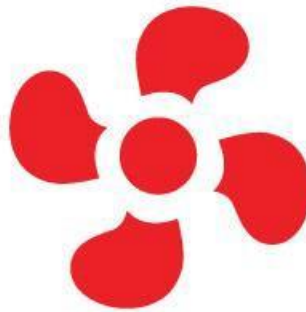
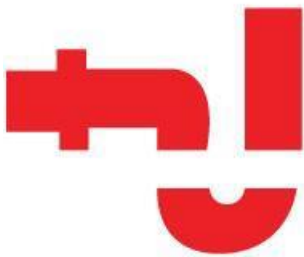




NATIONAL TECHNICAL — INSTITUTE —



1870 Whitney Mesa Dr Suite 100

Henderson, NV 89014

(702) 948-9000

Enrollmentnv@ntitraining.com

2023 – 2024 Catalog

Effective November 23, 2023

Welcome to National Technical Institute (NTI)

At NTI, we are committed to building a better world one student at a time. Our institute is a beacon of excellence, offering comprehensive training programs in Heating, Ventilation, and Air Conditioning (HVAC), Plumbing, and Electrical systems. With a strong emphasis on hands-on learning and real-world experience in our labs, NTI equips students with the practical and functional skills they need to thrive in their chosen fields. Are you looking to embark on a new career? NTI is your gateway to a world of opportunities in the ever-evolving trades industry.

National Technical Institute is licensed by the Nevada Commission on Postsecondary Education

Our Dedicated Staff

At NTI, our exceptional team is the backbone of our institute's success. We are proud to employ a group of educators and support staff who are not only highly qualified but also deeply committed to the success of our students. Every member of our staff is Results Driven, meaning we are unwavering in our pursuit of excellence and the positive outcomes of our students. We are Invested in your future, tirelessly working to provide the guidance and support you need to achieve your career goals. Our staff is Proactive in identifying opportunities for growth and improvement, ensuring that our programs stay at the forefront of industry trends. Most importantly, we are committed to doing the right thing on behalf of our students, fostering an environment of trust, respect, and integrity. When you choose NTI, you're not just joining a school; you're becoming a part of a community dedicated to creating success.

Ownership & Leadership

NTI is owned by Service Education Holdings Inc. Kodi Wilson is the Campus Director

Faculty		Staff	
David Snow	Plumbing Instructor	Kelly Sharkey	Finance Administrator/VA SCO
Randall Nichols	Plumbing Instructor	Jeremy Carroll	Student Finance Coach
		Marriana Barlow	Director of First Impressions
Craig Straley	HVAC Instructor	Amber Amlin	Admissions Representative
Caleb Furcht	HVAC Instructor	Laurie Goodwin	Admissions Representative
		Jasmine Shreve	Admissions Representative
Leonard Fifita	HVAC Instructor	Kodi Wilson	Campus Director
Shawn Durnin	Electrical Instructor		
Simote Kaihau	Electrical Instructor		
Ralph Hunsley	Electrical Instructor		
Beau Bliss	Lab Assistant		

Location & Facility

We are at 1870 Whitney Mesa Drive, Henderson, NV 89014. Our facilities are comprised of 14k square feet of classrooms, labs, and offices. Each program has live labs that replicate "in the field" experiences. We have operational HVAC systems and units, as well as live plumbing systems and available power for our electrical program. Class size is limited to 24 students per instructor.

School Office Hours:

Administrative Office hours are Monday through Thursday 8-5 Friday 8-4 (Except Holidays)

Observed Holidays:

V08082023

New Year's Day, Memorial Day, Independence Day, Veteran's Day, Thanksgiving Day, Winter Break.

Entrance Requirements

All students enrolling at NTI must be 18 years of age. Show proof of U.S. high school diploma or equivalent if this cannot be provided an ability to benefit (ATB) must be completed. A valid photo ID must be provided. An enrollment agreement with NTI must be completed.

Credit for Previous Training

To receive credit for previous HVAC, Plumbing or Electrical educational courses a student needs to submit transcripts, course descriptions, and program catalog from previously attended educational institutions. Prior HVAC, Plumbing and/or Electrical educational courses will be evaluated for possible transfer credit. If credit can be applied, students will need to test out of any portion of program they are to receive previous credit for. All necessary documentation must be received prior to starting program. Previous training test must be completed before starting the program.

Evaluation of previous training for students receiving VA Educational Benefits is required. All post-secondary training and education is required to be submitted and this includes military transcripts.

Cancellation and Refund Policy

1. Refund of tuition:
 - A. If National Technical Institute (NTI) has substantially failed to furnish the training program agreed upon in the Enrollment Agreement, we shall refund to the student all the money paid.
 - i. In this paragraph, the term substantially failed, means the willful failure to furnish the training agreed upon in the Enrollment Agreement.
 - B. If student **cancels** their enrollment by delivering written notice to NTI on or before the start date of the training program, NTI shall refund all money they have paid, minus 10 percent of the full tuition agreed upon in the Enrollment Agreement or \$150.00, whichever is less.
 - C. If student **withdraws** by delivering written notice to NTI or is expelled or **terminated** after the start date of the training program, but before 60% of such program has been presented, student will be charged a prorated tuition based on the percentage of the program presented prior to formal withdrawal or termination, plus 10% of the full tuition agreed upon in the Enrollment Agreement or \$150.00, whichever is less.
 - D. If student **withdraws** by delivering written notice to NTI or is expelled or **terminated** after 60% or more of the training program has been presented prior to formal withdrawal or termination, student will be charged the full tuition agreed upon in the Enrollment Agreement.
2. If a refund is owed pursuant to Paragraph 1, National Technical Institute shall pay the refund to the person or entity who paid the tuition within 15 calendar days after the:
 - a. Date of receipt by NTI of written cancellation of the enrollment of a student.
 - b. Date of termination by the institution of the enrollment of a student.
 - c. Last day of an authorized leave of absence if a student fails to return after the period of authorized absence.
 - d. Last day of attendance of a student, whichever is applicable.
3. Books, educational supplies or equipment for individual use are not included in the policy for refund stated in Paragraph 1 and will not be refunded.
4. For purposes of this section:

