designed to familiarize students with the theory and hands on training to properly install HVAC equipment. Students with no prior experience will learn proper install guidelines and start up procedures. Once complete, they will have the knowledge to remove and install residential equipment and perform capacity checks for proper operation. After completing this course, students will feel confident in their trade and will be an asset to any company.

Bottom Line: The graduating student should have the knowledge to properly remove and install new HVAC equipment. He/she will be able to check system for proper operation by gathering applicable data.

Course Outline:

- Installation Tools
- Equipment Removal / Installation Process Overview
- Refrigerant and Wiring Installation
- Proper Duct Connections & Airflow
- System Start-Up and Troubleshooting
- Fresh-Air Make Up & Gas

Objectives: Upon completion of the HVAC Service Protocol Training program the students will have learned the following:

- The proper tools needed for an air conditioning installation.
- The air conditioning equipment operation.
- The proper steps for an air conditioning installation per manufacturer's Installation Guide.
- Methods for the refrigerant recovery process (Recovery and Pump Down).
- Multimeter Usage (safety).
- Air Conditioning equipment removal.
- Suction and Liquid Line Sizing.
- Silver Brazing and nitrogen usage.
- Evacuation Process.
- Condensate Drain Installation.
- Air Conditioning equipment changeout utilizing a systematic checklist.
- Refrigerant Installation (Weighing in the proper charge).
- Multiple Methods to Measure Airflow.
- Air Conditioning Start-Up Checklist.
- Clocking the Gas Meter (Setting Equipment BTU Input).

Course Name: Plumbing Service Protocol

Course Costs: Tuition = $4,325.00 + Books & Supplies = $400.00 = Total Tuition = $4,725.00

Prerequisites: High School Diploma or GED or a "passed" Wonderlik Scholastic Level Exam with a minimum score of 15.

Introduction: Plumbing Service Protocol is a 100-hour course designed to educate students on the importance of plumbing as a critical health and safety concern for society and on the opportunity, demand and potential in the modern plumbing industry. An introduction to the tools, materials, and terminology used in plumbing today combined with classroom demonstrations and hands-on practice in our plumbing laboratory will prepare a student to begin a career in the plumbing industry. Five Cumulative sections, which include 24 real-world service call scenarios, will be covered with approximately 20 hours of classroom instruction and demonstration and 80 hours of hands on practice in the laboratory. The course will end with a written and a lab test. A Certificate of Attendance will be awarded to the students with an overall score of less than 70%. A Certificate of Achievement will be awarded to the students with an overall score of 70% or greater.

The Goal: This course is designed to establish the drive and desire to begin a successful career in the trade of professional plumbing, to familiarize students with the tools, materials and terminology used in the modern plumbing industry, and to build confidence and competence through hands-on experience with the installation and repair of a complete plumbing system. A knowledgeable technician is a competent technician. A competent technician is a gem. The goal of this course is to place competent, confident, and content technicians in the workforce.

Bottom Line: This course is designed for service technicians who want to know their trade. The Total Tech Plumbing Service Protocol graduate will have a good understanding of the various materials used in the plumbing trade, the technique needed to service the plumbing system, and the technicians' role in the plumbing service industry.

Coursework: In the Plumbing Service Protocol course students can expect between 1-2 hours of homework to be assigned per night. Of course, the time it takes to complete the homework assignments is individually based, therefore it may take some students more/less time than others. Students must keep in mind that they will get out of the course what they put into it, so it is the full responsibility of the student to complete the daily assignments, otherwise they will most likely fall behind in the course and their grade will be negatively impacted.

