

IUOE Local 95 Training Fund Associates Degree Program



Our Training Moves the World

Carl Luis
Union Co-Chairman

John Greenwald
Management Co-Chairman

Jason Amenta
Treasurer



International Union of Operating Engineers

Local 95 Training Fund

Our Training Fund is a Taft Hartley fund that was founded in 1996 by Local 95. It is administrated by a board of trustees that include both Union and Management trustees from our signatory contracts and has provided consistently over 20,000 hours of training each year to our students.

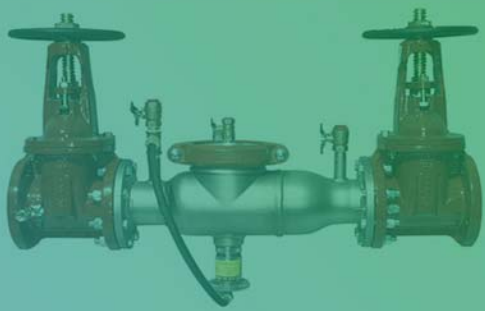
Since its inception our training program has expanded opportunities and provided job security to our members. It is the foundation of our industry partnership that includes over 100 companies at 140 locations and continues to improve their competitiveness and the economic stability of our area. We also help fill critical shortages in skilled workers to meet the challenges of our facilities, and the latest modern technology.

Our training program is the cornerstone of our success as a labor organization and the key to our continued success, particularly in view of the current environmental awareness and new energy initiatives.

Stationary Engineers are professionals who repair and maintain mechanical equipment to help buildings and companies operate effectively. As conscientious building operators, we are already hard wired to run equipment safely and efficiently, optimize the life of the equipment and provide occupant friendly environments for our clients whether it is indoor air quality, new lighting technologies, energy savings or life safety.

In today's current office structure and setting, energy performance and space conditioning is paramount. Two things drive this, new technology and our labor. Our innovative training programs provide our members with the tools to meet this challenge and ensure that employers who invest in good stationary engineers will be rewarded with a highly skilled employee, and a sound return of their investment.

The IUOE Local 95 Training Fund Board



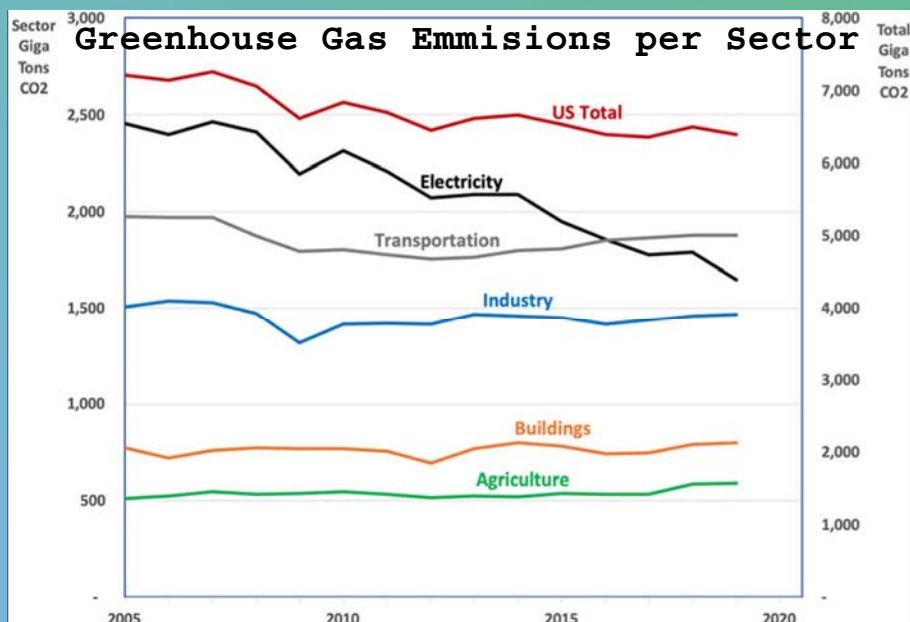
OUR CRAFT CONTRIBUTES TO YOUR BOTTOM LINE

Stationary engineers, with their intense training and specialized skills, are already some of the most significant contributors to cost effective, safe, and efficient energy use, which also helps reduce America's dependence on foreign oil. Our unique, comprehensive Energy Conservation Training Program will assist both public and private sector employers improve their bottom line.

Reaching the Employer's Goals



By providing opportunities to our members to expand their knowledge and improve their skills, we can increase their productivity and job security. Local 95 remains committed to providing every imaginable opportunity to allow our members to excel in their craft.



EMPLOYER Sponsored Apprentice Engineer Program

Section 1. This Article is intended to provide a means of on-the-job and classroom training to produce qualified and competent engineers.

Section 2. The apprentice engineer will be provided with on-the-job training under the supervision of a licensed engineer.

Section 3. This Article shall be subject to review annually and may be modified if both parties agree, otherwise it shall remain in full force and effect for the duration of this Agreement.

Section 4. The Standard Length Of Apprenticeship Is 48 Months

During apprenticeship, The Employer has the option of starting a new employee anywhere on Apprentice scale by taking into consideration their past experience and schooling. The apprentice shall be required to complete at least one (1) of the following courses or modules each semester in order to progress on the wage scale. The Employer reserves the right and may elect to advance the apprentice at a faster rate, at which time the apprentice may be required to complete more than one module per semester. Each successfully completed 39-hour course/module shall be the equivalent of a 5% increase along the scale of advancement. The Employer may also choose to determine the offered course(s) to better meet the facility's needs. Should the Employer require additional course training beyond the apprenticeship, provisions will be made to allow for, and compensate the Employee without affecting the scale of advancement.

1. Basic Electricity for Stationary Engineers

- a) Part I
- b) Part II

2. HVACR

- a) Part I
- b) Part II
- c) Part III
- d) Part IV

3. High Pressure Steam and Boiler Mechanics

4. PLC and DDC Controls

- a) Part I
- b) Part II

5. Plumbing

- a) Part I
- b) Part II

6. Industrial Maintenance

- a) Part I
- b) Part II

7. Industrial Electric

- a) Part I
- b) Part II

Section 5. The apprentice shall receive the following rates of pay.