- a. The period of attendance is measured from the first day of instruction set forth in the Enrollment Agreement through the last date of actual attendance, regardless of absences.
 - b. The period for the training program is set forth in the Enrollment Agreement.
 - c. Tuition is calculated using the tuition and fees set forth in the Enrollment Agreement and does not include books, educational supplies or equipment listed separately from tuition and fees.
5. As used in this section, “substantially failed to furnish” includes cancelling or changing training program agreed upon in the enrollment agreement without:
- a. Offering the student a fair chance to complete the same program or another program with a demonstrated possibility of placement equal to or higher than the possibility of placement of the program in which the student is enrolled within approximately the same period at no additional cost or
 - b. Obtaining the written agreement of the student to the specified changes and a statement that the student is not being coerced or forced into accepting the changes, unless the cancellation or change of a program is in response to a change in the requirements to enter an occupation.

Three Day Cancellation: NTI shall allow an applicant to **cancel** an enrollment agreement if the applicant submits a written notice of cancellation to NTI within 3 days. You can mail this notice to 1870 Whitney Mesa Dr. Henderson NV 89014, send an email to StudentFinance@ntitraining.com, or you can drop it off in person to the front Desk at 1870 Whitney Mesa Dr. Henderson NV 89014

VA Refund Policy:

1. Refund of tuition for VA funded students:

- A. VA funded students will receive a 100% refund if they withdraw on or before the first day of class.
- B. If VA students cancel their enrollment by delivering written notice to NTI on or before the start date of the training program, NTI shall refund 100% of all money they have received.
- C. If a VA student withdraws after the start date of the training program, but before 100% of such program has been presented, the student will be charged a prorated tuition based on the percentage of the program presented prior to formal withdrawal.
- D. If VA student is expelled or terminated from NTI, after the start date of the training program, but before 100% of such program has been presented, student will be charged a prorated tuition based on the percentage of the program presented prior expulsion/termination.

2. VA Education Benefit Program Policy Update - Title 38 USC 3679(e).

National Technical Institute does not penalize students using VA Education benefit programs under Chapters 33 and 31 while waiting for payment from the Department of Veterans Affairs providing, they submit a certificate of eligibility, a written request to use such entitlement, and any additional information needed to certify enrollment. Students will continue to have access to classes, libraries, and other institutional facilities as outlined available in our catalog. No late fees will be assessed, and student accounts will be considered on hold. Title 38 USC 3679 (e).

3. If a refund is owed pursuant to Paragraph1, National Technical Institute shall pay the refund to the person or entity who paid the tuition within 15 calendar days after the:

- A. Date of receipt by NTI of written cancellation of the enrollment of a student.
- B. Date of termination by the institution of the enrollment of a student.
- C. Last day of an authorized leave of absence if a student fails to return after the period of authorized absence.
- D. Last day of attendance of a student, whichever is applicable.

4. Books, educational supplies or equipment for individual use are not included in the policy for refund stated in

Paragraph 1 and will not be refunded.

5. For purposes of this section:

- A. The period of attendance is measured from the first day of instruction set forth in the Enrollment Agreement through the last date of actual attendance, regardless of absences.
- B. The period for the training program is set forth in the Enrollment Agreement.
- C. Tuition is calculated using the tuition and fees set forth in the Enrollment Agreement and does not include books, educational supplies or equipment listed separately from tuition and fees.

Account for Student Indemnification

In an event of a schools discontinued operation or a violation by the institution per NRS 394.383 to NAC 394.560, an account for student indemnification may be used to indemnify a current student or enrollee who has suffered damage because of: discontinuance of operation or violation by such institution of any provision of NRS 394.383 to 394.560.

Attendance Policy

A minimum of **80% attendance** must be maintained throughout the entirety of enrolled program. Any student who drops below 70% attendance will meet with an administrator to determine proper course of action going forward. Withdraw, make-up, or restart with leave of absence.

- The student may be allowed to make up missed class hours on an hour-for-hour basis during an approved time.
- The student may be allowed to restart the program during a later start date at no additional cost. This restart must occur within 6 months of the original start date and the student will be required to sign a Leave of Absence request form.
- The student may opt to withdraw from the program and receive a refund in accordance with NTI's refund policy.
- Students will be marked Tardy if they arrive more than 15 minutes late. Tardiness will count against the clock hour attendance in 30-minute increments rounding up. EX. If a student is 20 minutes late 30 minutes will be deducted, if a student is 39 minutes late 60 minutes will be deducted.
- If a student misses half of the class, it will count as an absence.
- Students leaving before their dismissal will be marked tardy or absence in the same ratio to the tardy and absence standards.
- All absences are recorded, regardless of reason.
- Three consecutive absences are an automatic termination.
- Students may request a leave of absence (LOA) in instances of family bereavement or medical conditions pertaining to the student or immediate family. The student will be allowed to join a later program at the same point of taking leave of absence or earlier within 6 months of the start of LOA.
 - Students will only be allowed a maximum of 1 leave of absence.
 - Submit a written request stating the reason and the amount of time needed for the leave of absence to the Campus Director.
 - Complete LOA forms

Standard of Academic Progress

All students must meet the following minimum standards of Satisfactory Academic Progress (SAP):

- Maintain a minimum 80% cumulative attendance in their enrolled program.
- Maintain a minimum 70% or higher cumulative average grade throughout program.
- Evaluations are done at 29% of program completion and 67% of program completion.
- If satisfactory SAP is not being met at the evaluation period(s), the following will take place.
 - SAP warning, conversation with instructor and/or administrator
 - Depending on the level of unsatisfactory academic achievement the student may be given the option to take a **leave of absence** until the next start date to restart the program or continue the

- program on a probationary period until the next evaluation.
 - At the end of a probationary period, if a student is still not meeting the SAP requirements, the student will be **terminated** or dismissed.
 - To complete the program students are required to achieve **80% cumulative attendance and 80% cumulative average grade. Within the Maximum Time Frame (MTF)**, which is one and a half times the number of hours and weeks required for the specified program of study.

