



# LOCAL 39

## TRAINING DEPARTMENT

**NEW  
FOR  
SPRING  
2024**

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**OPEN  
ENROLLMENT**  
Monday,  
November 20,  
2023 – Friday,  
December 22,  
2023



Apprentices in action

# Spring 2024

# COURSE CATALOG

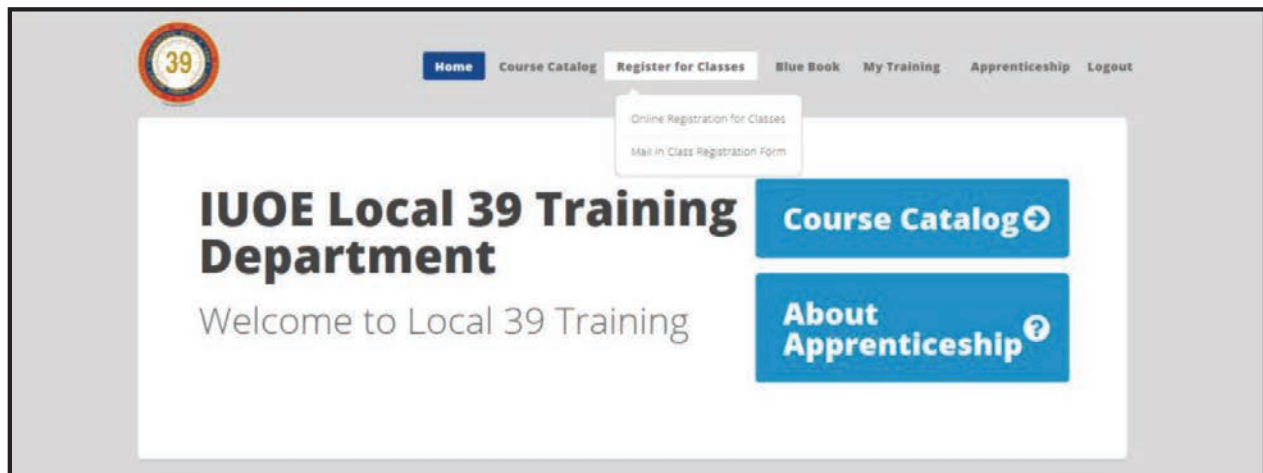
Online Enrollment Required for all Classes



## FEE CATEGORIES

**Member of a Contributing Employer:** A Local 39 member whose employer contributes money to the Local 39 Training Fund annually by Union contract. This member receives the lowest registration rate for Local 39 sponsored classes and seminars. If the student registers for a full semester, job-related course at a community college or regional occupation center, (with prior approval).

**Member of a Non-Contributing Employer:** A Local 39 member whose employer does not contribute money to the Training Fund. This member receives a higher registration rate than a member of a contributing employer. Registration for a full semester, job-related course at a community college or regional occupational center is not subject to reimbursement by the Local 39 Training Department.



## EQUAL OPPORTUNITY PLEDGE

(Updated July 10, 2017)

### Position on Discrimination, Harassment, Intimidation, and Retaliation

Northern California & Northern Nevada Stationary Engineers Joint Apprenticeship and Advisory Committee and Stationary Engineers Local 39 Joint Apprenticeship Committee of Northern Nevada (collectively referred to as "Stationary Engineers Joint Apprenticeship Committee") are committed to maintaining apprenticeship programs free from discrimination, harassment, intimidation, and retaliation.

### Equal Opportunity Pledge

Stationary Engineers Joint Apprenticeship Committee, as a sponsor, will not discriminate against apprenticeship applicants or apprentices based on race, color, religion, national origin, sex (including pregnancy and gender identity), sexual orientation, genetic information, or because they are an individual with a disability or a person 40 years or older.

Stationary Engineers Joint Apprenticeship Committee, as a sponsor, will take affirmative action to provide equal opportunity in apprenticeship and will operate the apprenticeship program as required under Title 29 of the Code of Federal Regulations, part 30, and equal employment opportunity regulation of the State of California and State of Nevada.



## ADDITIONAL FEES:

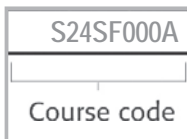
Transcripts and verification of records from previous semesters are available for an administrative fee of \$50.00 per request. All requests must be submitted in writing to the administrative office and include the timeframe in which the classes were taken, along with your Local 39 Union Register ID Number.

A \$35 fee will be charged for checks returned due to non-sufficient funds ("NSF"). Any other fees incurred due to returned checks or declined credit card payments will be charged to the student.

## ATTENDANCE POLICY

For seminars, the registered students must attend the entire seminar to get a certificate of completion. For 18 week courses, the maximum number of absences allowed are two. After that the instructor has to talk to the coordinator to make sure that the student does not fall too far behind. For multi day seminars, the student will only get a certificate if they complete the full seminar.

## EXPLANATION OF CLASS SCHEDULE



When looking at the course listings, please note that they are color coded by location. The location colors below should help you to find courses in your preferred location. The second item is the course code. This includes the semester and year, the location and the course ID.

Location colors:

CONCORD	SACRAMENTO
FRESNO	SAN FRANCISCO
HAYWARD	SAN JOSE
RED BLUFF	RENO

## REFUND/CANCELLATION POLICY

Full refunds will be issued when a class is sold out or has been cancelled. Registrants who wish to withdraw from a class must notify the Local 39 Training Department no later than seven business days prior to the start of the class, course or seminar in order to be eligible for a full refund or to transfer to another class. Requests for a refund or transfer into another class made after the deadline will result in the forfeiture of the registration fee.

Class registration is Member specific and is non-transferrable.

## WEBSITE INFORMATION

The Local 39 Training Department website can be accessed at [www.local39training.org](http://www.local39training.org). The site offers information on training courses, Apprenticeship, upcoming seminars and current news.



## HOW TO ENROLL

Stationary Engineers Local 39 Training Department reserves the right to change our fee categories, registration terms and conditions, to make changes to any of our courses, certification classes and seminars described in this catalog, or to change a course location, or cancel a course/class at any time without liability.

Our Training Programs are only available to Local 39 Members in Good Standing. Local 39 Members who are on "Withdraw" Status are allowed to register for classes as long as they have properly withdrawn from the Union. They may take classes for a period covering two full semesters or one year at the "Member of Non-Contributing Employer" rate from the date of withdraw. Thereafter the Member would not be eligible to register and take any more classes until re-employed by another Union employer under contract. Active members must provide their IUOE Local 39 Membership Card Union Register Number when registering for a course/class and must show their ID card upon Check-In at the Training Facility or at the Jobsite.