Course Outline:

1. Intro to the Plumbing Trade.
2. Water service materials and diagnostics/repair.
3. Hydrants and Special Valves types and diagnostics/repair.
4. Water distribution materials and diagnostics/repair.
5. Water quality (what Is It, why Is It Important, how to manage).
6. Water heater diagnostics/repair/Installation (electric and gas).
7. Faucet diagnostics/repair/installation (kitchen, lavatory, tub/shower).
8. Toilet diagnostics/repair/Installation.
9. Tub/shower, kitchen, lavatory drain assemblies diagnostics/repair/Installation.
10. DWV diagnostics/repair/Installation.
11. Drain Cleaning

Objectives: Upon completion of the HVAC Service Protocol Training program the students will have learned the following:

- Safety on the job, cutting various materials, working with piping and tubing.
- How to properly put together various piping and tubing materials.
- Installation, diagnosis, and repair of various valves and devices.
- How to properly size and install water lines according to various requirements.
- Proper operation and workings of hot water heaters, including diagnosis and repair (gas and electric).
- Installation, assembly, removal, and reinstallation of toilets.
- Installation, diagnosis, and repair of various types of lavatory, kitchen, and tub/shower faucets.
- Installation, diagnosis, and repair of various items for the minor DWV system (tub/shower drains, kitchen sink drain assemblies, lavatory drain assemblies.
- Installation, diagnosis, and repair of the main DWV system.
- How to diagnose and clean plumbing drains utilizing cable machines and sewer cameras.

Course Name: Electrical Service Protocol

Course Costs: Tuition = $4,325.00 + Books & Supplies = $400.00 = Total Tuition = $4,725.00

Prerequisites: High School Diploma or GED or a "passed" Wonderlik Scholastic Level Exam with a minimum score of 15.

Introduction: The Electrical Service Protocol course provides an introduction to electrical theory and residential applications. Its purpose is to provide the student with a firm foundation in electrical theory and application through classroom instruction and laboratory exercises. The course begins with safety procedures in the workplace, electrical basics and the tools of the trade. Next the students will begin wiring residential modules in the laboratory. As the theory progresses in the classroom the students will apply the theory in the lab. Upon completion of the course, the student will be able to install residential electrical systems and successfully diagnose those systems. Students will gain approximately 20 hours of classroom instruction and demonstration and 80 hours of hands on practice in the laboratory. The course will end with a written and a lab test. A Certificate of Attendance will be awarded to the students with an overall score of less than 70%. A Certificate of Achievement will be awarded to the students with an overall score of 70% or greater.

The Goal: This course is designed to establish the drive and desire to begin a successful career in the electrical trade, to familiarize students with the tools, materials and terminology used in the electrical industry, and to build confidence and competence through hands-on experience with the installation and repair of a complete electrical system. A knowledgeable technician is a competent technician. A competent technician is a gem. The goal of this course is to place competent, confident, and content technicians in the workforce.

Bottom Line: This course is designed for service technicians who want to know their trade. The Total Tech Electrical Service Protocol graduate will have a good understanding of the various materials used in the electrical trade, the technique needed to service the wiring system, and the technicians' role in the electrical service industry.

Coursework: In the Electrical Service Protocol course students can expect between 1-2 hours of homework to be assigned per night. Of course, the time it takes to complete the homework assignments is individually based, therefore it may take some students more/less time than others. Students must keep in mind that they will get out of the course what they put into it, so it is the full responsibility of the student to complete the daily assignments, otherwise they will most likely fall behind in the course and their grade will be negatively impacted.

Course Outline:

1. Introduction to Electrical Theory
2. Safety in the Workplace
3. Residential Wiring: General Application
4. Lighting
5. Residential Wiring: Specialized Circuits
6. Devices and Generators
7. Troubleshooting Residential Electric Systems

Objectives: Upon completion of the Electrical Service Protocol Training program the students will have learned the following:

- Science of electricity, coverage of various measuring services, meters and measuring devices, how to identify wires and their application, circuits and voltage.
- Safety on the job, electrical codes, working with city, county, and state code employees, working with blue prints, the inspection process.
- Learn wiring methods and layouts, electrical devices, various lighting applications such as switch types, placement, and wiring, learn process of residential service from installation to activation.
- Learn kitchen and bath wiring methods, various light fixture types, design and layout of kitchen and bath circuits, including conductor sizing for appliances, kitchen and bath wiring.
- HVAC circuit rough-in, disconnects, pools, spas, hot tubs, indoor baths, low voltage systems, security and fire alarms, grounding, pipe bending.
- Light fixture hanging and mounting, transfer switches, generator operation and back-up power.
- Learn to troubleshoot various malfunctions and properly repair in training modules.