Grading Scale

100-90%	A
89-80%	B
79-70%	C
69-60%	D
59-00%	F

Student Conduct

Students will be terminated for violating any of the following rules and regulations. All students are expected to act maturely and are required to respect other students and faculty members.

1. Any student caught cheating on exams or assignments or committing plagiarism.
2. Any sexual misconduct, i.e., unprofessional advances, vulgar or offensive language, innuendoes, or harassment on the school's premises.
3. Disruptive, abusive, or unprofessional behavior
4. Any student under the influence or in possession of alcohol, marijuana, or any controlled substances on the school's premises
5. Any student having possession of firearms or weapons of any nature on the school's premises.
6. Threat of physical altercation with staff, faculty, or another student
7. Stealing or intentional destruction of school property
8. Smoking on breaks outside only
9. Clean up labs and classroom areas that you use.
10. Dress code
 - a. Shirt with sleeves (no tank tops, muscle shirts, cut offs, spaghetti straps, etc.)
 - b. Jeans or work pants (no shorts, sweatpants, etc.)
 - c. Closed-toed work-ready shoes (no heels, flip flops, slippers etc.)

Terminated or Withdrawn Students

Terminated or Withdrawn students may re-start a program once, provided a refund has not been issued. If a refund has been issued the student will need to go through the entire enrollment process again.

Requirements for Receiving Certificate and Graduation Tool Bag

A student must be in good standing in all the following areas to receive a certificate of completion, and graduation tool bag.

- Attendance 80% cumulative
- Academic 80% cumulative
- Financial must be current on payments.
- All requested documents on file

Career/Placement Services

The National Technical Institute offers employment assistance to graduates, consisting of job lead referrals and job skills

development. While assisting in your job search, we make no guarantee, expressed or implied, of future employment. Current law prohibits any school from guaranteeing job placement as an inducement to enroll students.

Grievance and Complaint Policy

PER NRS 394.443 Students enrolled in licensed, private postsecondary educational institutions have the right to register a legitimate complaint with the Commission on Postsecondary Education. Prior to filing a complaint, you must attempt to resolve the issue with school officials according to the policies of the school which you are attending- **This complaint should be presented in writing to the NTI Campus Director.** If you are unable to reach a solution, you may contact the Commission (see below) and the Commission will attempt to resolve the issue. If a resolution cannot be reached, you will be required to complete a formal complaint form; Formal complaints are investigated by staff and a decision by the administrator of the Commission. If either party does not agree with that decision, an appeal to the full Commission may be requested.

More information, including complaints forms, is available at www.cpe.nv.gov. Or contact: Commission on Postsecondary Education 2800 E. St. Louis Avenue Las Vegas, NV 89104 702-486-7330 (Ph) 702-486-7340 (Fax)

Program Modalities Overview

Traditional Modality Lab: 42% | Lecture: 58%- *The Traditional modality offers a balanced mix of hands-on lab work and in-person lectures. Ideal for students who thrive in a structured classroom environment, this option emphasizes face-to-face interaction and direct engagement with instructors and peers.*

Fusion Modality Lab: 44% | Online Lecture: 56%- *The Fusion modality blends the benefits of practical lab sessions with the convenience of online lectures. This format is perfect for students who seek a flexible schedule while still valuing the interactive aspects of laboratory work.*

Immersion Modality Lab: 40% | Online Lecture: 60%- *The Immersion modality maximizes online learning without compromising on essential lab experiences. Designed for students who prefer or require a predominantly online educational format, this option allows for greater flexibility and autonomy in managing coursework.*

***The Immersion program moves at a fast pace with half the lab hours of our traditional modality. It is highly encouraged that individuals enrolling in this class have a mechanical aptitude and prior/existing exposure to the trade.**

HVAC Programs (Class sizes limit to 24)

A student with no industrial experience can advance to a job-ready, entry-level HVAC/R (Heating, Ventilation, Air Conditioning and Refrigeration) technician job with hands on training in just 2 to 4 months; depending on the program. Classes are normally held on campus either 4 mornings(8am-noon), or 4 evenings(5pm-9pm) per week (Monday, Tuesday, Wednesday, and Thursday) for 3 to 4 months; depending on program. The objective of the different programs of study at NTI is to prepare students for entry-level job opportunities within the HVAC industry. The objective of the HVAC Install Technician program is to prepare students for jobs in the residential installation of HVAC equipment. The Certified HVAC Technician program is to prepare graduates for entry level technician and repair services in residential settings. The Certified HVAC/R Technician has the same objectives as the Certified HVAC Technician, but also includes preparation for entry level commercial refrigeration repair, troubleshooting and maintenance jobs. As a next step in HVAC/R training and/or field experience, the National Technical Institute also offers 3 additional courses as part of our Facility Engineer Program. These 3 more advanced courses allow students to move beyond residential and small commercial HVAC/R systems and into “central plants” found in large commercial and industrial buildings (such as casinos, hospitals, high-rise office buildings, manufacturing plants, etc.). Topics covered include boilers, chillers, cooling towers, air handlers, pumps, piping, and blueprint reading.

***The Immersion program moves at a fast pace with half the lab hours of our traditional modality. It is highly encouraged that individuals enrolling in this class have a mechanical aptitude and prior/existing exposure to the trade.**

HVAC Install Technician				
Electrical 1 – Basic Electrical Theory		Textbook	\$150	
Electrical 2 – Electrical Application		EPA Test Fee	\$25	
Air Conditioning & Refrigeration Fundamentals		Tuition	\$3080	
EPA Certification Seminar & Exam		Total Cost	\$3,255.00	
Total Hours for Program		88		
Textbook: Keeping it cool workbook, Copyright 2021 by National Technical Institute				
Certified HVAC Technician*				
Electrical 1 – Basic Electrical Theory		Textbook	\$150.00	Immersion*
Electrical 2 – Electrical Application		EPA Test Fee	\$25.00	
		Lab Material Fee	\$325.00	
Air Conditioning & Refrigeration Fundamentals		Tuition	\$5,895.00	
EPA Certification Seminar & Exam		Total Cost	\$6,395.00	
Advanced Air Conditioning				
Gas Heating Seminar				
Heat Pump Seminar				
HVAC Troubleshooting				
Total Hours		100 Hours- Immersion*		
Textbook: Keeping it cool workbook, Copyright 2021 by National Technical Institute				
*The Immersion program moves at a fast pace with half the lab hours of our traditional modality. It is highly encouraged that individuals enrolling in this class have a mechanical aptitude and prior/existing exposure to the trade.				
Certified HVAC/R Technician				
Electrical 1 – Basic Electrical Theory		Textbook	\$175	Traditional
Electrical 2 – Electrical Application		Lab Material Fee	\$300	Fusion
Air Conditioning & Refrigeration Fundamentals		EPA Test Fee	\$25	\$175
EPA Certification Seminar & Exam		Tuition	\$9,495.00	\$375
				\$25
				\$7,220.00