Online enrollment for training classes is available for all Local 39 members. To register for courses, visit [www.local39training.org](http://www.local39training.org). You'll need to register on the website in order to view the course catalog online. Once you've registered and logged in, you may browse the catalog on the website and select the courses for which you wish to enroll. Once you've finished making your selections, you can pay for your courses via PayPal, using your PayPal account or a credit card.

	S	M	T	W	T	F	S	Start Date	Times	
<b>SAC</b>							S	01/30/2021	12:30 pm to 4:30 pm	Select Training -- \$40.00
<b>SF</b>							S	02/20/2021	12:30 pm to 4:30 pm	Select Training -- \$40.00

Add the course to your Shopping Cart by selecting the **Select Training** button next to the course. You can view your shopping cart by selecting the **View Cart** button. Once you have finished adding your courses, click on the **Proceed to Check Out** button in the shopping cart. Click on "Submit" to complete the transaction.

Early Registration is encouraged to ensure we have enough participants to hold a course/class. Registration forms are available on our website at [www.local39training.org](http://www.local39training.org). Registration forms that are incomplete or do not include your Union ID number or a form of payment will not be processed, and space WILL NOT be held.

We accept VISA, MASTER CARD, AMERICAN EXPRESS AND DISCOVER credit cards. If your ATM card features any of the



above symbols, it will be accepted as well. Save yourself time by simply completing the registration form and faxing it to our office at (415) 285-6916.





# Online Enrollment for all Courses/Seminars/Webinars

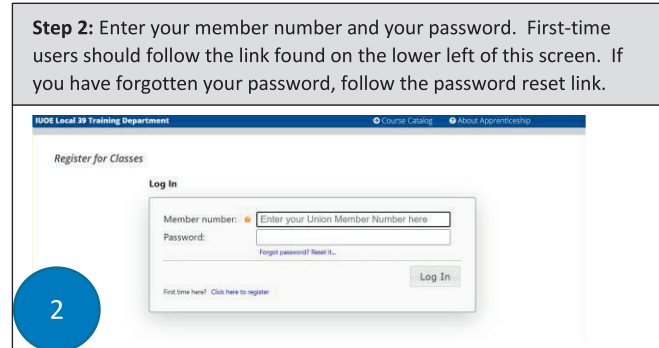
## HOW TO ENROLL ONLINE

To view this catalog and enroll in classes, visit [www.local39training.org](http://www.local39training.org). Follow these steps to register online:

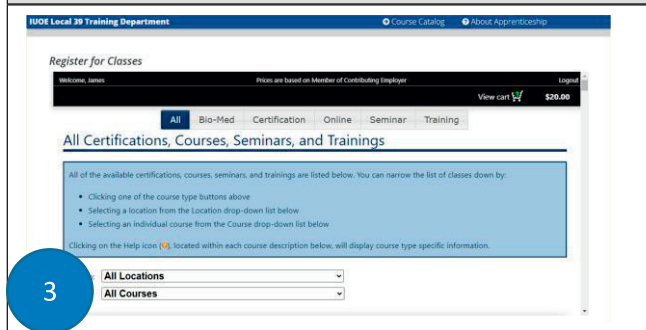
**Step 1:** Select “Register for Classes” > “Online Registration for Classes”.



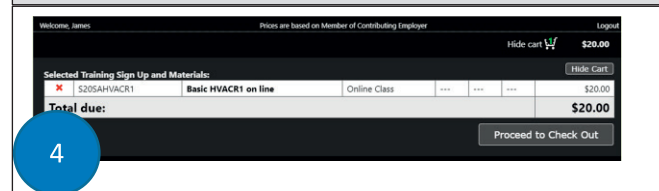
**Step 2:** Enter your member number and your password. First-time users should follow the link found on the lower left of this screen. If you have forgotten your password, follow the password reset link.



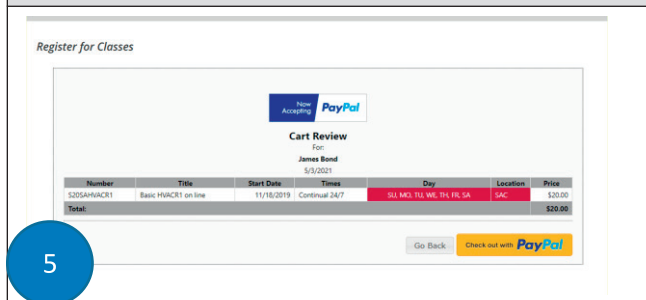
**Step 3:** Choose the classes that you would like to take and select “View cart” after you have finished adding classes.



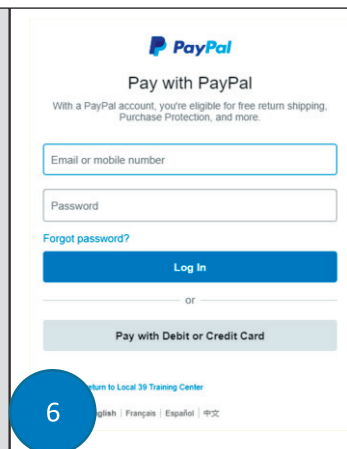
**Step 4:** Review your cart. Remove unwanted items by selecting the red “X”. If you would like to add more classes, select “Hide cart”. Select “Proceed to Check Out” to continue to Step 5.



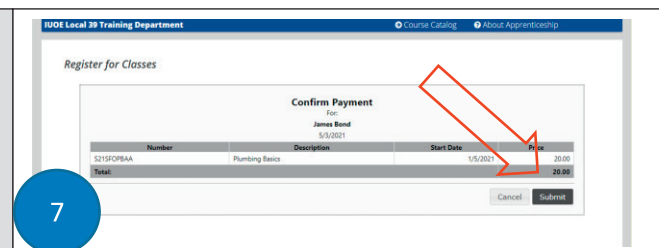
**Step 5:** When you are ready to pay for the registration fees, select “Check out with PayPal”. Please note: you do not have to have a PayPal account to proceed.



**Step 6:** Select “Pay with Debit or Credit Card”. You will be asked to enter your payment information. If you have a PayPal account, you may log in and use PayPal as you regularly do. Select “Continue” when you have completed entering your information. You will be redirected to the Local 39 Training website for Step 7.



**Step 7:** Select “Submit” to finish the transaction. Your registration will not be processed unless this step is completed. PayPal will send a receipt to the email address that was provided during the check-out process. After successful registration, you will receive a confirmation email from the Local 39 Training Department. If you do not receive confirmation within 48 hours, call us at (415) 285-3939.





## Online Learning Center

Our online course delivery has been updated to make taking online training even easier than before. After purchase and approval of enrollment, you will receive an email with information to launch your class and start working.

Completion progress is tracked in each class on the right side of your screen. Navigate by using the Course Contents box or from the overview screen. Throughout the courses, new vocabulary terms or concepts are linked to a glossary. Transcripts of your online courses or assistance with online training may be obtained by contacting the Online administrator, at [support@local39training.org](mailto:support@local39training.org).