<u>Service</u>	<u>% of Journeyman's Hourly Rate & Pension</u>	<u>Course</u>	<u>NIULPE LICENSE</u>
6 Months	65%	39 hour module	
12 Months	70%	39 hour module	
18 Months	75%	39 hour module	
24 Months	80%	39 hour module	4 th Class
30 Months	85%	39 hour module	
36 Months	90%	39 hour module	3 rd Class
42 Months	95%	39 hour module	
48 Months	100%	39 hour module	2 nd Class

Section 6. The apprentice must be properly licensed per NIULPE schedule “C” and obtain a City of Pittsburgh Stationary Engineers License prior to a journeyman's assignment, Otherwise the apprentice shall remain at 95%.

Facility Maintenance Programs and Specialized Training



Training Today, for a Better Tomorrow

**Commercial, Industrial, Production,
Medical, Educational, Sports and
Entertainment Venues.**



Education Director

Carl Luisi

Education Administrator

Dana O'Neill

The IUOE Local 95 Training Fund

Training TODAY for TOMORROWS Jobs.



The Local 95 Training fund not only offers specialized skilled training in the field of facility maintenance and green building operation, but steam, high pressure boiler, chiller and building operation, retro commissioning, energy conservation, digital controls and electrical theory and maintenance.

Our training platform is also accredited with the City of Pittsburgh for Continuing Education Credits towards the City Power Engineer License, City Electrical License and the HVAC Mechanical License.

Our training can be custom tailored for your needs, if there is a course or program that you need, please contact us so that we can work together to make sure that your training needs are met.

The Local 95 Training Fund offers MANY specialized courses throughout the course of the year that may not be listed in this catalog. Scan the QR code below to receive the latest updates and notifications for every class and course and be sure to never miss a thing!



Air Conditioning and Refrigeration Systems

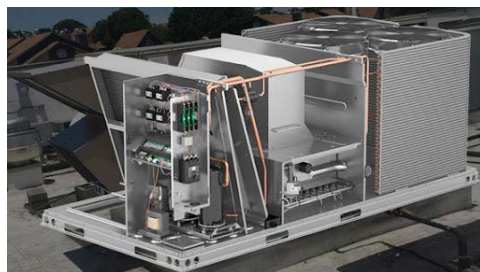
Part 1-4

Receive extensive classroom instruction and hands on training on the latest equipment and technologies in all phases of refrigeration, heating, and air conditioning for residential, commercial and industrial settings.

This course consists of 4 semesters, 13 weeks each semester (39 hours) for a total of 52 weeks (156 hours)

Topics covered:

- Heat, Temperature, and Pressure
- Matter and Energy
- Refrigeration and Refrigerants
- Safety, Tools and Equipment, and Shop Practices
- General Safety Practices
- Tools, Instrumentation, and Equipment
- Tubing and Piping
- Leak Detection, System Evacuation, and System Cleanup
- Refrigerant and Oil Chemistry and Management—Recovery, Recycling, Reclaiming, and Retrofitting
- System Charging
- Automatic Controls
- Introduction to Automatic Controls
- Automatic Control Components and Applications
- Advanced Automatic Controls—Direct Digital Controls (DDCs) and Pneumatics
- Electric Motors
- Types of Electric Motors
- Application of Motors
- Motor Controls
- Troubleshooting Electric Motors
- Commercial Refrigeration
- Evaporators and the Refrigeration System
- Condensers
- Compressors
- Expansion Devices
- Special Refrigeration System Components
- Special Refrigeration Applications
- Air-Conditioning (Heating and Humidification)
- Hydronic Heat
- Indoor Air Quality
- Air-Conditioning (Cooling)
- Comfort and Psychrometrics
- Refrigeration Applied to Air-Conditioning
- Residential Energy Auditing
- All-Weather Systems
- Section Divider: Domestic Appliances
- Room Air Conditioners
- Commercial Air-Conditioning and Chilled-Water Systems
- High-Pressure, Low-Pressure, and Absorption Chilled-Water Systems
- Cooling Towers and Pumps
- Operation, Maintenance, and Troubleshooting of Chilled-Water Air-Conditioning Systems
- Commercial, Packaged Rooftop, Variable Refrigerant Variable Air Volume Systems



Plumbing Design and Installation

Part 1-2

The Local 95 plumbing program comprises lecture and laboratory classes at CCAC for 3 credits a semester, which may be applied toward the Stationary Operating Engineer associate degree.

This course consists of 2 semesters, 13 weeks each semester (39 hours) for a total of 26 weeks (78 hours)

Topics covered:

- The Plumbing Trade
- Job Site Safety
- Plumbing Math
- Plumbing Materials
- Plumbing Tools and Equipment
- Joining, Installing, and Supporting Pipe
- Sanitary Drainage, Vent, and Stormwater Drainage Piping
- Sizing Sanitary Drainage and Vent Piping
- Plumbing Traps
- Sizing Water Supply Piping
- Protecting the Potable Water Supply
- Plumbing Fixtures and Appliances
- Sustainable Plumbing
- Testing and Inspecting Plumbing Systems
- Customer Service and Plumbing System Repair



DDC Controls and Building Automation

Part 1-2

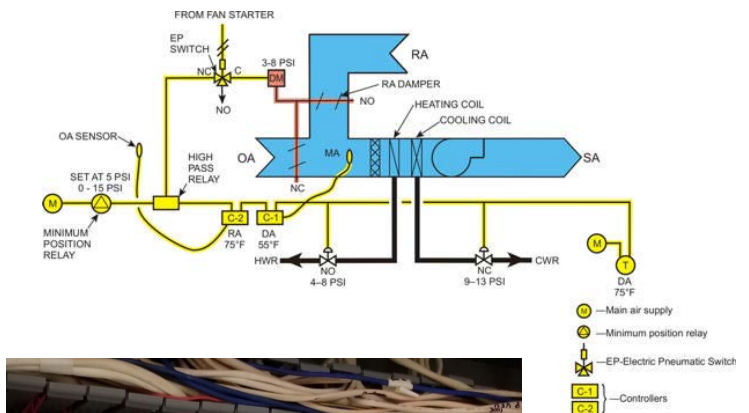
The building automation system allows building related equipment to be centrally monitored, adjusted, and controlled. Building automation systems take in analog and digital information from sensors, make decisions based on time of day and desired setpoints, and send commands to controllers and actuators. Centralized programming and control optimize building energy usage and occupant comfort.