ADMISSIONS

Class Enrollment:

Class enrollment will be accepted until class is full or until day prior to first day of class, whichever comes first.

Students can enroll one of two ways:

1. The Registration page found on the Total Tech website at www.TotalTechSchool.com
2. Contact Total Tech offices at (615) 459-8024

Admission Policy:

HVAC Service Protocol:

1. High School Diploma or
2. GED or
3. A "Passed" Wonderlik Scholastic Level Exam with a minimum score of 15.

HVAC Replacement Protocol:

1. High School Diploma or
2. GED or
3. A "Passed" Wonderlik Scholastic Level Exam with a minimum score of 15.

Plumbing Service Protocol:

1. High School Diploma or
2. GED or
3. A "Passed" Wonderlik Scholastic Level Exam with a minimum score of 15.

Electrical Service Protocol:

1. High School Diploma or
2. GED or
3. A "Passed" Wonderlik Scholastic Level Exam with a minimum score of 15.

****NO LATE ENROLLMENT WILL BE ACCEPTED**

Attendance Policy:

All students are expected to attend every session. An absence or tardy will penalize the student 1% of the final grade per day. Due to the nature of these courses, if a student is absent 2 days due to mitigating circumstances, the student stands a chance of being dropped from the course, and it will be up to the course instructor as to whether the student should be dropped from the course and required to re-enroll in the next available class.

Progress Reports:

All student grading is done through the Total Tech Portal. Students have access to real-time grading through their Portal account at anytime, once the course Instructor has posted the applicable class assignment grades. Although students have access to grades as they go through each course there are no progress reports given during attendance.

Grading Procedure:

In the HVAC Service Protocol, HVAC Replacement Protocol, Plumbing Service Protocol and Electrical Service Protocol courses a Certificate of Achievement will be awarded to the students with an overall score of 70% or greater, along with an appropriate Total Tech Level ranging from 1 to 5 based on the students total course score.

ADMISSIONS

Student Conduct:

Students are expected to conduct themselves in a safe and appropriate manner at all times. Any students conducting themselves in an unsafe or inappropriate manner will be subject to immediate dismissal with no refunds and will not be readmitted to the school.

Grievance Policy:

In the case of any grievance or complaint, students are to contact Shawna Miller, Business Administrator, via mail at Total Tech, LLC 909 Murfreesboro Pike, Nashville, Tennessee 37217 or via telephone at (615) 459-8024. If a complaint is not settled at the institutional level, the student may contact the Tennessee Higher Education Commission, Parkway Towers, Suite 1900, Nashville, TN 37243-0830. Telephone: (615) 741-5293. Any person claiming damage or loss as a result of any act or practice by this institution that may be a violation of the Title 49, Chapter 7, Part 20 or Rule Chapter 1540-01-02 may file a complaint with the Tennessee Higher Education Commission, Division of Postsecondary State Authorization.

Previous Education Credits:

Total Tech, LLC is a special purpose institution. That purpose is to change the way the industry trains HVAC, Plumbing, and Electrical service technicians by applying new concepts to education. These concepts include applied technical training, service technician management, and customer relations. This purpose does not include preparing students for further college study. Students should be aware that transfer of credit is always the responsibility of the receiving institution. Whether or not credits transfer is solely up to the receiving institution. Any student interested in transferring credit hours should check with the receiving institution directly to determine to what extent, if any, credit hours can be transferred. Total Tech LLC does not accept credits earned from prior education and training.