## Basic Schematic Reading

**Course Code:** OBSRA

**No Prerequisite**

Member of Contributing Employer	\$20
Member of Non-Contributing Employer	\$90
Affiliate Rate	\$150

This beginners online class is all about the basics to ladder diagram reading. It starts out with the basic components you will see represented in a ladder diagram and how they function and work. Then we cover some basic schematics showing the student what it all means when looking at a ladder diagram and the sequence of operation. Estimated completion time is 8 hours.

## Building Systems

**Category:** *Introductory Courses*

Member of Contributing Employer	\$20
Member of Non-Contributing Employer	\$90
Affiliate Rate	\$150

In this course, you will be introduced to the basic operations and functions of the mechanical, plumbing, electrical systems and other systems which are commonly found in a commercial building. Students are prepared for further studies into the more particular trade skills required to operate a building as a professional Stationary Engineer. Those interested in entering the trade or utilities personnel interested in preparing themselves to become Stationary Engineers will find this instruction very helpful.

This course covers:

- Electrical equipment and electrical distribution
- Components of the plumbing system in a commercial facility
- Heating, ventilation and air conditioning equipment, (HVAC)
- Steam-generating equipment in commercial buildings
- Central control systems for management of facility operation
- An overview of life safety systems including fire control and fire signaling equipment

## Centrifugal Chillers

**Course Code:** OCECA

**Category:** *Chillers*

Member of Contributing Employer	\$20
Member of Non-Contributing Employer	\$90
Affiliate Rate	\$150

This class covers the basics to a centrifugal plant watch: what to look for, parameters, terms and definitions you need to know and understand. The focus is on large tonnage chillers.

## Chiller Plant Operation

**Course Code:** OCPA

**Category:** *Chillers*

Member of Contributing Employer	\$20
Member of Non-Contributing Employer	\$90
Affiliate Rate	\$150

This course gives an introduction to what an engineer needs to know in order to understand the operation of a chiller and its components in a plant. Estimated completion time is 8 hours.



## Confined Space Awareness Course Code: OCFA

Member of Contributing Employer	\$20
Member of Non-Contributing Employer	\$90
Affiliate Rate	\$150

This is a course for awareness purposes only. The course will cover topics emphasizing safety in confined space situations, such as things that should be looked-out for and things that can be done ahead of time, that will help in complying with the laws. Estimated completion time is 21 hours.

## Cooling Towers O&M Course Course Code: OCTMA

Member of Contributing Employer	\$20
Member of Non-Contributing Employer	\$90
Affiliate Rate	\$150

This course will cover the basics to cooling towers starting with an Introduction, then a cooling tower start up, routine maintenance part 1 and then part 2, then it will introduce the student to thermal performance, aftermarket solutions and then a brief lesson on troubleshooting. Estimated completion time is 21 hours. Books required to purchase.

## Electrical Basics Category: Electricity

Member of Contributing Employer	\$20
Member of Non-Contributing Employer	\$90
Affiliate Rate	\$150

This course introduces you to basic electrical principles, electrical safety, and electrical applications and equipment in your facility. This course covers:

- Electrical theory: Principles, quantities, and relationships
- Fundamental electrical devices and circuit types
- Electrical safety: Staying alive while working with high voltages
- Tools and test instruments for troubleshooting electrical systems
- Alternating current: Principles, applications, and system type
- Transformers: Different means of converting voltages
- Conductors: Choosing safe wire sizes, installing conduit, and tapping busbars
- Circuitry: Power-distribution devices, overload protection, and schematic diagrams
- Basic electrical devices: resistors, inductors, and capacitors

## Electrical Safety and NFPA 70E Course Code: OESA

No Prerequisite

Member of Contributing Employer	\$20
Member of Non-Contributing Employer	\$90
Affiliate Rate	\$150

In this course on Electrical Safety and NFPA 70E guidelines, you will learn how both employees and employers can comply with the electrical safety training requirements mandated by OSHA in 29 CFR 1910 and 29 CFR 1926. You will learn about methods to prevent electrical accidents developed from NIOSH research. Finally, you learn how employees can avoid electrical injuries and employers can avoid unnecessary OSHA citations and personal injury litigation by adhering and enforcing Workplace Electrical Safety Guidelines defined in NFPA 70E. This course covers: • General Overview and Description of Electrical Safety Concerns • The Safety Model Approach Developed by NIOSH • Establishing an Electrical Safe Work Environment • Application of NFPA 70E Guidelines to Establish Workplace Safety • Decision to "Work Live" and How to Perform that Work Safely. Estimated completion time is 8 hours.

# Spring 2024 ONLINE TRAINING



## Electricity and Automation for HVAC/R

*Category: Cooling Equipment*

Member of Contributing Employer	\$20
Member of Non-Contributing Employer	\$90
Affiliate Rate	\$150

This course introduces electrical and automatic equipment as they relate to refrigeration and cooling systems.

This course covers:

- Basic Electricity and Magnetism
- Introduction to Automatic Controls
- Components and Applications
- Troubleshooting Basic Controls
- Advanced Automatic Controls
- Electric Motors in Refrigeration

## Fire Alarm Signaling Systems

*Category: Safety*

Member of Contributing Employer	\$20
Member of Non-Contributing Employer	\$90
Affiliate Rate	\$150

This course demystifies fire alarm systems and prepares you to manage those systems' testing, scheduled maintenance, and mandatory repairs. Students will learn about how Fire Alarm Signaling Systems interact with most of a building's major operations, and will understand how to oversee their operations.

This course covers:

- Building and Fire Code
- Types of Systems
- Basic System Architecture
- Operation Sequence
- Addressable Configuration
- Smoke and Fire Containment

## HVACR1

*Course code: OHVAC1A*

Member of Contributing Employer	\$20
Member of Non-Contributing Employer	\$90
Affiliate Rate	\$150

This course is an estimated 21 hours in length, it takes you through the basics in HVACR for air conditioning and refrigeration, heating and ventilation. The book used for this course is from American Technical Publishers, HVACR Refrigeration Systems. A workbook must be downloaded and scanned when completed and E-mailed back in for correction. The chapters covered are Overview and Basics, Heating and Ventilation, AC and Refrigeration, Special Purpose Systems, and Electric Motors and Piping. Books required to purchase.

## HVACR2

*Course code: OHVAC2A*

Member of Contributing Employer	\$20
Member of Non-Contributing Employer	\$90
Affiliate Rate	\$150

This is a continuation of HVACR1. It discusses components you will see in the field as well as other aspects of HVACR. Estimated completion time is 21 hours. Books required to purchase.

