

# 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.

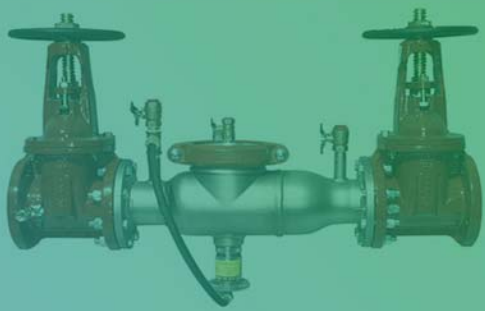
Since its inception our training program has expanded opportunities and provided job security to our members. It is the foundation of our industry partnership that includes over 100 companies at 140 locations and continues to improve their competitiveness and the economic stability of our area. We also 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



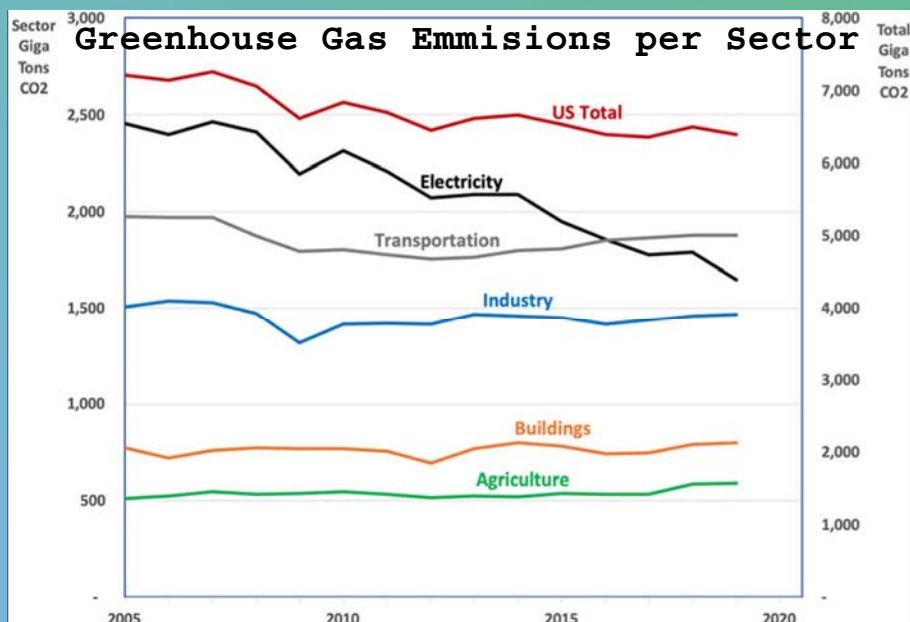
# OUR CRAFT CONTRIBUTES TO YOUR BOTTOM LINE

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.



## **STATIONARY OPERATING ENGINEERS ASSOCIATES DEGREE**

Local 95 has entered into a partnership with Community College of Allegheny County by which our students, Apprentices and Journeymen can earn an Associates Degree.

Our members can earn Fifty (50) college credits by taking classes that are offered and paid for by the Training Program and twenty-one (21) credits offered by Community College of Allegheny County at their own expense.

Seventeen (17) trade classes are currently offered and paid for by the International Union of Operating Engineers Local 95 Training Fund to all eligible members..

Classes should be completed as much in the following sequence as possible:

<u>First Semester</u>	<u>Credits</u>
SOE 101 Electricity 1	3
SOE 102 HVACR 1	3
SOE 103 Plumbing 1	<u>3</u>
	<b>9</b>
 <u>Second Semester</u>	
SOE 110 HVACR 2	3
SOE 111 Electricity 2	3
SOE 112 Plumbing 2	3
SOE 114 High Pressure Steam Boilers	<u>3</u>
	<b>12</b>
 <u>Third Semester</u>	
SOE 201 Industrial Maintenance 1	3
SOE 202 Industrial Electricity 1	3
SOE 203 HVACR 3	3
SOE 204 Direct Digital Control 1	3
SOE 205 Chief Engineer Training	<u>2</u>
	<b>14</b>
 <u>Fourth Semester</u>	
SOE 210 Industrial Maintenance 2	3
SOE 211 Industrial Electricity 2	3
SOE 212 HVACR 4	3
SOE 214 Direct Digital Control 2	3
SOE 215 City Engineer License Refresher & Testing	<u>3</u>
	<b>15</b>
 <u>Total Credits</u>	<b>50</b>