The Local 95 DDC Controls course is comprised of lecture, theory and hands on lab.

This course consists of 2 semesters, a 13 weeks each semester (39 hours) for a total of 26 weeks (78 hours)

Topics covered:

- DDC and Electrical Safety
- Electrical Principles DDCs/PLCs
- Electrical Circuits and DDCs/PLCs
- DDC/PLC Hardware
- DDC/PLC Programmable Instruction
- DDC/PLC Timers and Counters
- System interfacing
- Installations and start up
- Programming
- System maintenances
- Trouble-shooting principles and test instruments



NIULPE License Prep Class 1 and 2

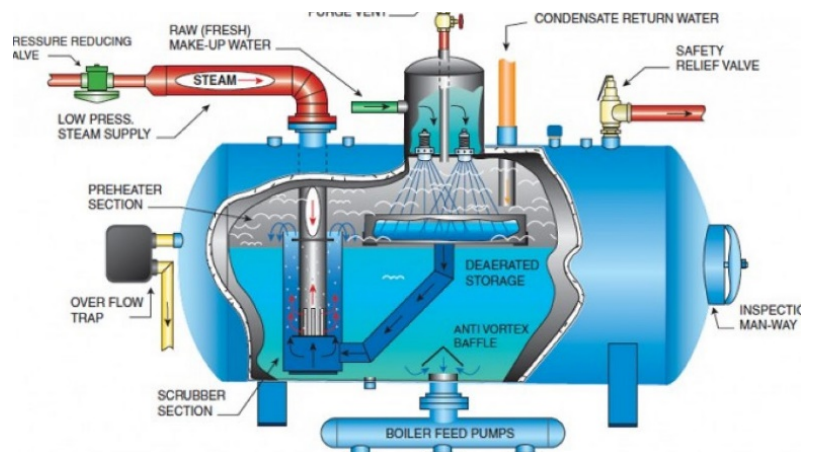
The NIULPE License is the pre-cursor to obtaining the City of Pittsburgh Power Engineer License. This Preparatory course covers the necessary material and theory needed to successfully pass the testing in order to achieve your City License.

The Local 95 NIULPE Prep course is comprised of lecture and theory.

This course is a 13-week semester (39 hours)

Topics covered:

- HVAC theory
- Electrical theory
- Stationary Engineering Principles
- Boilers
- Steam and Water Fittings and Accessories
- Fuels and Combustion
- Boiler Calculations and Mathematical Formulas
- Boiler Operation and Maintenance
- Steam Turbines
- Steam Turbine Operation and Maintenance
- Water Treatment
- Electrical Principles
- Steam Management
- Computer-Integrated Control Systems
- Licensing Examination Preparation—Third, Second, and First Class



Chief Engineer Certificate

The Chief Engineer Certificate program is designed to develop, promote and advance the leadership skills needed for those seeking to move into a Lead or Chief position.

The Local 95 Chief Engineer course is comprised of lecture and theory.

This course is a 12-week semester (36 hours)

Topics covered:

- Benefits of an Internal Work Force
- Budget Preparation
- Computer Application
- Energy Conservation
- Health & Safety
- Human Relations
- Personal Hygiene
- Customer Service skills
- Resolution Conflict
- Dealing with difficult Employees and Customers
- Planning & Time Management
- Recommended Skill Levels
- Recordkeeping
- Reports & Presentations



Basic Electricity

Part 1-2

The Local 95 Basic Electricity program comprises lecture and laboratory classes.

This course consists of 2 semesters, 13 weeks each semester (39 hours) for a total of 26 weeks (78 hours)

Topics covered:

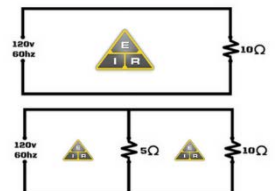
Safety, Basic Electricity, And Ohm's Law
Electrical Quantities And Ohm's Law
Static Electricity
Magnetism
Resistors
Basic Electric Circuits
Series Circuits
Parallel Circuits
Combination Circuits
Meters And Wire Sizes
Measuring Instruments
Using Wire Tables And Determining Conductor Sizes
Small Sources Of Electricity
Conduction In Liquids And Gases
Batteries And Other Sources Of Electricity
Magnetic Induction
Basics Of Alternating Current
Basic Trigonometry And Vectors
Alternating Current
Alternating Current (Ac) Circuits Containing Inductance
Inductance In Ac Circuits
Resistive-Inductive Series Circuits
Resistive-Inductive Parallel Circuits
Ac Circuits Containing Capacitors
Capacitors
Capacitance In Ac Circuits
Resistive-Capacitive Series Circuits
Resistive-Capacitive Parallel Circuits
Section Divider: Ac Circuits Containing Resistance-Inductance-Capacitance
Resistive-Inductive-Capacitive Series Circuits
Resistive-Inductive-Capacitive Parallel Circuits
Surge, Spike, And Lightning Protection
Three-Phase Power
Three-Phase Circuits
Single-Phase Transformers
Three-Phase Transformers
Dc Machines
Dc Generators
Dc Motors
Ac Machines
Three-Phase Alternators
Three-Phase Motors
Single-Phase Motors
Motor Installation
Harmonics



I = Current
E = Voltage
R = Resistance

Basic Electrical Theory

$$I = \frac{E}{R}$$



High Pressure Steam Boiler

The High Pressure Steam Boiler program is designed for preparing for high pressure boiler operator and facility operating engineer licensing.