## Indoor Air Quality

*Course code: OIAQA*

Member of Contributing Employer	\$20
Member of Non-Contributing Employer	\$90
Affiliate Rate	\$150

This course covers the basics to indoor air quality, what it is, terms to know and understand, and basic maintenance checks. Estimated completion time is 21 hours. Books required to purchase.





# Spring 2024 ONLINE TRAINING

## Introduction to Boilers - Online

**Course Code:** OIBA

**Category:** Boilers

Member of Contributing Employer	\$20
Member of Non-Contributing Employer	\$90
Affiliate Rate	\$150

This online class gives a stationary engineer an introduction to boilers. A list of basic terminology and their definitions is covered. Estimated completion time is 8 hours.

## Introduction to Chillers and Cooling Towers

**Category:** Cooling Equipment

Member of Contributing Employer	\$20
Member of Non-Contributing Employer	\$90
Affiliate Rate	\$150

This course introduces you to chilled-water cooling equipment and cooling towers, as used in large-scale refrigeration and cooling systems.

This course covers:

- Refrigeration Principles (a quick review)
- Cooling-System Components
- Compression-Cycle Chillers
- Absorption Chillers
- Cooling Towers and Related Controls

## LEED and Green Building Overview

**Category:** LEED/Green Buildings

Member of Contributing Employer	\$20
Member of Non-Contributing Employer	\$90
Affiliate Rate	\$150

LEED (Leadership in Energy and Environmental Design) certification is an internationally recognized standard for designing, operating, and maintaining buildings in environmentally sound ways.

This course covers:

- Steps to LEED certification: categories and credits
- Benefits of LEED certification, with case studies
- "Green building" principles, and why they matter
- Stationary engineers' LEED role
- Strategy and planning for LEED certification

## LEED: Water Efficiency Credits

**Category:** LEED/Green Buildings

Member of Contributing Employer	\$20
Member of Non-Contributing Employer	\$90
Affiliate Rate	\$150

This course shows you how to certify your existing building under the LEED Water Efficiency category. It demonstrates how to meet the eligibility prerequisite, and how to earn certification credits by improving your facility's water performance.

This course covers:

- Water usage: Baseline measurement and performance metering
- Fulfilling the prerequisite: Minimum fixture and fitting efficiency
- Water-efficient plumbing fixtures and maintenance practices
- Water-efficient landscaping practices and devices
- Improving cooling-tower water management
- Certification overviews: Investments and paybacks

# Spring 2024 ONLINE TRAINING



## Master Keying Locks for Buildings

Course Code: OBMK

Prerequisite: None

Estimated completion time: 16 Hours

Member of Contributing Employer	\$20
Member of Non-Contributing Employer	\$90
Affiliate Rate	\$150

This class covers the basics in master keying locks for buildings such as master keying processes and how to write a small program. There will be exercises and tests related to some of the topics covered.

## Math

Course Code: OMBA

Category: Math for electrical refresher

Member of Contributing Employer	\$20
Member of Non-Contributing Employer	\$90
Affiliate Rate	\$150

This online course will take you through all the basics of math and how to apply them using Trade-related examples.

## Mold

Category: Safety

Member of Contributing Employer	\$20
Member of Non-Contributing Employer	\$90
Affiliate Rate	\$150

In this course, you will learn the fundamentals of mold growth, how mold can contaminate your facility, and how to reduce or remove mold's effects.

This course covers:

- Specific Mold Types and Their Effects
- How to Prevent Mold Growth
- How to Assess Suspected Mold Growth
- How to Remediate (clean up and correct) Mold and Its Sources

## Plumbing Basics

Course Code: OPBA

Category: Plumbing

No Prerequisite

Member of Contributing Employer	\$20
Member of Non-Contributing Employer	\$90
Affiliate Rate	\$150

This online class covers basic plumbing, an Introduction to OSHA, welding, cutting and brazing, plumbing materials, plumbing tools, joining pipe, traps and more. Estimated completion time is 16 hours.



## Principles of Thermodynamics

**Category:** Cooling Equipment

Member of Contributing Employer	\$20
Member of Non-Contributing Employer	\$90
Affiliate Rate	\$150

This course explores the principles of thermodynamics as they relate to refrigeration and cooling systems. Students will learn the best safety practices in dealing with equipment, as well as both the scientific and practical components of maintaining cooling systems. Cooling systems are a critical part of a facility's operation and essential part of the Stationary Engineer's knowledge.

This course covers:

- General Safety Practices
- Theory
- Matter and Energy
- Refrigeration and Refrigerants
- Indoor Air Quality
- Comfort and Psychrometrics

## Pump Operation and Maintenance

**Course Code:** OPOM

Member of Contributing Employer	\$20
Member of Non-Contributing Employer	\$90
Affiliate Rate	\$150

This class discusses the basics to pumping systems and what the differences are between various pumps in the field. Estimated completion time is 8 hours. Books required to purchase.

## Steam Boiler Basics

**Course Code:** OSBA

Member of Contributing Employer	\$20
Member of Non-Contributing Employer	\$90
Affiliate Rate	\$150

**Prerequisite:** Basic Electricity

This course begins with the basics, definitions to help you understand boilers, and common components that are on all boilers. Then it covers the types of boilers and then in section 4 it begins to cover the components in steam boilers. Tests are included in each section.

All tests must be passed to complete the course.

Estimated completion time is 21 hours.

## Steam Boiler Water Treatment Basics - Scale Control

**Category:** Water Treatment

Member of Contributing Employer	\$20
Member of Non-Contributing Employer	\$90
Affiliate Rate	\$150

In this course, you learn the fundamentals of water chemistry and how to apply these principles to the maintenance of steam boilers. The course focuses on how to control the buildup of scale (mineral solids). Controlling scale helps steam boiler equipment last longer and operate more efficiently, which translates into substantial cost savings.

This course covers:

- Principles of Water Chemistry
- Concentration, Solubility, and Solubility Limits
- Mineral Scale
- Conductivity
- Water Softeners and Maintaining Optimum Efficiency
- Chemical Control Programs
- Chemical Testing Procedures



## Understanding Airflow

Category: Airflow

Member of Contributing Employer	\$20
Member of Non-Contributing Employer	\$90
Affiliate Rate	\$150

This course is designed to introduce the student to the theoretical and practical applications of basic airflow utilized within a building. Students learn about the duct systems and the mechanical components used to deliver airflow, as well as the importance of proper airflow delivery. These will include instruments, formulas and charts used to assess the amount of airflow. Additional studies include AK factor, air changes per hour, fan laws, stratification, as well as rules and regulations. Students will need to have access to the internet, a computer and have some familiarity with a computer.

## Understanding the Pump Curve

Course Code: OUPCA

Member of Contributing Employer	\$20
Member of Non-Contributing Employer	\$90
Affiliate Rate	\$150

This course helps you understand the definitions used in pumping systems at your facility and how to check a pump curve to see if your pumps are eroding and costing you more money to run. Estimated completion time is 16 hours.