Advanced Air Conditioning		Total Cost	\$9,995.00	\$7,795.00
Gas Heating Seminar				
Heat Pump Seminar				
HVAC Troubleshooting				
Commercial Refrigeration				
Total Hours		192 Hours- Traditional	144 Hours- Fusion	
Textbook: Keeping it cool workbook, Copyright 2021 by National Technical Institute				
Facility Engineer Program				
Blueprint Reading		Textbooks	\$250.00	
HVAC Central Plants		Tuition	\$2,520.00	
Boiler Operations		Total Cost	\$2,770.00	
Total Hours	72			
Textbook: Blueprint Reading (\$55), HVAC&R 6-Part Series Workbooks (\$100), Boiler Operator's Workbook (\$95)				

Plumbing Programs (Class sizes limit to 24)

A student with no plumbing or maintenance experience can advance to a job-ready, entry level Plumbing Technician job with hands on training in just 3 months. Classes are held 4 days or evenings per week (8am – noon or 5pm - 9pm). The curriculum will take a student through the basic skills required to become an Entry Level Plumber. This program provides students with a basic understanding of the materials, tools and processes used by plumbing professionals to complete residential and light-commercial plumbing assignments. Students learn safe-work practices, hand and power tool identification and operation, as well as the common fixtures and components used to assemble water and waste systems. The program also provides instruction on the design and installation of standard plumbing systems, plumbing applications to HVAC systems and specialty systems for recreation and irrigation. Safety will be taught throughout the entire 192 clock hour program. The focus of the program will be to help students understand the basics of the plumbing industry and the best ways to break into the industry as an entry level technician with an understanding of career, safety, plumbing tools, essential math, print-reading functions, and interpretation of plumbing codes required to execute standard plumbing services. Emphasis will also be put on how plumbers work with others. Time will be spent with students in how to communicate with co-workers, other employees, contractors, and homeowners. It is our goal at NTI to teach in a very hands-on, friendly atmosphere. It is anticipated that our Entry Level Plumbing Technicians' students will spend approximately 50% of their 192 clock hours in NTI's plumbing lab; where they will learn, hands-on, practical education that will benefit them greatly in the plumbing field. Throughout the entire program, students will participate in 9 different courses with specific objectives and outcomes. At the end of each course, there will be a final exam given to demonstrate that concepts and theories are understood by each student in a proficient manner.

***The Immersion program moves at a fast pace with half the lab hours of our traditional modality. It is highly encouraged that individuals enrolling in this class have a mechanical aptitude and prior/existing exposure to the trade.**

Entry Level Plumbing Technician			Traditional	Fusion
What is Plumbing and the History of Plumbing		Textbook	\$175	\$175
First Aid & Safety/Ensuring the Health & Safety of the public		Lab Material Fee	\$325	\$400
Tool of the Plumbing Trade and Basic Math for Plumbing		Tuition	\$9,495.00	\$7,220.00

Water Supply, Waste Disposal and Sewage Disposal		Total Cost	\$9,995.00	\$7,795.00
Mechanical Properties & Piping Materials & Joining methods for DWV & Pressure Pipe				
Plumbing Fixtures and Faucets				
Water Heaters				
Building Plans and Print Reading				
Drawings and Sketching				
Total Hours		192- Traditional	144- Fusion	
Textbook: Modern Plumbing 9 th edition, Copyright 2022, E. Keith Blankenbaker ISBN: 978-1-64564-668-6				

Entry Level Plumbing Technician (Immersion Model)*			Immersion*	
What is Plumbing and the History of Plumbing		Textbook	\$175	
First Aid & Safety/Ensuring the Health & Safety of the public		Lab Material Fee	\$325	
Tool of the Plumbing Trade and Basic Math for Plumbing		Tuition	\$5,895.00	
Water Supply, Waste Disposal and Sewage Disposal		Total Cost	\$6,395.00	
Mechanical Properties & Piping Materials & Joining methods for DWV & Pressure Pipe				
Plumbing Fixtures and Faucets				
Water Heaters				
Building Plans and Print Reading				
Drawings and Sketching				
Total Hours	100			
Textbook: Modern Plumbing 9 th edition, Copyright 2022, E. Keith Blankenbaker ISBN: 978-1-64564-668-6				
*The Immersion program moves at a fast pace with half the lab hours of our traditional modality. It is highly encouraged that individuals enrolling in this class have a mechanical aptitude and prior/existing exposure to the trade.				

Electrical Programs (Class sizes limit to 24)

A student with no electrical or maintenance experience can advance to a job-ready entry level Electrical Technician job with hands on training in just 3 months. Classes are held 4 days or evenings per week (8am – noon or 5pm to 9pm). The curriculum in the Entry Level Electrical Technician program is designed to help students understand the various aspects of electricity, and how it can be generated and controlled in different electronic systems. NTI will teach electricity in both the home and offices and all codes associated with both locations. Safety will be taught all along the way and throughout the entire 192 clock hour program. The focus of the program will be to help students understand the basics of the electrical industry and the best way to break into the industry as an entry level technician with an understanding of careers, safety, electrical mathematics, theory, tools, wiring and the landscape of electricity and how it fits into the “green” technology of today’s changing world. Emphasis will also be put on how electricians work with others. Time will be spent with students on how to communicate with co-workers, other employees, contractors, and homeowners. It is our goal at NTI to teach in a very hands-on, friendly atmosphere. It is anticipated that our Entry Level Electrical Technicians students will spend approximately 50% of their 192 clock hours in NTI’s electrical lab; where they will learn, hands-on, practical education that will benefit them greatly in the electrical field. Throughout the entire program, students will participate in 14 different courses with specific objectives and outcomes. At the end of each course, there will be a final exam given to demonstrate that concepts and theories are understood by each student in a proficient manner.