This course provides a comprehensive overview of the safe and efficient operation of high pressure steam boilers and related equipment. The latest combustion control technology, as well as EPA regulations and their implications.

The Local 95 High Pressure Steam Boiler course is comprised of lecture and theory.

This course is a 13-week semester (39 hours)

Topics covered:

- Steam Boilers
- Boiler Systems
- Steam Boiler Fittings
- Steam Systems
- Feedwater Systems
- Water Treatment
- Combustion Equipment
- Fuels and Combustion
- Combustion and Boiler Controls
- Draft Systems
- Instrumentation and Control Systems
- Steam Boiler Operation



Industrial Maintenance

Part 1-2

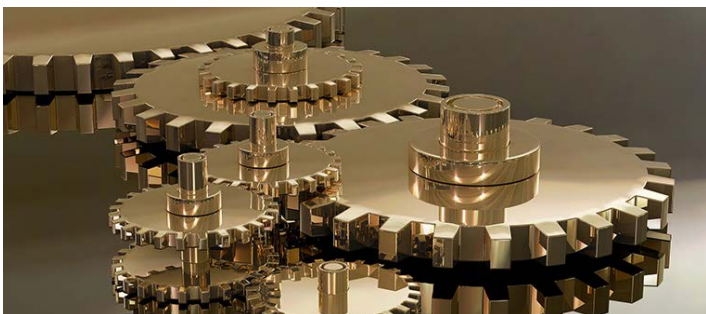
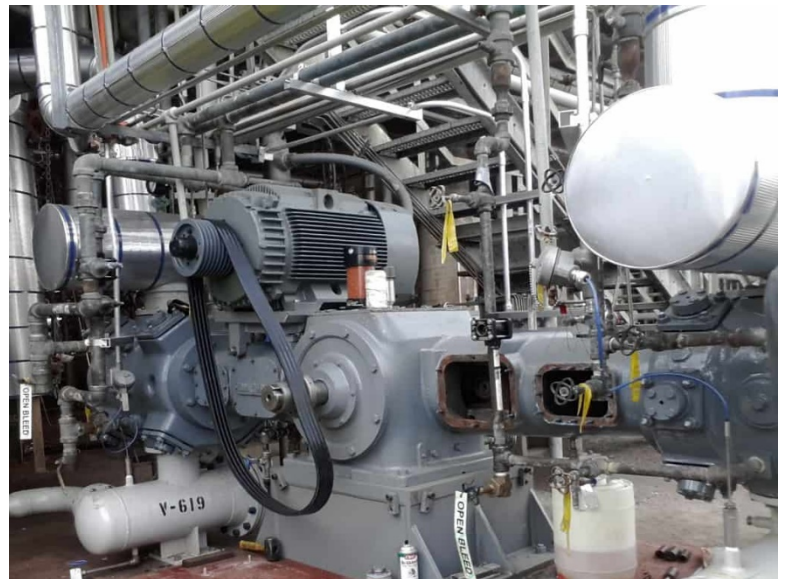
The Local 95 Industrial Maintenance Course presents real-world maintenance problems and solutions, along with equipment operation principles, maintenance management procedures, and troubleshooting scenarios for commercial and industrial settings.

The Local 95 program comprises lecture and theory.

This course consists of 2 semesters, 13 weeks each semester (39 hours) for a total of 26 weeks (78 hours)

Topics covered:

- Safety
- Maintenance and Troubleshooting Principles
- Workplace Safety
- Printreading
- Service and Repair Principles
- Mechanical Drives
- Electrical Systems
- Electronic Systems
- Refrigeration Systems
- Boiler Systems
- HVAC Systems
- Fluid Power Systems
- Efficiency and Sustainability



Industrial Electric

Part 1-2

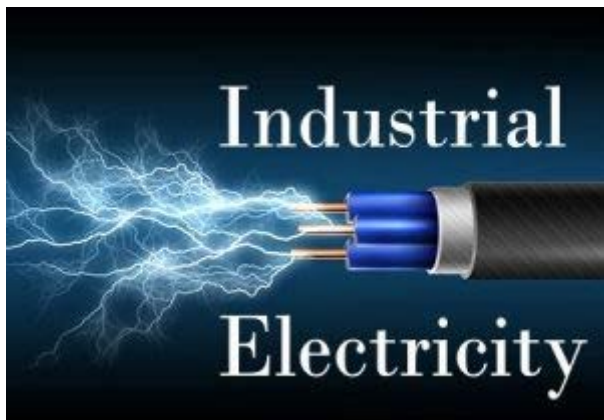
The Local 95 Industrial Electric Course presents the essentials of electrical theory in a clear, current, logical manner to help you master both fundamental concepts and more advanced subjects relevant to the field of industrial electricity. Coverage begins with foundational topics like electrical symbols and drawings, current, voltage, resistance, and power, while subsequent chapters introduce series, parallel, and combination circuits, and resistive and reactive circuits. As well as a thorough discussion of advanced subjects such as rotating machinery, motor controls, transformers, electronic drives, and PLCs, as well as practical information on key real-world applications of electrical theory, including installation, maintenance, and troubleshooting.

The Local 95 program comprises lecture and theory.

This course consists of 2 semesters, 13 weeks each semester (39 hours) for a total of 26 weeks (78 hours)

Topics covered:

- Safety
- Electrical Fundamentals
- Test Equipment
- Basic Resistive Electrical Circuits
- Alternating Current
- Reactive Circuits And Power Factor
- Conductor Types And Sizes
- Electrical Installation
- Magnets And Magnetism
- Transformers And Electrical Distribution
- Dc Machines
- Ac Machines
- Control And Controlled Devices
- Motor Control Circuits
- Variable Frequency Drives (Vfds)
- Programmable Controllers (Plcs And Pacs)
- Lighting
- Predictive And Preventive Maintenance



Print reading for Installing and Troubleshooting Electrical Systems

The Local 95 Print reading for Installing and Troubleshooting Electrical Systems course covers the essential print reading skills needed to safely install and troubleshoot common residential, commercial, and industrial electrical systems. The course focuses on print reading fundamentals, symbols, print elements, and construction documentation.