## Variable Air Volume Basics

Prerequisite: None

Member of Contributing Employer	\$20
Member of Non-Contributing Employer	\$90
Affiliate Rate	\$150

This class is designed to acquaint the student with variable air volume, some basic checks they can do in the field and what the 3 – degree rule is as well as how to check for stratification. Estimated completion time is 8 hours.

## Variable Frequency Drive Basics

Course Code: OVFDA

Member of Contributing Employer	\$20
Member of Non-Contributing Employer	\$90
Affiliate Rate	\$150

Prerequisite: Basic Electricity

This class covers VFD's from what is needed at the motor, its basic operation, definitions and some basic troubleshooting. Tests are taken at the end of each section and a final is given after all the section tests are completed. All tests must be passed to complete the course.

Estimated completion time is 25 hours.



## AIR CONDITIONING & REFRIGERATION I

		S	M	T	W	T	F	S	Start Date	Times
SA	S24SA012A				◆				01/10/2024	5:00 pm to 8:00 pm

**18-Weeks, 3 Hours Per Session, 54 Hours Total. Textbook Included.**

*Prerequisite: An understanding of basic electricity is a requirement of this course.*

This course will provide the student with a thorough understanding of the refrigeration process. Included in the course are the functions and applications of the components of the refrigeration systems such as compressors, drive mechanisms, evaporators, condensers, liquid receivers, heat exchangers, expansion valves, metering devices, dryers and sight glasses.

Member of Contributing Employer	\$75
Member of Non-Contributing Employer	\$500
Affiliate Rate	\$600

## AIR CONDITIONING & REFRIGERATION II

		S	M	T	W	T	F	S	Start Date	Times
SF	S24SF112A		◆						01/08/2024	5:00 pm to 8:00 pm

**18-Weeks, 3 Hours Per Session, 54 Hours Total. Textbook not included.**

*Prerequisite: Air Conditioning and Refrigeration I*

This course is a continuation of Air Conditioning & Refrigeration I and will instruct the student in the different types of heating systems, combustion controls, psychrometrics and airflow for air conditioning systems. It will also include schematic reading, basic heat pump operation, as well as an introduction to cooling towers and water cooled systems.

Member of Contributing Employer	\$75
Member of Non-Contributing Employer	\$500
Affiliate Rate	\$600

## BASIC ELECTRICITY

		S	M	T	W	T	F	S	Start Date	Times
SA	S24SA212A					◆			01/11/2024	9:00 am to 12:00 pm

**18-Weeks, 3 Hours Per Session, 54 Hours Total.**

This course will help build a solid foundation of knowledge in the subject of electricity. Students will learn the fundamentals needed to move on to more advanced electrical classes such as Electricity and Motor Controls I. Some of the topics that will be covered include: what voltage is; current flow; conductors versus insulators; series circuits and parallel circuits and combinational circuits; motor basics; how transformers operate; capacitors and inductors; and more.

Member of Contributing Employer	\$75
Member of Non-Contributing Employer	\$500
Affiliate Rate	\$600



# Spring 2024 TRAINING



## BUILDING SYSTEMS

		S	M	T	W	T	F	S	Start Date	Times
SF	S24SF082A				◆				01/10/2024	5:00 pm to 8:00 pm

**18-Weeks, 3 Hours Per Session, 54 Hours Total. Textbook Included.**

*Prerequisite: None.*

This course will provide a basic description of the electrical distribution, life safety, steam, HVAC, domestic water, plumbing and mechanical systems that can be found in a typical facility. The course is designed as an introduction to the trade. After completing this course, you should have a basic knowledge of the various systems that are maintained by stationary engineers. The general design and operation principals are reviewed and examples of different systems configurations are discussed in a classroom setting. Study materials consist of handouts and building drawings. One field trip is included.

Member of Contributing Employer	\$75
Member of Non-Contributing Employer	\$500
Affiliate Rate	\$600

## ELECTRICITY AND MOTOR CONTROLS I

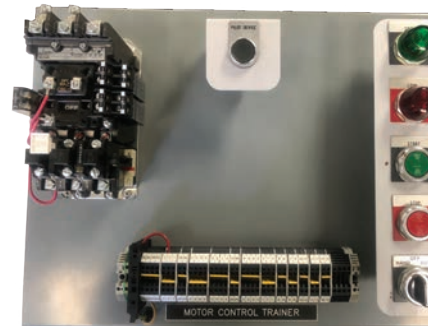
		S	M	T	W	T	F	S	Start Date	Times
SA	S24SA216A			◆					01/09/2024	9:00 am to 12:00 pm

**18-Weeks, 3 Hours Per Session, 54 Hours Total. Textbook Included.**

*Prerequisite: None.*

The student will gain an understanding of the electrical concepts needed by Stationary Engineers, such as alternating current, direct current, single- and three-phase generation, transformers, and distribution. Also discussed are inductive, capacitive, and resistive circuits, as well as power factor and power factor correction. The student will also learn various types of electrical controls used in motor control systems, and will gain the ability to construct and analyze wiring and ladder diagrams used in motor control circuits. Through hands-on projects, students will learn how to use a meter and how to troubleshoot motor control circuits.

Member of Contributing Employer	\$75
Member of Non-Contributing Employer	\$500
Affiliate Rate	\$600



## ELECTRICITY & ELECTRIC MOTOR CONTROLS II

		S	M	T	W	T	F	S	Start Date	Times
SF	S24SF316A		◆						01/08/2024	5:00 pm to 8:00 pm

**18-Weeks, 3 Hours Per Session, 54 Hours Total. Textbook Not Included.**

*Prerequisite: Electricity & Electric Motor Controls I.*

The student will continue to gain an understanding of the electrical concepts needed by a Stationary Engineer to understand Electricity and Electrical Troubleshooting techniques. The student will also learn various types of electric controls used in building control and motor control systems and will gain the ability to construct and analyze wiring and ladder diagrams used in these types of control circuits.

Member of Contributing Employer	\$75
Member of Non-Contributing Employer	\$500
Affiliate Rate	\$600



## LOCKSMITHING II

		S	M	T	W	T	F	S	Start Date	Times
SF	S24SF121A		◆						01/08/2024	5:00 pm to 8:00 pm

**18-Weeks, 3 Hours Per Session, 54 Hours Total. Textbook Not Included.**

*Prerequisite: Locksmithing I.* This course is a continuation of Locksmithing I. Students will study and discuss topics such as master keying, electronic locks, computer control systems, developing master codes systems, lock repairs, record keeping, advance pinning with high security cylinders.