Classes offered by Community College of Allegheny County:

### **Stationary Operating Engineers Associates Degree Program**

#### **Required General Education**

CIT	Computer Elective	3
ENG 101	English Composition I	3
ENG 103	Technical Communications	3
MAT 191	Math for the Industries	3
SPH 101	Oral Communications	3
PHS 161	Physical Science for the Industries	3
PSY 215	Organizational Psychology	<u>3</u>
		<b>21</b>

Program Total **71**

Students who successfully complete the Seventeen (17) trade classes will receive a certificate of completion in Stationary Operating Engineering.

Students who successfully complete the required twenty-four (24) classes will receive a Stationary Operating Engineers Associates Degree.



Community College of Allegheny County

## **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 &amp; 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 <sup>th</sup> Class
30 Months	85%	39 hour module	
36 Months	90%	39 hour module	3 <sup>rd</sup> Class
42 Months	95%	39 hour module	
48 Months	100%	39 hour module	2 <sup>nd</sup> 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%.



# College Degree Program 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.**

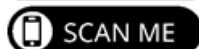


The Local 95 Training fund not only offers college credit courses, but also offers specialized training in the field of maintenance and engineering.

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

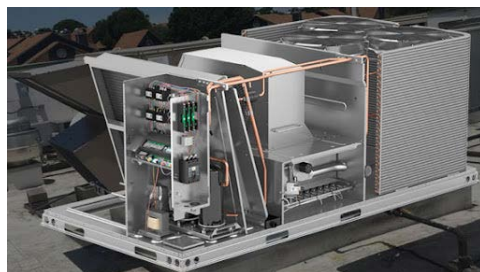
## Part 1-4

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 (3 credits a semester), 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

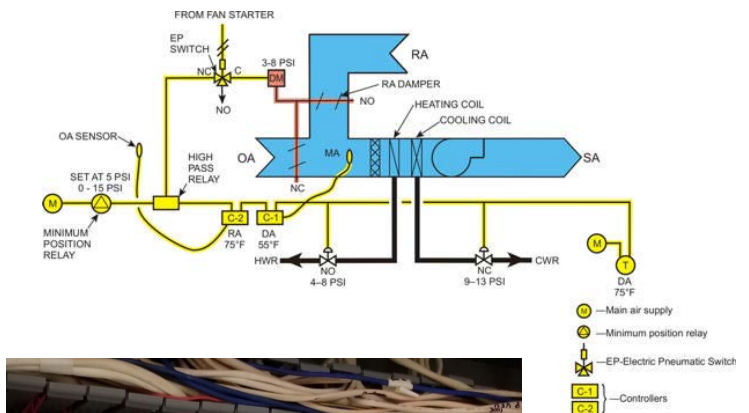
The building automation system allows building related equipment to be centrally monitored, adjusted, and controlled. Building automation systems take in analog and digital information from sensors, make decisions based on time of day and desired setpoints, and send commands to controllers and actuators. 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 for 3 credits a semester, which may be applied toward the Stationary Operating Engineer associate degree.

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

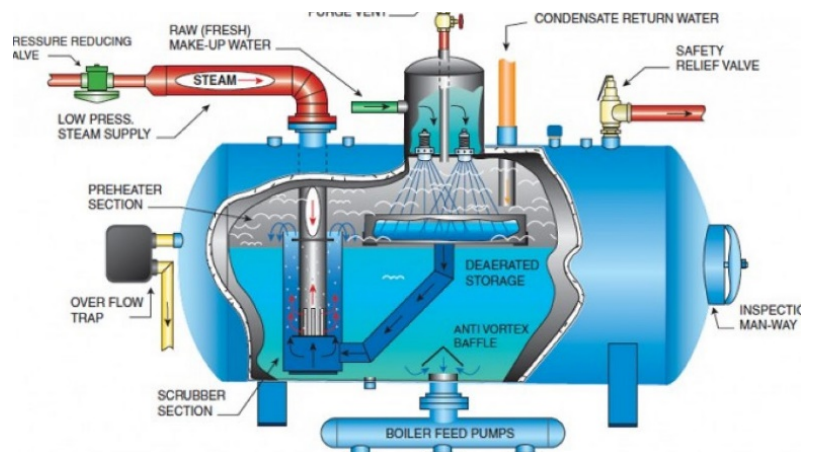
The NIULPE License is the pre-cursor to obtaining the City of Pittsburgh Power Engineer License. This Preparatory course covers the necessary material and theory needed to successfully pass the testing in order to achieve your City License.