Entry Level Electrical Technician				
Entry Level Electrical Technician			Traditional	Fusion
Electrical Career and Trade		Textbook	\$175	\$175
Electrical Safety		Lab Material Fee	\$325	\$400
Electrical Mathematics and Metric System		Tuition	\$9,495.00	\$7,220.00
Electrical Concepts and Theory		Total Cost	\$9,995.00	\$7,795.00
Introduction to National Electrical Codes				
Grounding – Theory and Safety				
Electrician Tools and Proper Usage				
Wiring - Overview				
Wiring – Devices				
Wiring – Methods				
Wiring – Calculations				
Wiring – Requirements				
Electrical Industry in Today’s Green Technology				
Electrical Job Search and Soft Skills				
Total Hours		192- Traditional	144- Fusion	
Textbook: Modern Residential Wiring, 12 th edition, Copyright 2021 Harvey N. Holzman, ISBN:978-1-63563-880-6				

Course Listings

E101 Electrical I - Basic Electrical Theory

24 Hours- Traditional, 22 Hours- Fusion, 14 Hours- Immersion

FORMAT: Lecture and Lab

STUDY TO INCLUDE: Electron Theory, Basic Electrical Math, Ohm's Law, Basic Electrical Circuits, Series and Parallel Circuits, Schematics and Diagrams, Electrical Testing Instruments, Electric Motors, and Electrical Safety.

OBJECTIVE: Students will become familiar with basic electrical theory and fundamentals. The use of electrical testing equipment and basic hand tools will be covered and practiced. Circuit wiring will be studied and practiced in a lab environment.

E102 Electrical II - Electrical Application

24 Hours- Traditional, 17 Hours- Fusion, 14 Hours- Immersion

FORMAT: Lecture and Lab

STUDY TO INCLUDE: Industrial Control Circuits, Motor Controls, Starting and Running Circuits and Motor Protection. An emphasis will be placed on understanding and wiring control circuits. Electrical Safety will be emphasized.

OBJECTIVE: Students will become familiar with electrical components. Each student will build, and test circuits used in HVAC equipment and industrial controls. The use of hand tools and electrical test equipment will be studied and practiced in a lab environment.

A101 Air Conditioning & Refrigeration Fundamentals

32 Hours- Traditional, 26 Hours- Fusion, 16 Hours- Immersion

FORMAT: Lecture and Lab

STUDY TO INCLUDE: Refrigeration History, Refrigeration Theory, Thermal Laws, Components of a Refrigeration System, Refrigeration Cycle, Refrigerant Properties, Compressor Types, ARI Standards. Refrigeration Tool Usage, including Gauges, TP Chart, Soldering, Brazing. Safety will be emphasized.

OBJECTIVE: Students will understand the basic refrigeration cycle, the components that are common to refrigeration systems and the physical laws that apply. Upon completion the student will be able to competently Solder and Braze copper refrigeration fittings.

A102 Advanced Air Conditioning

32 Hours- Traditional, 23 Hours- Fusion, 16 Hours- Immersion

FORMAT: Lecture and Lab

STUDY TO INCLUDE: Review of Refrigeration Systems, Introduction to Duct Systems and Airflow, Refrigerant Controls, Electrical Controls, Air Conditioning Troubleshooting, Recovery, Evacuation and Recharge, Superheat and Sub-cool. Safety will be emphasized.

OBJECTIVE: Students will understand the use of test equipment and will comprehend superheat, sub-cooling, and airflow, and how to use these key indicators of system performance in the trouble shooting process.

A103 EPA Certification Seminar & Exam

8 Hours- Traditional, 12 Hours- Fusion, 10 Hours- Immersion

FORMAT: Lecture and Proctored Testing

STUDY TO INCLUDE: Students will become familiar with the E.P.A. Rule 608 40-CFR, part 82 subpart (f). Students will become familiar with types of certifications, theory on ozone loss, legal requirements regarding use and disposal of refrigerants containing CFC's. Proper recycling techniques, recovery techniques and refrigerant disposal will be covered.

OBJECTIVE: Students will be prepared to successfully complete the EPA608 Universal Certification exam, which will be given at the end of the 2-day EPA module.

NOTE: • ESCO Testing Fee: \$25.00 • Tuition includes taking the EPA Exam one time; Exam "retake" fee (if necessary) \$25.00

A104g Gas Heating Seminar

8 Hours- Traditional, 6 Hours- Fusion, 6 Hours- Immersion

FORMAT: Lecture and Lab

STUDY TO INCLUDE: Introduction to Gas Heating, Ignition Theory, Combustion Theory, Operational Controls and Safety Controls, Furnace Types. Safety will be emphasized.

OBJECTIVE: Students will learn the fundamentals of gas heating systems and components. Troubleshooting techniques will be studied and practiced in a lab environment. Safety practices will be covered.

A104h Heat Pump Seminar

8 Hours- Traditional, 8 Hours- Fusion, 4 Hours- Immersion

FORMAT: Lecture and Lab

STUDY TO INCLUDE: Heat Pump Theory, Design and Components and Troubleshooting Heat Pump systems. Safety will be emphasized.

OBJECTIVE: Students will learn the fundamentals of Heat Pump operation and system components, and troubleshooting techniques unique to Heat Pump systems will be covered.

A105 Commercial Refrigeration

32 Hours- Traditional, 8 Hours- Fusion

FORMAT: Lecture and Lab

STUDY TO INCLUDE: Types of Commercial and Industrial Refrigeration Equipment and Systems, Refrigeration System Components, and Troubleshooting Commercial Refrigeration Systems. Safety will be emphasized.