This course consists of 1 semester, 13 weeks (39 hours)

Topics covered:

- Printreading Fundamentals
- Residential and Commercial Electrical Symbols
- Industrial Electrical and Electronic Symbols
- Electrical Drawings and Plans
- Electrical and Electronic Diagrams
- Construction and Maintenance
- Residential and Commercial Power and Lighting Systems
- VDV Systems
- Fire Alarm and Security Systems
- HVAC Systems
- Industrial Control Systems
- Industrial Power Systems
- Wiring Methods
- Fluid Power Systems
- Process and Instrumentation Systems



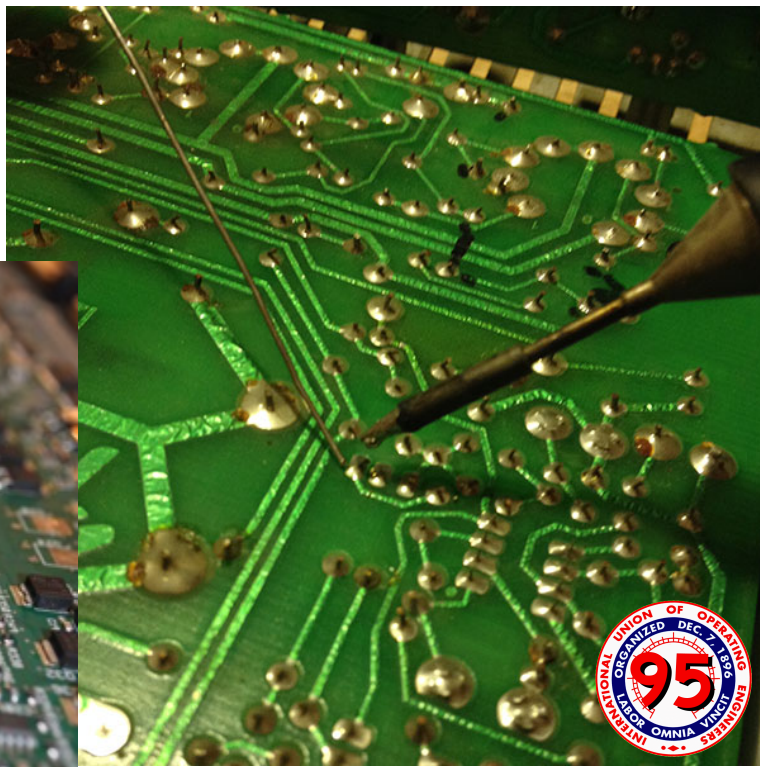
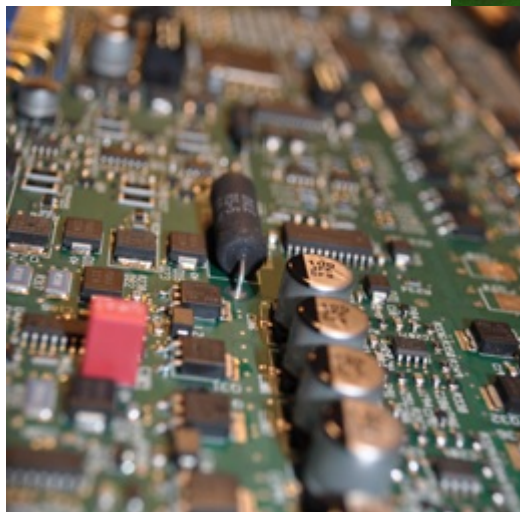
Solid State Devices and Systems - Repair and Maintenance

Solid State Devices and Systems presents a comprehensive overview of solid state devices, circuits, troubleshooting, repair and maintenance.

Component and circuit construction, operation, and installation are done in a hands on learning lab.

This course consists of 2 semesters, 13 weeks each semester (39 hours) for a total of 26 weeks (78 hours)

- Symbols, Circuits, and Safety
- Test Instruments
- Printed Circuit Board Construction and Troubleshooting
- Soldering and Desoldering
- Diode Applications and Troubleshooting
- DC Power Supply Operation and Troubleshooting
- Power Sources and Renewable Energy
- Transducer Applications and Troubleshooting
- Bipolar Junction Transistors (BJTs)
- Transistors as Amplifiers
- JFETs, MOSFETs, and IGBTs
- Silicon-Controlled Rectifiers (SCRs)
- Triacs, Diacs, and Unijunction Transistors
- Operational Amplifiers and 555 Timers
- Photonics
- Digital Electronics Fundamentals
- Solid State Relays
- Solid State Technology in Programmable Controllers



Infra Red Thermal Imaging Certification



NFPA 70E states that only qualified persons may work on or near energized electric circuits. Since infrared inspections of electrical equipment will often require a thermographer to come in close proximity to exposed live conductors, **thermographers must be Qualified Persons in order to comply with the standard.**

This 32 hour class covers the theory and applications of infrared thermography in the preventive maintenance, quality assurance, condition monitoring and nondestructive testing of materials fields. This class focuses on qualitative thermography and how to collect data, capture clear thermograms, perform diagnostics and follow proven and published inspection procedures. Upon completion of the course an exam will be offered on accepted ASTM, ISO, NFPA, NETA, IEEE, OSHA, EPRI, and BINDT methodologies.

An overview of the most common applications include:

- | | |
|---------------------------------|-------------------------------------|
| Electrical distribution systems | Nondestructive testing of materials |
| Mechanical systems | Steam systems |
| Refractories | Underground piping |
| Active thermography | Building envelopes |
| Low-slope roofs | |

This course fully meets the educational requirements for certification in accordance with Recommended Practice No. SNT-TC-1A, as defined by the American Society for Nondestructive Testing.