Refund & Cancellation Policy

Should any applicant/student withdraw or be terminated for any reason, ALL REFUNDS WILL BE MADE IN ACCORDANCE WITH THE FOLLOWING POLICY AND SCHEDULE:

1. Cancellation must be made in writing.
2. If a student withdraws from the institution on or before the first day of classes, or fails to begin classes, the refund shall equal the sum of all amounts paid or to be paid by or on behalf of the student for the period of enrollment, less an administrative fee of one hundred dollars ($100.00).
3. If after classes have commenced and before expiration of ten percent (10%) of the period of enrollment for which student was charged, a student withdraws, drops out, is expelled, or otherwise fails to attend classes, the refund shall equal seventy-five percent (75%) of all amounts paid or to be paid by or on behalf of the student for the period, less administrative fee of one hundred dollars ($100.00).
4. If after expiration of ten percent (10%) of the period of enrollment for which student was charged, and before expiration of twenty-five percent (25%) of the period, a student withdraws, drops out, is expelled, or otherwise fails to attend classes, the refund shall equal twenty-five percent (25%) of all amounts paid or to be paid by or on behalf of the student for the period, less administrative fee of one hundred dollars ($100.00).
5. If after expiration of twenty-five (25%) of the period of enrollment for which he or she was charged, a student withdraws, drops out, is expelled, or otherwise fails to attend classes, the student may be deemed obligated for one hundred (100%) of the tuition, fees and other charges assessed by the institution.
6. When computing student refunds, the last day of attendance for a student shall be one of the following:
    (a) The date on the expulsion notice if a student is expelled from the institution; or
    (b) The date the institution receives a written notice of withdrawal from a student; or
    (c) When no written notice of withdrawal is given, the institution shall use the last day of attendance as the date of withdrawal; or
    (d) Fails to return from an approved Leave of Absence (LOA).

Veterans

Refund & Cancellation Policy:

This institution has and maintains a policy for the refund of the unused portion of tuition and other charges in the event the eligible person withdraws or is discontinued at any time prior to the completion of the course. Such policy provides that the amount charged to the eligible person for tuition and other charges for a portion of the course shall not exceed the approximate prorated portion of the total charges for tuition and other charges that the length of the completed portion of the course bears to its total length. All veteran benefits will be terminated to the Veterans Administration upon the day of dismissal.

The Institution will not impose any penalty, including the assessment of late fees, the denial of access to classes, libraries, or other institutional facilities, or the requirement that a covered individual borrow additional funds on any covered individual because of the individual's inability to meet his or her financial obligations to the institution due to the delayed disbursement funding from VA under Chapter 31 or 33.

The institution requires additional payment for the amount that is the difference between the amount of the student's financial obligation to the institution and the amount of the VA education benefit disbursement. The financial shortfall is the full responsibility of the student and payment will be expected at the beginning of the student's course.

Veteran Addendum:

This addendum applies to those students receiving U.S. Department of Veterans Affairs (VA) education benefits payments (GI Bill) while attending Total Tech, LLC.

Conduct Policy: Students must conduct themselves in a respectable manner at all times. Disruptive or inappropriate behavior, as explained in the school's rules of conduct, or as deemed unsatisfactory or inappropriate conduct by school officials, will result in termination of VA education benefits, and possible dismissal from Total Tech, LLC. Readmittance after conduct dismissal will be at the discretion of the school Director.

Academic Progress Policy: The academic progress of students receiving VA education benefits is evaluated daily. VA students must maintain a proper understanding of the materials covered to keep up with the elevated pace of the course. If satisfactory progress is not maintained, the student may be subject to dismissal from school and termination of VA education benefits. Re-admittance after dismissal for academic reasons requires approval of the school Director/Owner.

Attendance Policy: All students are expected to attend every session. An absence or tardy will penalize the student 1% of the final grade per day. Due to the nature of these courses, if a student is absent 2 days due to mitigating circumstances, the student stands a chance of being dropped from the course, and it will be up to the course instructor as to whether the student should be dropped from the course and required to re-enroll in the next available class. Due to the nature of the HVAC Replacement course, students have 0 absences allowed due to mitigating circumstances and will be dropped immediately from the course.