Member of Contributing Employer	\$75
Member of Non-Contributing Employer	\$500
Affiliate Rate	\$600



## SUPERVISION (Chief / Assistant Chief)

		S	M	T	W	T	F	S	Start Date	Times
SF	S24SF029A		◆						01/08/2024	5:00 pm to 8:00 pm

**18-Weeks, 3 Hours Per Session, 54 Hours Total. Textbook Included.**

*Prerequisite: None.*

This course will enhance an engineer's present skills and also enable him / her to continue to develop into a successful Assistant or Chief Engineer. Subjects include budget preparation, record keeping, reports, presentations, human relations, planning, time management, computer applications, health and safety issues, and energy conservation.

Member of Contributing Employer	\$75
Member of Non-Contributing Employer	\$500
Affiliate Rate	\$600

# Spring 2024 Certification Classes and Courses



## EPA TECHNICIAN CERTIFICATION PREPARATION, REVIEW AND EXAM

		S	M	T	W	T	F	S	Start Date	Times
SA	S24SA039A							◆	01/20/2024	8:00 am to 4:30 pm
SA	S24SA039B				◆				03/06/2024	8:00 am to 4:30 pm
SF	S24SF039A							◆	01/27/2024	8:00 am to 4:30 pm
SF	S24SF039B		◆						05/06/2024	8:00 am to 4:30 pm

### 1 Session, 8 Hours Total.

*Prerequisite: A basic understanding of the refrigerant cycle.*

This class is recommended for those who have not previously taken the EPA exam. This eight-hour class will provide six hours of review for the CFC/EPA Certification Exam and a two-hour CFC/EPA Universal testing period. Topics include refrigeration, charging, transportation, recycling, and recovery of chlorofluorocarbons. The EPA requirements covered in this review prepare the student for all levels of certification, (Type I, Type II, Type III and Universal).

Member of Contributing Employer	\$75
Member of Non-Contributing Employer	\$350
Affiliate Rate	\$450

## EPA TECHNICIAN CERTIFICATION REVIEW & EXAM

		S	M	T	W	T	F	S	Start Date	Times
SA	S24SA139A							◆	01/20/2024	12:30 pm to 4:30 pm
SA	S24SA139B				◆				03/06/2024	12:30 pm to 4:30 pm
SF	S24SF139A							◆	01/27/2024	12:30 pm to 4:30 pm
SF	S24SF139B		◆						05/06/2024	12:30 pm to 4:30 pm

### 1 Session, 4 Hours Total.

*Prerequisite: A basic understanding of the refrigerant cycle and/or previous completion of the Technician Certification for Refrigerants online course.*

This four-hour class is designed specifically for students who have already taken the Preparation, Review and Exam class. The class includes a review for the CFC/EPA Certification Exam and a two-hour CFC/EPA Universal testing period. The EPA requirements covered in the review prepare the student for all levels of certification, (Type I, Type II, Type III and Universal).

Member of Contributing Employer	\$50
Member of Non-Contributing Employer	\$350
Affiliate Rate	\$450



# Spring 2024 Certification Classes and Courses

## HIGH RISE FIRE SAFETY DIRECTOR

		S	M	T	W	T	F	S	Start Date	Times
SF	S24SF023A		◆						01/08/2024	11:00 am to 2:00 pm
SF	S24SF023B		◆						01/08/2024	5:00 pm to 8:00 pm
SF	S24SF023C				◆				01/10/2024	5:00 pm to 8:00 pm
SF	S24SF023D		◆						03/25/2024	11:00 am to 2:00 pm
SF	S24SF023E		◆						03/25/2024	5:00 pm to 8:00 pm

← Morning Class

← Morning Class

**9 Weeks, 3 Hours Per Session, 27 Hours Total. Textbook Included.**

*Prerequisite: None.*

This course meets and exceeds the requirements of the California Code of Regulations, Title 19 and the City of San Francisco Fire Code as it pertains to the certification of High Rise Fire Safety Directors. The course provides instruction in preparing and updating facility emergency plans, fires prevention guidelines, and a comprehensive review of a buildings fire life safety systems as well as a review of proper evacuation and/or relocation procedures. The course will also provide a general review applicable to all buildings of proper building preparation and response to medical, earthquake, hazardous materials release, bomb threat and civil unrest.

A course term paper and successful performance on two multiple choice tests are required for completion of this course. *The High Rise Fire Safety Director Certification is valid for five (5) years from the date of the class. Certificate of completion is accepted by all cities and fire departments in the San Francisco Bay Area.*

Member of Contributing Employer	\$75
Member of Non-Contributing Employer	\$500
Affiliate Rate •	\$600

## HIGH RISE FIRE SAFETY DIRECTOR RENEWAL

		S	M	T	W	T	F	S	Start Date	Times
SF	S24SF123A		◆						02/05/2024	2:00 pm to 5:00 pm
SF	S24SF123B		◆						03/04/2024	2:00 pm to 5:00 pm
SF	S24SF123C				◆				04/03/2024	5:00 pm to 8:00 pm
SF	S24SF123D		◆						05/06/2024	2:00 pm to 5:00 pm
SF	S24SF123E		◆						06/03/2024	2:00 pm to 5:00 pm

**1 Session, 3 Hours Total. Textbook Included.**

*Prerequisite: Registrant must possess a valid\* Fire Safety Director Certificate: A copy of your valid certificate must be submitted with your registration form.*

This class provides an overview of current federal, state and local laws, codes and policies as well as an overview of the responsibilities of a High Rise Fire Safety Director. This class includes a question and answer session and suggestions on how to handle specific issues at your facility.

**\*You are eligible to renew if your current certificate's date does not exceed 5 years. THERE ARE NO EXCEPTIONS FOR EXPIRED CERTIFICATES.** The certificate renewal is valid for 5 years from the date of the class.

Member of Contributing Employer	\$75
Member of Non-Contributing Employer	\$350
Affiliate Rate •	\$450

# Spring 2024 Certification Classes and Courses



## NFPA 70E - LOW VOLTAGE ELECTRICAL SAFETY CERTIFICATION

		S	M	T	W	T	F	S	Start Date	Times
HY	S24HY179A							◆	04/27/2024	8:00 am to 4:30 pm
SA	S24SA179A				◆				02/07/2024	8:00 am to 4:30 pm
SA	S24SA179B							◆	04/06/2024	8:00 am to 4:30 pm
SF	S24SF179A			◆					02/06/2024	8:00 am to 4:30 pm
SF	S24SF179B							◆	04/20/2024	8:00 am to 4:30 pm

1 Session, 8 Hours Total. Textbook Included.

*This class is a prerequisite for the NFPA 70E - High Voltage Electrical Safety Certification.*