Infection Control Risk Assessment (ICRA) Classes and Training

For Healthcare Maintenance, Construction and Renovation



Many hospitals are now requiring that contractors be trained in ICRA and its process' before starting or performing work within their facility. Are You Compliant?

Hospitals are constantly undergoing some form of expansion, renovation or construction to respond to changes in healthcare delivery, emerging technology or demographics. At the same time, regulatory focus on the reduction of hospital-acquired infections has increased the importance of a well-developed infection control risk assessment (ICRA) process related to maintenance, construction and renovation.

Why ICRA?

Health care-associated infections, or HAIs, are infections that people acquire while they are visiting a hospital or receiving treatment for another condition in a health care setting. HAIs can be acquired anywhere health care is delivered, including birthing and neonatal facilities, inpatient acute care hospitals, outpatient settings such as ambulatory surgical centers, cancer centers, end-stage renal disease facilities, and long-term care facilities such as nursing homes and rehabilitation centers. HAIs may be caused by any infectious agent, including bacteria, fungi, and viruses, as well as other less common types of pathogens by disturbing or contacting the surrounding areas.

How Does This Happen?

- Construction (Adding new space)
- Renovation (Updating rooms or facility space)
- Update existing facilities equipment (nurse call stations, fire control systems, TV systems)
- Remediation tasks (Removal of mold or asbestos)
- Repair or replacement of existing equipment (Removing ceiling tiles or cutting dry wall to access equipment)
- Maintenance (Replacing lighting in ceiling tiles or painting walls)
- Demolition (Removing ceiling tiles. Ripping down walls. Removing existing infra-structure)

Did you know that:

According to the Centers for Disease Control:

- About 1.8 million patients suffer annually from care-related infections
- HAIs are the fourth leading cause of death in the U.S.
- HAIs will kill 99,000 people this year
- HAIs kill more people than AIDS, breast cancer and auto accidents combined.

Hospital-acquired infections account for **\$40 billion** in excess healthcare costs each year. 2 million estimated infections per year X \$20-25K per infection

(Average additional hospital costs when a patient contracts an infection) = \$40 Billion

ICRA

Infection Control Risk Assessment (ICRA) compliance is now a required part of working in Healthcare Facilities. Our program teaches the ICRA standards and protocols and the reasoning for them, along with the construction of infection control containments and barriers. Our Program is playing an important part in training and education for hospitals in response to a critical industry need.

Our Classes And Training Are Not Union Exclusive, Our Training Is Available To Everybody!!!

For more information on classes or onsite training for the ICRA 8 or ICRA 16



Solar Installation, Fundamentals and Overview

The Local 95 Refrigerants course explains in detail the use, introduction, replacement and retrofit of solar photovoltaic (PV) cells, modules, and system components; electrical circuits; PV system design and sizing for use on homes, commercial building etc., understanding energy conversion from sunlight to electricity, and working with solar conversion equipment.

This course is approved by the City of Pittsburgh for continuing education credits towards the City Engineer License, and City Electrical license.

(4 hours)

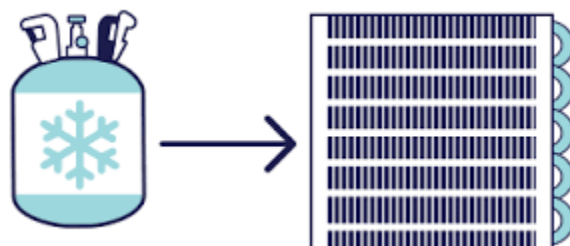


Alternative Refrigerants and Equipment

The Local 95 Refrigerants course explains in detail the use, introduction, phase out, replacement, how to reclaim and retrofit new and alternative refrigerants and oils within all types of equipment, throughout the industry.

This course is approved by the City of Pittsburgh for continuing education credits towards the City Engineer License, and City HVAC License.

(4 hours)



Pump Fundamentals and Overview

The Local 95 Pump Fundamentals course is a dynamic course that covers troubleshooting of various types of pumps and pumping systems, valves, controls, pump seals, repair, maintenance and set up.

This course is approved by the City of Pittsburgh for continuing education credits towards the City Engineer License.

(4 hours)



Nurse Call Station Installation, overview and Trouble shooting

The Local 95 Nurse Call Overview course is recommended for anyone working on or involved with hospital maintenance. The course covers the setup, installation techniques and troubleshooting of nurse call stations and the ancillary equipment that ties into and is controlled by the system.

This course is approved by the City of Pittsburgh for continuing education credits towards the City Engineer License, and City Electrical License.

(4 hours)

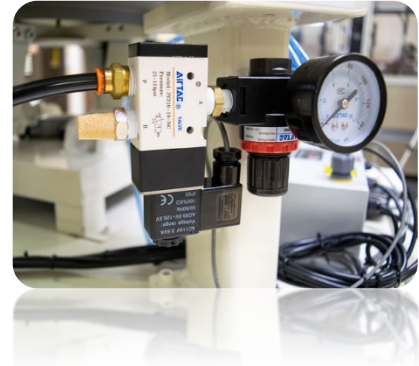


Pneumatics Overview, Troubleshooting and Theory

The Local 95 Pneumatics course introduces and explains the basic principles, laws and components used in pneumatic / electropneumatic systems. It covers the equipment required, operating principles and symbols for the different components used in commercial and industrial applications.

This course is approved by the City of Pittsburgh for continuing education credits towards the City Engineer License.

(4 hours)



EPA 608 Certification

The EPA requires that all persons who maintain, service, repair or dispose of appliances that contain ozone depleting refrigerants be certified in proper refrigerant handling techniques.

The Local 95 EPA course covers in detail, The EPA requirements, phase out, attaching and detaching hoses and gauges to and from equipment for diagnostics and service, adding refrigerant, replacement, and how to reclaim refrigerants and oils within all types of systems.