Prior Credit Policy: Per Title 38, Code of Federal Regulations (38 CFR), Section 21.4253 (d)(3), previous training and experience will be considered, and granted if appropriate, for veterans and other eligible students. Veterans must submit a copy of their DD Form 214, and all students must request that transcripts from all previous post-secondary schools attended be forwarded to Total Tech, LLC for review.

Pro-Rata Refund Policy for VA Students: Total Tech, LLC has and maintains a policy for the refund of the unused portion of tuition and other charges in the event the eligible person withdraws or is discontinued at any time prior to the completion of the course. Such policy provides that the amount charged to the eligible person for tuition and other charges for a portion of the course shall not exceed the

approximate prorated portion of the total charges for tuition and other charges that the length of the portion of the course bears to its total length. All veteran benefits will be terminated to the Veterans Administration upon the day of dismissal.

VA Payment Policy: Students are responsible to pay any shortfall of payment from the VA for school tuition to the school. It is the responsibility of the student to ensure that all class tuition will be covered 100%, otherwise the student understands that they will be responsible to pay the shortage not paid by the VA prior to the completion of their class.

Record Retention: Total Tech LLC will retain student records for a minimum of three years from student graduation or withdrawal from any program.

IMPORTANT NOTICE: Students whose VA education benefits are terminated for violating academic progress or attendance standards may experience a negative impact to their VA education benefits that could result in SIGNIFICANT DEBTS owed to the VA.

References: 38 CFR 21.4135, 38 CFR 21.4253, 38 CFR 21.4254, 38 CFR 21.4277, 38 CFR 21.4278

Placement Assistance:

Total Tech will assist each student as much as possible to guide toward a potential hiring employer. We do not guarantee employment with any employer.

Class Supplies:

Total Tech has most class materials, which include required class literature and student documents, located in its online Portal via the Total Tech website. A tablet or preferably a computer will be needed for any course taken at Total Tech, which is to be supplied by the student. Total Tech has a Student Resource Center which has personal computers and a printer for student use if needed. It is open during school operating hours only. Total Tech provides daily items to students such as pens, pencils, and paper. Uniforms are NOT required, but students are advised to wear long pants and must wear close toed shoes...no sandals will be permitted.

**NOTE – Books are mandatory to be purchased from Total Tech LLC due to the uniqueness of the books.

Inclement Weather Policy:

Should questionable weather arise and other schools are closing in the area, Total Tech will post information about possible closing or delay on the Total Tech website (www.TotalTechSchool.com), Total Tech Facebook page (www.Facebook.com/TotalTechSchool), and on WSMV Channel 4 News – Snowbird (www.wsmv.com) under "all". It is the responsibility of each student to check one or all of these listings for school schedule information. If a student shows up for class and class has been cancelled or delayed due to weather conditions, and the student failed to check at least one of the three options for school operating hours, then it is the fault of the student and school will not be held liable for such failure.

Equal Opportunity Laws:

This institution will comply with Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d et seq.), Title IX of the Education Amendments of 1972, as amended (20 U.S.C. 1681 et seq.), Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794), the Age Discrimination Act of 1975 (42 U.S.C. 6101 et seq.), and all Federal regulations adopted to carry out such laws. This assurance is directed to the end that no person in the United States shall, on the ground of race, color, national origin (Title VI), handicap (Section 504), sex (Title IX, in education programs and activities only), or age (Age Discrimination Act) be excluded from participation in, to be denied the benefits of, or be subjected to discrimination under any program or activity of the Signatory receiving Federal financial assistance or other benefits under statutes administered by VA (Department of Veterans Affairs), the ED (Department of Education), or any other Federal agency.

ADMISSIONS

This assurance applies whether assistance is given directly to the recipient or indirectly through benefits paid to a student, trainee, or other beneficiary because of enrollment or participation in a program of the Signatory.

TOTALTECH

HVAC • PLUMBING • ELECTRICAL TRAINING

TotalTechSchool.com

Total Tech is a wholly-owned subsidiary company of Hiller Plumbing, Heating, Cooling & Electrical.