This program meets the requirements of NFPA 70E and OSHA 1910.300 series for working around or on electrical equipment. This is a safety certification class for people working with electricity in the workplace. This program covers low voltage electrical safety, the hazards of working with electrical systems and safe working practices. These laws apply to all areas of Stationary Engineering and other mechanical related fields for Buildings, Hospitals, Production Facilities, Water and Wastewater Plants. The low voltage electrical safety class is good for up to 600 volts. Above that value the high voltage certification class is needed. **Certification is valid for 3 years from class date.**

Member of Contributing Employer	\$75
Member of Non-Contributing Employer	\$350
Affiliate Rate	\$450

## NFPA 70E - HIGH VOLTAGE ELECTRICAL SAFETY CERTIFICATION

		S	M	T	W	T	F	S	Start Date	Times
HY	S24HY279A							◆	05/04/2024	8:00 am to 4:30 pm
SA	S24SA279A				◆				03/27/2024	8:00 am to 4:30 pm
SA	S24SA279B							◆	05/04/2024	8:00 am to 4:30 pm
SF	S24SF279A			◆					03/12/2024	8:00 am to 4:30 pm

1 Session, 8 Hours Total. Textbook Included.

*Prerequisite: Registrant must possess a valid Local 39 NFPA 70E - Low Voltage Electrical Safety Certificate. A copy of your valid certificate must be submitted with your registration form.*

This program meets the requirements of OSHA 1910.269. This is a safety certification class for people working with and around electricity in the workplace. This program covers high voltage electrical safety, the hazards of working with electrical systems and safe working practices. The high voltage electrical safety class is good for voltages from 601 and above. **Certification is valid for 3 years from class date.**

Member of Contributing Employer	\$75
Member of Non-Contributing Employer	\$350
Affiliate Rate	\$450





# Spring 2024 Certification Classes and Courses

## FORKLIFT CERTIFICATION

		S	M	T	W	T	F	S	Start Date	Times
SF	S24SF760A							◆	02/10/2024	8:00 am to 4:30 pm
SF	S24SF760B			◆					05/07/2024	8:00 am to 4:30 pm

1 Session, 8 Hours Total.

### Key Points to be Covered:

1. Overview of Forklift Safety.
2. Vehicle Inspection prior to operation.
3. Set up and equipment prior to lifting and movement.
4. Traveling with and without a load.
5. Pallets and stacking.
6. Loading and unloading.
7. Travel in uncommon circumstances.

8. Reporting maintenance problems.
9. Backing.
10. Seat Belt Usage.
11. Successful completion of written test.
12. Successful demonstration of proficiency with the vehicle under simulated driving conditions.

Member of Contributing Employer	\$50
Member of Non-Contributing Employer	\$400
Affiliate Rate	\$500

### DEMONSTRATION OF PROFICIENCY IN OPERATION OF VEHICLE: *Hands on training.*

1. Walk around inspection/review of Mfg. I.D.plate.
2. Reporting of maintenance deficiencies to supervisory personnel.
3. Seat Belt usage.
4. Starting the vehicle, checking horns, lights, lift capacity etc.
5. Backing of loaded/unloaded vehicle.
6. Lifting of palletized and non palletized items.
7. Stacking of pallets.
8. Movement of vehicles in tight areas.
9. Adjustment of forks.
10. Satisfying the instructor that the trainee has basic familiarity and confidence in safe operation of the vehicle.



# Spring 2024 SEMINARS



## AIR CONDITIONING MEASUREMENTS

		S	M	T	W	T	F	S	Start Date	Times
SA	S24SA714A				◆				01/24/2024	8:00 am to 3:30 pm

**2 Weeks, 7 Hours Per Session, 14 Hours Total.**

This seminar provides an introduction to air conditioning field service calls and the components of an air conditioner and how those components work and fail. Other topics that will be covered include air conditioning measurements and basic schematic reading.

Member of Contributing Employer	\$50
Member of Non-Contributing Employer	\$300
Affiliate Rate	\$400

## AUTOMATIC TRANSFER SWITCHES & GENERATORS

		S	M	T	W	T	F	S	Start Date	Times
SF	S24SF609A				◆				03/06/2024	8:00 am to 3:30 pm

**1 Session, 7 Hours Total.**

This class will instruct the students in the basics of automatic transfer switch operation and maintenance and troubleshooting, as well as proper generator operation maintenance and troubleshooting. This class covers a wide variety of generators and will not be equipment specific. In addition, topics will include the frequency of proper PM's (preventive maintenance) and checklists that apply to all generators when providing maintenance.

Member of Contributing Employer	\$50
Member of Non-Contributing Employer	\$300
Affiliate Rate	\$400

## BASIC MASTER-KEYING AND PINNING

		S	M	T	W	T	F	S	Start Date	Times
SA	S24SA801A					◆			02/22/2024	8:30 am to 4:00 pm
SF	S24SF801A					◆			04/11/2024	8:30 am to 4:00 pm

**1 Session, 7 Hours Total.**

The class will cover the basics of pinning of cylinders how to read a master key system. What types of followers to use, what shims are used for, also how to use a key gauge. This class will emphasize Schlage keys bitting and pinning only.

Member of Contributing Employer	\$50
Member of Non-Contributing Employer	\$300
Affiliate Rate	\$400

## BLUEPRINT READING

		S	M	T	W	T	F	S	Start Date	Times
SA	S24SF556A				◆				04/03/2024	8:00 am to 3:30 pm

**1 Session, 7 Hours Total.**

This seminar will provide an overview of the theories used in putting drawings on paper and review the terminology found on blueprints commonly used in the maintenance of buildings. The class will include lecture, hands on drills, and skill enhancement exercises.

Member of Contributing Employer	\$50
Member of Non-Contributing Employer	\$300
Affiliate Rate	\$400



## BASIC REFRIGERATION DIAGNOSTICS

		S	M	T	W	T	F	S	Start Date	Times
SA	S24SA613A							◆	02/03/2024	8:00 am to 3:30 pm

**4 Weeks, 7 Hours Per Session, 28 Hours Total.**

*Prerequisite: A basic understanding of air conditioning systems.*

***Class size is limited to no more than 16 students for quality instruction, so register early!***

This seminar was designed to help students enhance their knowledge of air conditioning and refrigeration systems. The students will learn the operations, systems evacuation, charging, cycling, and specific controls and parameters of HVAC units through hands-on lab projects. This seminar will also cover basic troubleshooting, basic air flow measurements and basic electrical troubleshooting techniques.

**Attendees must furnish their own safety goggles.**

Member of Contributing Employer	\$75
Member of Non-Contributing Employer	\$400
Affiliate Rate	\$500

## BASIC SCHEMATIC READING

		S	M	T	W	T	F	S	Start Date	Times
SA	S24SA508A							◆	04/13/2024	8:00 am to 3:30 pm

**3 Weeks, 7 hours per Session, 21 Hours Total.**

This program explores the different types of schematics that technicians see in the work environment. Students will learn how to read a ladder diagram, become familiarized with various symbols, and learn how to use a meter to check components prior to being wired into the system. This program will also cover different motor control schematics, and the Hopscotch and Tiedown methods of troubleshooting.