OBJECTIVE: Students will become familiar with commercial refrigeration systems and their components. Troubleshooting will be covered for commercial refrigeration systems. Students will study, troubleshoot, and repair commercial refrigeration systems in a lab environment.

A108 HVAC Troubleshooting

24 Hours- Traditional, 22 Hours- Fusion, 20 Hours- Immersion

FORMAT: Lecture and Lab

STUDY TO INCLUDE: Troubleshooting concepts and techniques, review of control circuits, review of refrigeration cycle. Lab practice on commercial and residential package and split units covering a wide variety of HVAC problems.

OBJECTIVE: To provide students with the knowledge and skills to successfully troubleshoot any type of problem associated with commercial and residential package or split HVAC systems.

F101 Blueprint Reading

8 Hours

FORMAT: Lecture

BOOKS: Blueprint Reading \$55

STUDY TO INCLUDE: Introduction to blueprints, sheet metal drawings, piping and plumbing drawings, electrical drawings, and air conditioning and refrigeration drawings.

OBJECTIVE: Upon completion of this course students will be able to interpret building plans, schematics, equipment schedules and drawings used to carry out the duties of a Facility Engineer.

F102 HVAC Central Plants

24 Hours

FORMAT: Lecture

BOOKS: HVAC&R 6-Part Series Workbooks \$100

STUDY TO INCLUDE: Complete system troubleshooting, air handling systems and calibration, chiller components, chiller leak check and electrical, cooling tower maintenance and troubleshooting, and condenser maintenance and troubleshooting.

OBJECTIVE: Upon completion of this course students will be able to describe all equipment that makes up an HVAC central plant, including chillers, chilled water systems, air handling systems, cooling towers, water treatment, and condensers. Students will be able to troubleshoot complete system problems, understand what maintenance is required and how to perform maintenance tasks.

F103 Boiler Operations

40 Hours

FORMAT: Lecture

BOOKS: Boiler Operator's Workbook (includes Interactive CD-ROM) \$95

STUDY TO INCLUDE: Boiler theory and principles, boiler construction and design, steam systems/ controls, water supply and water treatment systems/controls, fuel systems/controls, draft and flue gas systems/controls, instrumentation, and boiler operation, maintenance, and optimization.

OBJECTIVE: Upon completion of this course students will have knowledge of boiler operation, maintenance, and troubleshooting. Common boiler auxiliaries (including pumps and piping) as well as operating techniques will be covered. Safety will be stressed along with operating efficiency.

P101 What is Plumbing and the History of Plumbing

4 Hours- Traditional, 4 Hours- Fusion, 2 Hours- Immersion

FORMAT: Lecture and Lab

STUDY TO INCLUDE: Description of the plumbing industry and expectations in this career, Various career paths in the trade, Upper-level positions and roles, Requirements for a master's License, Value of on-the-job training.

OBJECTIVE: Students will become familiar with the plumbing industry and its history, various career paths, upper-level positions, and descriptions of roles. Understanding of the requirements to eventually obtain a master plumbers license and the value of on-the-job training.

P102 First Aid and Safety and Ensuring the Health and Safety of the Public

24 Hours- Traditional, 17 Hours- Fusion, 12 Hours- Immersion

FORMAT: Lecture and Lab

STUDY TO INCLUDE: Description of the safety related hazards in the plumbing industry both on the job and for the public. Understand various health hazards. Understanding of licenses, permits and inspection requirements. Safety techniques.

OBJECTIVE: Students will become familiar with the safety-related practices used in the plumbing industry including hazards on the job and for the public along with safety techniques. Also, the student will become aware of codes you will need to adhere to, licenses, permits and inspections used on the job.

P103 Tools of the Plumbing Trade and Basic Math for Plumbing

30 Hours- Traditional, 22 Hours- Fusion, 12 Hours- Immersion

FORMAT: Lecture and Lab

STUDY TO INCLUDE: Introduction and usage of basic tools used in the plumbing industry. Basic math used in everyday plumbing.

OBJECTIVE: Students will be able to describe and use typical standard tools used in the plumbing trade: Including: Torch kits, pipe wrenches, pipe cutters, tape measurers and other common tools. Students will also be taught basic math problem solving principles used in the plumbing trade including Solving problems using fractions, percentages, decimals.

P104 Water Supply, Waste Disposal and Sewage Disposal

32 Hours- Traditional, 28 Hours- Fusion, 12 Hours- Immersion

FORMAT: Lecture and Lab

STUDY TO INCLUDE: Introduction to Water Supply, Waste and Sewage Disposal. Principal waste hazards, health implications of plumbing.

OBJECTIVE: Students will be able to describe water hazards such as cross connections, how to prevent back siphonage problems and principal waste hazards. Proper usage of fixture traps. Students will also understand water sources such as: Municipal water supplies, Private systems, surface water, graywater etc. Cases of contamination.

P105 First Mechanical Properties and Piping materials and Joining Methods for DMV and Pressure Pipe

42 Hours- Traditional, 24 Hours- Fusion, 10 Hours- Immersion

FORMAT: Lecture and Lab

STUDY TO INCLUDE: Understanding Mechanical properties such as compression, tension; shear and stress lines. Learn how to work with beams and columns. How to attach structural loads. Proper use of pipe hangers and support.

OBJECTIVE: Students will have an understanding and work with vitrified clay pipe, steel pipe, concrete pipe. Students will perform Solder and Brazing. Usage of copper fitting and tubing. Cast iron cutting and joining and many other mechanical properties.

P106 Plumbing Fixtures and Faucets

24 Hours- Traditional, 26 Hours- Fusion, 10 Hours- Immersion

FORMAT: Lecture and Lab

STUDY TO INCLUDE: Introduction to standard plumbing fixtures and parts used in everyday plumbing installs in both residential and commercial settings.

OBJECTIVE: Students will have an understanding and install, fabricate and usage of Water Closets Flush Types; Flushometer, Dual Flush, Materials and finishes, Flushing Cycle, Water Closet rough in, Water closet configurations, Urinals and flushing methods, Bidets, Sinks Types, mounting Faucets, Water coolers and drinking fountains and more.