This course is approved by the City of Pittsburgh for continuing education credits towards the City Engineer License.

(15 hours)



Type I Certification – For Small Appliances (5lbs or less of refrigerant)

Type II Certification – For Medium-, High-, and Very-High Pressure Appliances

Type III Certification – For Low-Pressure Appliances

Universal Certification – For anyone who possesses Type I, Type II and Type III Certifications

Dust Barrier and Containment Construction

In today's working environment it is more critical than ever to protect the air quality of the space that you are working in and the surrounding areas. From smells to dust and debris generation, painting, sanding, stripping floors, conducting light to moderate renovation or overhead ceiling work and mold remediation. The Local 95 Dust Barrier course covers the theory, practice and construction techniques of Dust Barriers and Containments.

This course is approved by the City of Pittsburgh for continuing education credits towards the City Engineer License.

(4 hours)



Rigging for Engineers

You may not realize it, but rigging is used every day in the maintenance and engineering field from lifting pumps, motors, bell ends and chiller components, to moving filing cabinets, chemical drums, furniture and pallets, rigging safety is paramount.

The Local 95 Rigging course is recommended for anyone working in the maintenance field. The course covers rigging theory, installation techniques, safe practices and use of equipment needed for lifting and moving.

This course is approved by the City of Pittsburgh for continuing education credits towards the City Engineer License.

(4 hours)



FLAT - STRAIGHT G-Link™	FLAT - STRAIGHT Web Sling Hook Synthetic Sling Saver Shackle	FLAT - STRAIGHT High Performance Sling Connector
Rounded - Curved	"Corner" Loading - Wrong	Round - Curved
Bunching	Wrong	Non-Optimal Relationship

OSHA Training

OSHA CLASSES

Bloodborne Pathogens & Ergonomics
Electrical & Safety Related Work Practices
Hand & Portable Powered Tools
Hazard Communication and Safety Data Sheets (SDS)
Global Harmonization (GHS)
Hazardous Material-Medical/First Aide
Introduction to OSHA
Lockout/Tagout and Material Handling
Machine Guarding and Hearing Conservation
Means of Egress & Fire Protection,
Welding, Cutting & Brazing
Permit Required Confined Spaces & Personal Protective Equipment (P.P.E.)
Walking & Working Surfaces, Recordkeeping
Scissor lift and aerial platforms



Health Hazard	Flame	Exclamation Mark
<ul style="list-style-type: none">• Carcinogen• Mutagenicity• Reproductive Toxicity• Respiratory Sensitizer• Target Organ Toxicity• Aspiration Toxicity	<ul style="list-style-type: none">• Flammables• Pyrophorics• Self-Heating• Emits Flammable Gas• Self-Reactives• Organic Peroxides	<ul style="list-style-type: none">• Irritant (skin and eye)• Skin Sensitizer• Acute Toxicity (harmful)• Narcotic Effects• Respiratory Tract Irritant• Hazardous to Ozone Layer (Non Mandatory)
Gas Cylinder	Corrosion	Explosive Bomb
<ul style="list-style-type: none">• Gases under Pressure	<ul style="list-style-type: none">• Skin Corrosion/ burns• Eye Damage• Corrosive to Metals	<ul style="list-style-type: none">• Explosives• Self-Reactives• Organic Peroxides
Flame over Circle	Environment (Non Mandatory)	Skull and Crossbones
<ul style="list-style-type: none">• Oxidizers	<ul style="list-style-type: none">• Aquatic Toxicity	<ul style="list-style-type: none">• Acute Toxicity (fatal or toxic)

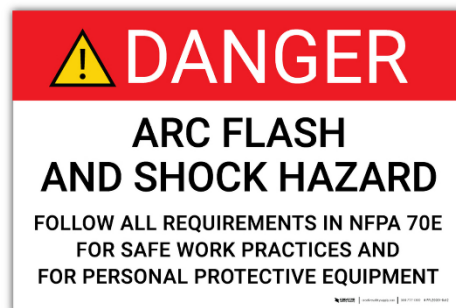
NFPA 70E Overview and Awareness

The Local 95 NFPA 70E course is ideal for all workers whose job responsibilities may expose them to electrical hazards. The course explains common electricity hazards, risk assessment strategies and NFPA and OSHA resources on electrically safe work practices, working on energized (hot) systems, Arc Flash- how it occurs, and the hazards involved as well as focusing on updated Content for the New 70E Standard.

Other topics include:

- Personal Protective Equipment (PPE) and other recommended equipment
- Hazards and protections associated with alternating current (AC) as well as direct current (DC)
- The requirement for an EEWP (energized electrical work permit)
- How to manage the boundaries

This course is approved for City Power Engineer License and City Electrical License
(4 hours)



Fire Damper Safety and Overview

Fire, smoke, and combination dampers are essential to your building's fire safety. Dampers are your building's first responders to fire, instantly activating to mitigate fire spread. Both national and local regulations require regular damper maintenance.

The Local 95 Fire Damper course covers safety, fire damper codes, types of inspections, damper selection and local requirements.

This course is approved for City Power Engineer License and City HVAC Mechanical License (4 hours) or (8 hours)



VFD systems-Theory, Operational Overview and Energy Savings

A Variable Frequency Drive controls the speed of an AC motor by varying the frequency supplied to the motor, thereby controlling the amount of energy consumed by supplying power only on an as needed basis.

Other topics include:

- Theory of Operation
- VFDs compared to Motor Starters
- Drive Configurations
- Volts/Hertz Discussion
- Pulse Width Modulation (PWM)
- Reactors
- Motor Considerations
- Energy Savings

This course is approved for City Power Engineer License City HVAC mechanical, and City Electrical License (4 hours)



TAB - testing and balancing for air and water systems

Part 1

Part 2

Part 3

Each module is 4 hrs.

The TAB specialist performs air and hydronic measurements on the HVAC systems and adjusts the flows as required to achieve optimum performance of the building environmental equipment. The balancing is usually based upon the design flow values required by the Mechanical Engineer.