The Local 95 NIULPE Prep course is comprised of lecture and theory for 3 credits, which may be applied toward the Stationary Operating Engineer associate degree.

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 for 2 credits, which may be applied toward the Stationary Operating Engineer associate degree.

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 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:

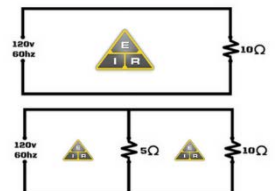
Safety, Basic Electricity, And Ohm's Law  
Electrical Quantities And Ohm's Law  
Static Electricity  
Magnetism  
Resistors  
Basic Electric Circuits  
Series Circuits  
Parallel Circuits  
Combination Circuits  
Meters And Wire Sizes  
Measuring Instruments  
Using Wire Tables And Determining Conductor 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 for 3 credits, which may be applied toward the Stationary Operating Engineer associate degree.

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

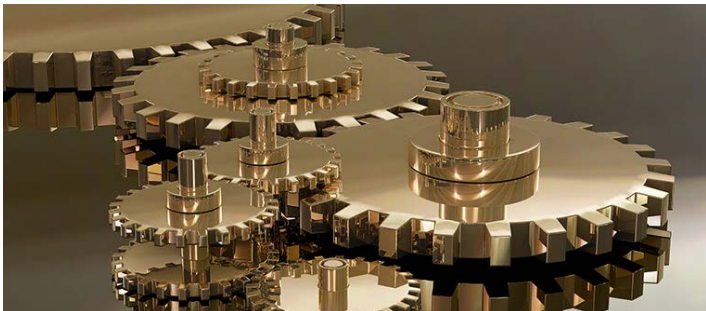
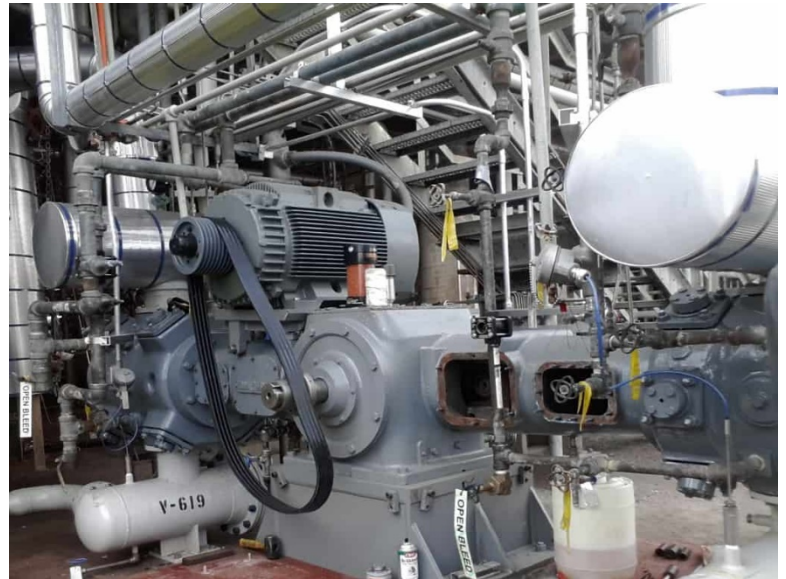
The Local 95 Industrial Maintenance Course presents real-world maintenance problems and solutions, along with equipment operation principles, maintenance management procedures, and troubleshooting scenarios for commercial and industrial settings.