P107 Water Heaters

24 Hours- Traditional, 11 Hours- Fusion, 4 Hours- Immersion

FORMAT: Lecture and Lab

STUDY TO INCLUDE: Introduction to standard installation and repair of electric and gas water heaters.

OBJECTIVE: Students will perform water heater installation and other heating devices. Students will also learn about jackets and insulation, dip tubes, thermostats for both electric and gas devices and temperature and relief valves.

P108 Building Plans and Print Reading

6 Hours- Traditional, 6 Hours- Fusion, 2 Hours- Immersion

FORMAT: Lecture and Lab

STUDY TO INCLUDE: Introduction to standard planning and project designs.

OBJECTIVE: Students will understand the fundamentals of construction drawing and how to read drawings and how scales are used in planning.

P109 Drawings and Sketching

6 Hours- Traditional, 6 Hours- Fusion, 2 Hours- Immersion

FORMAT: Lecture and Lab

STUDY TO INCLUDE: Introduction to standard drawing terms in the construction industry.

OBJECTIVE: Students will understand drawing terms, working drawings, freehand sketching, sketching with drawing aids and symbols for detailed sketching.

ELET 101 Electrical Career and Trade

8 Hours- Traditional, 8 Hours- Fusion

FORMAT: Lecture and Lab

STUDY TO INCLUDE: Description of the electrical industry and expectations in this career, various career paths in the trade, upper-level positions and roles, requirements for a master's License. Value of on-the-job training. Study Techniques.

OBJECTIVE: Students will become familiar with the electrical industry, various career paths, upper-level positions, and descriptions of roles. Understanding of the requirements to eventually obtain a master electrician license and the value of on-the-job training. Techniques and methods to study.

ELET 102 Electrical Safety

16 Hours- Traditional, 9 Hours- Fusion

FORMAT: Lecture and Lab

STUDY TO INCLUDE: Description of the general safety rules in the electrical industry both on the job and for the public. Understand various health hazards. OSHA regulations. Personal protective equipment (PPE), proper procedures for use of ladder and scaffolding.

OBJECTIVE: Students will become familiar with the safety-related practices used in the electrical industry including health hazards, how current affects the body. Understanding of OSHA regulations and other safety rules including lockout and tagout procedures. The three types of Personal protective equipment (PPE). The proper procedures for use of ladder and scaffolding.

ELET 103 Electrical Mathematics and Metric System

8 Hours- Traditional, 7 Hours- Fusion

FORMAT: Lecture and Lab

STUDY TO INCLUDE: Introduction and usage of basic math used in the electrical industry. Introduction to metric system of measurement and how to read and use a tape measure.

OBJECTIVE: Students will be able to solve math problems using fractions, percentages, decimals. Perform correct calculations and measurements using measuring tape.

ELET 104 Electrical Concepts and Theory

28 Hours- Traditional, 16 Hours- Fusion

FORMAT: Lecture and Lab

STUDY TO INCLUDE: Introduction to electrical concepts and principles. Principal parts of an atom, law of charges and the importance of current flow, magnetic terms. Define ampere, volt, ohm, and watt. Complete circuit in series, parallel and series-parallel and solve for circuit values.

OBJECTIVE: Students will be able to describe the three principal parts of an atom. Understand the laws of charges and describe its importance to current flow. Explain electron current flow and contrast direct and alternating current. Students will be able to explain and define Ohm's Law, using formula charts. Be able to define ampere, volt, ohm, and watts. Learn and understand basic additional electrical theory and principles.

ELET 105 Introduction to National Electrical Codes

12 Hours- Traditional, 23 Hours- Fusion

FORMAT: Lecture and Lab

STUDY TO INCLUDE: Understanding the history of the National Electrical Code, how codes are formed, importance and the intent of the Code. Summarization and how to locate information in the Code book.

OBJECTIVE: After completing this course, the students will be able to describe the history of the National Electrical Code, explain how codes are formed, the importance and intent of the Code, the process of changing codes and how to locate information in the Code book.

ELET106 Grounding—Theory and Safety

12 Hours- Traditional, 9 Hours- Fusion

FORMAT: Lecture and Lab

STUDY TO INCLUDE: Learning service grounding for a single-family dwelling, learn the consequences of incorrect grounding or lack of ground. Understand GFCI (ground fault circuit interrupter) requirements and application for a single-family dwelling.

OBJECTIVE: Students will understand grounding and bonding along with the consequences of improper or lack of grounding. Students will also gain knowledge of NEC requirements for bonding wiring devices to outlet boxes and understand GFCI (ground fault circuit interrupter).

ELET107 Electrician Tools and Proper Usage

12 Hours- Traditional, 9 Hours- Fusion

FORMAT: Lecture and Lab

STUDY TO INCLUDE: Introduction and usage of basic tools used in the electrical industry.

OBJECTIVE: Students will be able to describe and use typical standard tools used in the electrical trade. Including: Basic hand tools, power tools and specialty tools.

ELET108 Wiring—Overview

12 Hours- Traditional, 9 Hours- Fusion

FORMAT: Lecture and Lab

STUDY TO INCLUDE: Introduction to how specifications are used in making electrical installations. Understanding of symbols and notations used in electrical drawings and explain how they are used. Basic types of uses and circuit breakers.

OBJECTIVE: Students will understand how specifications are used in making electrical installations. Understand which symbols and notations are used in electrical drawings and how they are applied in electrical work.

ELET109 Wiring—Devices

12 Hours- Traditional, 20 Hours- Fusion

FORMAT: Lecture and Lab

STUDY TO INCLUDE: Introduction to wiring-devices: Identify marking on single and duplex receptacles and the operation of each, operation of single pole, three ways, and four-way toggle switches. Operation of dimmers, fuse, circuit breaker and GFCI (ground fault circuit interrupter) and AFCI (arc-fault circuit interrupters).

OBJECTIVE: Students will learn and understand wiring devices which include Receptacles, switches, dimmer controls devices, fuses, circuit breakers, GFCI's and AFCI's.