HVAC system surveys

Indoor air quality testing

Exhaust system troubleshooting

HVAC sound and vibration testing

Temperature control system verification

Air and hydronic system balancing and troubleshooting

Pressure and duct system leak testing and investigations



Water Treatment Operator 1st Class

This course is designed to provide training to facility engineers, maintenance and technicians in the proper handling, understanding and treatment of all water based processes (hot/chilled loops, boiler treatment, cooling towers, potable water and waste water) in commercial, industrial, food processing, laundry and healthcare facilities.

- Non-Boiler Water Treatment
- Water Chemistry and Analysis
- Water Pretreatment I
- Water Pretreatment II
- Internal Water Treatment
- Water Treatment Management

Upon completion of this course, the student has the ability to apply to N.I.U.L.P.E. to test for the Water Treatment Operator 1st class license.

This course is approved for City Power Engineer License
(12 hours)



The International Union of Operating Engineers **Local 95 Pittsburgh** is pleased to announce that we are a Pennsylvania Registered Apprenticeship Training Provider.

Apprenticeships are innovative training programs that allow employers to develop and prepare their future workforce while providing individuals with a learn-while-you-earn approach to career development.

EMPLOYER SPONSORED Apprenticeships include:

- **Paid Job** - Apprentices are paid employees who produce high-quality work while they learn skills that enhance their employers' needs.
- **On-the-Job Learning** - Develops skilled workers through structured learning in a work setting.
- **Classroom Learning** - Improves job-related skills through education in a classroom setting (virtual or in-person).
- **Mentorship** - Provides apprentices with the support of a skilled worker to assist and enhance critical hands-on learning.
- **Credentials** - Offers a portable, nationally recognized credential to be issued at the completion of the program.



Why Register Your Program?

Graduates of apprenticeship programs receive a national, industry recognized credential, and registration means the program has met national and independent standards for quality and rigor. Registration tells prospective employees, customers and suppliers that the business invests in its workforce and believes employees are its most important asset.

Only registered apprenticeships have access to certain federal and state funding programs, such as the GI Bill (which provides supplemental support to veterans engaged in apprenticeship), the Workforce Investment and Opportunity Act (which may provide wage reimbursements to the employers or wrap around services for apprentices) and PA workforce development grants.

Registering your program is easy, and involves four main steps:

Step #1: Develop your apprenticeship program

Step #2: Complete your registration paperwork

Step #3: Register your apprenticeship program with the State

Step #4: Launch and maintain your program

As a State recognized and registered Apprenticeship training provider, the Local 95 Training Fund is able to work with you, help develop your program, and provide the required classroom training necessary to get approved.



94% of apprentices who complete an apprenticeship retain employment, with an average annual salary of \$70,000.

APPRENTICE



Workers who complete apprenticeship programs earn approximately \$300,000 more during their career than their peers who do not. And many apprentices are able to earn credits towards an advanced degree while avoiding student debt.



IUOE International Training and Education Center

The International Training & Education Center, is the largest and most comprehensive training facility for union Operating and Stationary Engineers in North America. This world-class facility was designed by a blue-ribbon panel of Local Training Coordinators and IUOE staff to develop and improve the skills of our members, instructors, and staff in order to meet the needs of our members and our industry. The training center will augment and enhance the training opportunities delivered by our local union programs and demonstrates our commitment to high-quality skills training to our signatory contractors, general contractors, and owners.





Training Center Overview

This state-of-the-art facility contains everything needed to develop the skills of the IUOE professionals who operate and maintain critical stationary equipment.

Located in Crosby, Texas, the ITEC offers:

- 300 acre campus
- Classrooms, labs and simulators
- High-end training equipment
- Central plant designed for hands-on training
- 8,000 square foot conference space
- Private rooms, fitness center and full dining facilities
- Shuttle service to nearby Houston area airports

More information and videos about the International Training & Education Center can be found at www.iuoe.org



International Training & Education Center

Welcome to the International Training & Education Center (ITEC), a premier training facility serving union stationary engineers in North America. The ITEC was designed by union training directors and industry experts to meet the critical needs of our members and signatory employers throughout the United States and Canada.

The International Union of Operating Engineers is dedicated to workforce excellence. Our investment in training ensures that the skills of our members and instructors will provide our union employers and industry partners with a competitive advantage.



Stationary Engineer Training



International Union of Operating Engineers



A Central Plant Built for Training

The training center's physical plant was designed with stationary training in mind. Troubleshooting and analysis can be done on operating plant equipment, and redundant systems can be taken offline for maintenance training.

The spacious plant footprint allows the instructor and trainees room to work on the equipment and conduct a variety of hands-on training classes.

Training can easily transition from the plant floor to the classroom, or to the solar panels on the rooftop.



Meeting the Critical Training Needs of Employers

The ITEC offers the advanced training that provides IUOE employers with a clear advantage. Curriculum includes:

- Building Automation Systems
- Variable Frequency Drives
- PLC Programming and Troubleshooting
- Sustainability and Emerging Technology
- Electrical Troubleshooting
- Pump Maintenance
- Safety and OSHA classes
- HVACR Operation & Maintenance
- Boiler Operations & Maintenance
- Regulatory Compliance
- Workplace Communication and Leadership
- Customized training to meet specific employer needs

Employers interested in touring the facility or receiving more information may email: moreinfo@iuoe.org



Stationary Engineers Get the Job Done

Stationary engineers perform a variety of duties in commercial and industrial settings. We operate and maintain equipment at hotels, office buildings, data centers, schools, hospitals, power plants, refineries, manufacturing sites and other facilities.

The ITEC provides opportunities for IUOE members to learn essential skills of the trade, upgrade journey level skill sets, and stay current on the latest technology and equipment.

Register for Classes Today

Visit www.iuoe-itr.org for schedules and registration information.

I.U.O.E. Local 95 Training Fund

Our Training Moves the World



SCAN for
Classes and Training