The Local 95 program comprises lecture and theory for 3 credits/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:

- 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

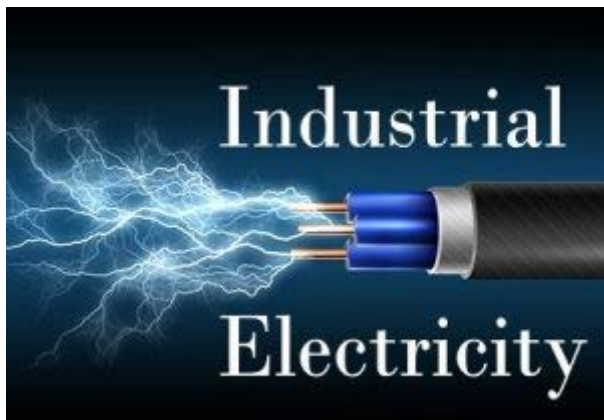
The Local 95 Industrial Electric Course presents the essentials of electrical theory in a clear, current, logical manner to help you master both fundamental concepts and more advanced subjects relevant to the field of industrial electricity. Coverage begins with foundational topics like electrical symbols 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 for 3 credits/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:

- 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

## Part 1-2

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



# 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

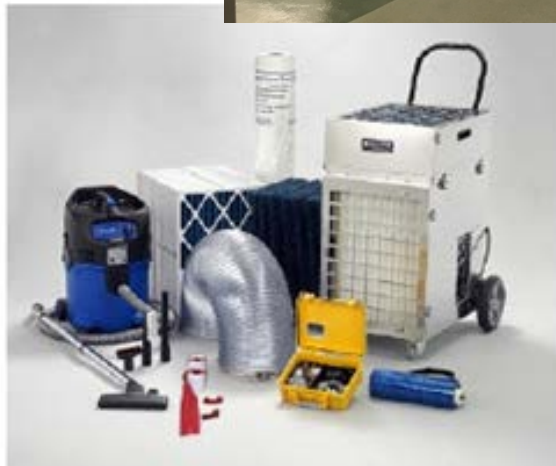
(Average additional hospital costs when a patient contracts an infection) = \$40 Billion

## 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)

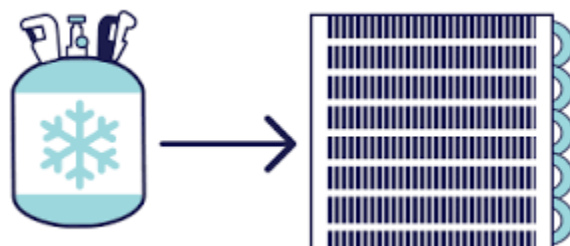


## Alternative Refrigerants and Equipment

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)

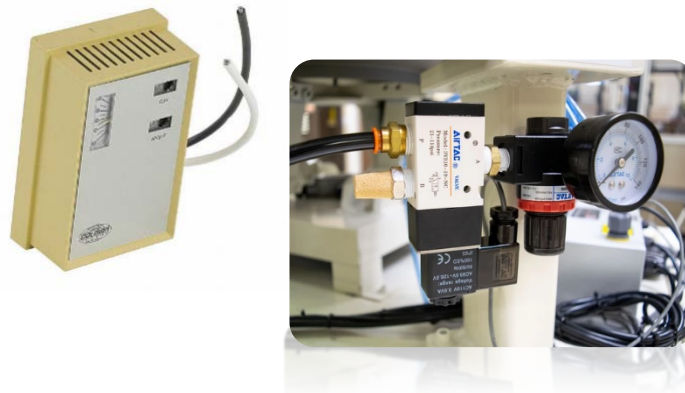


# Pneumatics Overview, Troubleshooting and Theory

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

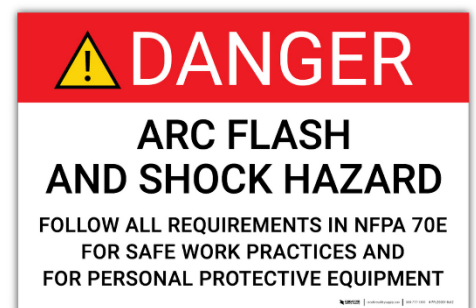
## NFPA 70E Overview and Awareness

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)



# Water Treatment Operator 1<sup>st</sup> 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 1<sup>st</sup> 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.**

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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.



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

## Our Training Moves the World



SCAN for  
Classes and Training