ELET110 Wiring—Methods

12 Hours, 18 Hours- Fusion

FORMAT: Lecture and Lab

STUDY TO INCLUDE: Descriptions of NEC requirements for installation of NMC, MC cable, UF cable, and EMT. The correct wiring methods and identification of correct wiring connections for single-pole, three-way, and four-way switching as per NEC requirements.

OBJECTIVE: Students will learn and understand the NEC requirements for installation of NMC, MC cable, UF cable, and EMT. Understand correct wiring methods and identification of correct wiring connections for single-pole, three-way, and four-way switching as per NEC requirements.

ELET111 Wiring—Calculations

12 Hours- Traditional, 9 Hours- Fusion

FORMAT: Lecture and Lab

STUDY TO INCLUDE: How to determine the fundamental NEC requirements for calculating branch-circuit sizing and loading. Perform conduit fill calculations as per NEC requirements. Calculate box fill and choose the correct size box. Describe the proper size conductor and over current device for a circuit, given a receptacle or switch.

OBJECTIVE: Students will learn and understand how to determine the fundamental NEC requirements for calculating branch-circuit sizing and loading, perform conduit fill calculations as per NEC requirements, calculate box fill and choose the correct size box and describe the proper size conductor and over-current device for a circuit, given a receptacle or switch.

ELET112 Wiring—Requirements

12 Hours- Traditional, 5 Hours- Fusion

FORMAT: Lecture and Lab

STUDY TO INCLUDE: How to determine locations of receptacles, switches, and luminaries for a residential dwelling as per NEC. How to determine where GFCI protection is required in a residential dwelling unit.

OBJECTIVE: Students will learn and demonstrate how to use NEC requirements for locating receptacles, switches, and luminaries for residential dwellings. Layout the NEC requirements for GFCI protection locations for residential dwellings. Cable layout for various rooms in a residence.

ELET113 Electrical Industry in Today's Green Technology

20 Hours- Traditional, 1 Hour- Fusion

FORMAT: Lecture and Lab

STUDY TO INCLUDE: Introduction to Green Technology, solar and wind technologies, U.S. Green Building Council, Leadership in Energy and Environmental Design's (LEED) Green Building Rating System. Employment opportunities for electricians in green technology.

OBJECTIVE: Students will be able to define green technology and know the four major goals of this developing technology. Students will have an understanding solar and wind technologies, U.S. Green building Council, Leadership in Energy and Environmental Design's (LEED). Students will also learn and discover employment opportunities for electricians in green technology.

ELET114 Electrical Job Search and Soft Skills

16 Hours- Traditional, 1 Hour- Fusion

FORMAT: Lecture and Lab

STUDY TO INCLUDE: Introduction to different ways of seeking employment in the electrical trade. Understanding the hiring process. Completing the job application and interviewing successfully.

OBJECTIVE: Students will learn job search techniques, completion of applications and how to prepare for interviews. Students will also build cover letters and resumes. Practice for interviews. Learn behaviors that will make a positive impression during the job interview.

Traditional Program Offerings

Certified HVAC/R Technician		Entry Level Plumbing Technician		Entry Level Electrical Technician	
Start Date	End Date	Start Date	End Date	Start Date	End Date
12/18/2023	3/21/2024	12/18/2023	3/21/2024	12/18/2023	3/21/2024
4/1/2024^	6/21/2024^	4/1/2024^	6/21/2024^	4/1/2024^	6/21/2024^
7/1/2024	9/24/2024	7/1/2024	9/24/2024	7/1/2024	9/24/2024
10/07/2024*	1/16/2025**	10/07/2024*	1/16/2025**	10/07/2024**	1/16/2025**

^Friday Graduation/End Date
**Winter Break exact dates to be announced

Fusion Program Offerings

Certified HVAC/R Technician		Entry Level Plumbing Technician		Entry Level Electrical Technician	
Start Date	End Date	Start Date	End Date	Start Date	End Date
11/27/2023	12/21/2023	11/27/2023	12/21/2023	11/27/2023	12/21/2023
1/8/2024	2/1/2024	1/8/2024	2/1/2024	1/8/2024	2/1/2024
2/12/2024	3/7/2024	2/12/2024	3/7/2024	2/12/2024	3/7/2024
3/18/2024	4/11/2024	3/18/2024	4/11/2024	3/18/2024	4/11/2024
4/22/2024	5/16/2024	4/22/2024	5/16/2024	4/22/2024	5/16/2024
5/28/2024	6/21/2024 [^]	5/28/2024	6/21/2024 [^]	5/28/2024	6/21/2024 [^]
7/1/2024	7/26/2024 [^]	7/1/2024	7/26/2024 [^]	7/1/2024	7/26/2024 [^]
8/5/2024	8/29/2024	8/5/2024	8/29/2024	8/5/2024	8/29/2024
9/9/2024	10/3/2024	9/9/2024	10/3/2024	9/9/2024	10/3/2024
10/14/2024	11/7/2024	10/14/2024	11/7/2024	10/14/2024	11/7/2024
11/18/2024	12/13/2024 [^]	11/18/2024	12/13/2024 [^]	11/18/2024	12/13/2024 [^]

[^]Friday Graduation/End Date

Immersion Program Offerings

*The Immersion program moves at a fast pace with half the lab hours of our traditional modality. It is highly encouraged that individuals enrolling in this class have a mechanical aptitude and prior/existing exposure to the trade.

Certified HVAC Technician		Entry Level Plumbing Technician (Immersion Model)	
Start Date	End Date	Start Date	End Date
10/4/2024	11/16/2024	10/4/2024	11/16/2024
4/4/2025	5/17/2025	4/4/2025	5/17/2025

Other Program Offerings

Facilities Engineer Program – Dates to be determined.

*All program dates are subject to change

Students must be registered 4 weeks prior to the start date for fusion programs.

Students must be fully registered before the start date for traditional programs.

Students cannot be added to a program after registration deadlines.

Students may withdraw at any point during the program. All withdrawals are subject to the NTI refund policy.

DISCLAIMER: Students receiving VA benefits are welcome to enroll in any of our programs. However, please be advised that VA benefits do not cover any of the online programs we offer (Immersion or Fusion).