Member of Contributing Employer	\$75
Member of Non-Contributing Employer	\$400
Affiliate Rate	\$500

## BOILERS 101

		S	M	T	W	T	F	S	Start Date	Times
SA	S24SA835A					◆			05/02/2024	8:00 am to 4:30 pm
SF	S24SF835A						◆		04/05/2024	8:00 am to 4:30 pm

**1 Session, 8 Hours Total.**

This class covers both water and steam boilers. The topics that will be covered include: boiler operation; boiler components; the various applications of water and steam boilers; and boiler maintenance (e.g. daily and weekly routines, and proper intervals for maintenance on the different components).

Member of Contributing Employer	\$50
Member of Non-Contributing Employer	\$300
Affiliate Rate	\$400

## BOILER BASICS (EMPHASIS STEAM BOILERS)

		S	M	T	W	T	F	S	Start Date	Times
SA	S24SA530A				◆				05/29/2024	8:00 am to 3:30 pm

**2 Weeks, 7 Hours Per Session, 14 Hours Total.**

This seminar will provide a fundamental understanding of Boilers Operation and Maintenance. The instructor will cover interlock and limit controls; discussion of low water, airflow-limits, interlocks, pivot valve train, main valve train, and approved safety controls specifications such as flame detection types. This training will also include safe operating procedures and safety control adjustments.

Member of Contributing Employer	\$50
Member of Non-Contributing Employer	\$300
Affiliate Rate	\$400

# Spring 2024 SEMINARS



## CENTRIFUGAL PUMP OPERATIONS

		S	M	T	W	T	F	S	Start Date	Times
SA	S24SA567A						◆		04/19/2024	8:00 am to 4:30 pm
SF	S24SF567A					◆			04/04/2024	8:00 am to 4:30 pm

### 1 Session, 8 Hours Total.

Training will leverage demonstration equipment, operating hydronic loops and building controls to explore pump system concepts and optimization strategies. Topics will include plotting data on pump curves, pump affinity laws, primary only vs. primary/secondary pumping, trimming impellers, variable speed opportunities, net positive suction head and cavitation. Training will include several interactive exercises.

Member of Contributing Employer	\$50
Member of Non-Contributing Employer	\$300
Affiliate Rate	\$400

## CENTRIFUGAL CHILLERS

		S	M	T	W	T	F	S	Start Date	Times
SA	S24SA912A					◆	◆		03/07/2024	8:00 am to 4:30 pm
SF	S24SF912A					◆	◆		02/08/2024	8:00 am to 4:30 pm

### 2 Sessions, 8 Hours Per Session, 16 Hours Total.

This is a two day program designed to provide detailed information about Centrifugal chillers and their place in the air conditioning community. Workshops break the chillers down into sections, with a complete understanding of each component. The instructor will cover chiller operation to include lift, approach, temperature and pressure relationships and heat exchange mediums. Cooling demand, controls and adjustments. The program involves a detailed understanding of chiller logs and the identification of problems. The student will gain an understanding of proper PM and inspections required to monitor and maintain system efficiency and safety, such as water treatment, cooling towers, refrigerants and mechanical rooms.

Member of Contributing Employer	\$75
Member of Non-Contributing Employer	\$300
Affiliate Rate	\$400

## ELECTRICAL TROUBLESHOOTING

		S	M	T	W	T	F	S	Start Date	Times
SF	S24SF817A							◆	05/04/2024	8:00 am to 4:30 pm

### 1 Session, 8 Hours Total.

In this class, students will learn how to efficiently use a digital multi meter to troubleshoot electrical components and circuits. All features of a standard multi meter will be covered and students will have the opportunity to get hands on experience metering; utilizing electrical trainers that closely mimic circuits that exist in the field. Students will be tasked with finding faults and making repairs. Utilize your wiring diagram and meter effectively to get the equipment back online.

Member of Contributing Employer	\$50
Member of Non-Contributing Employer	\$300
Affiliate Rate	\$400



## FIRE EXTINGUISHER TRAINING

		S	M	T	W	T	F	S	Start Date	Times
SF	S24SF738A			◆					03/05/2024	9:00 am to 12:00 pm
SF	S24SF738B		◆						04/22/2024	9:00 am to 12:00 pm

**1 Session, 3 Hours Total.**

*Train-the-Trainer, Portable Fire Extinguisher Training. Complies with OSHA 29, CFR 1910.157 Standard Portable Fire Extinguishers.*

**(Weather conditions may alter the class schedule.)**

Course will include: Fire behavior, Fire Stages, Fire classes, Extinguisher Types, Extinguishing, and Practical evolutions with live fire. Multiple-choice test included. Certificate as a Fire Extinguisher Trainer will be awarded upon successful completion.

Member of Contributing Employer	\$50
Member of Non-Contributing Employer	\$250
Affiliate Rate	\$300

## FIRE PUMP TEST PREPARATORY TRAINING

		S	M	T	W	T	F	S	Start Date	Times
HY	S24HY538A		◆						03/25/2024	9:00 am to 12:00 pm
SA	S24SA538A					◆			05/23/2024	9:00 am to 12:00 pm
SF	S24SF538A		◆						02/26/2024	9:00 am to 12:00 pm
SF	S24SF538B		◆						04/22/2024	9:00 am to 12:00 pm
SJ	S24SJ538A		◆						01/29/2024	9:00 am to 12:00 pm

**1 Session, 3 Hours Total.**

**Note: This seminar does not include the fees for registration to take the OSFM Certification Test.**

The purpose and scope of the class is to serve as a coaching seminar to better prepare a Stationary Engineer to be successful when taking the closed book Office State Fire Marshal (OSFM) multiple-choice Certificate Test on the Weekly Inspection, Testing & Maintenance of Building Fire Pumps. The instructor will provide an overview of the law, guidance on completing the OSFM forms, weekly fire pump test study material, and in-class review of weekly fire pump test procedures and information.

Member of Contributing Employer	\$50
Member of Non-Contributing Employer	\$300
Affiliate Rate	\$400

By California State law, each building must maintain a copy of the NFPA 25 – (Current Edition information will be provided during training), Testing, and Maintenance of Water Based Fire Protection Systems, which is also required for the purpose of class study.

## INTRO TO DDC

		S	M	T	W	T	F	S	Start Date	Times
SF	S24SF233A				◆				02/28/2024	10:00 am to 2:00 pm
SF	S24SF233B				◆				04/17/2024	10:00 am to 2:00 pm

**1 Session, 4 Hours Total.**

In this seminar you will get a close look on the setup and commissioning process of direct digital controls (DDC). Students will learn about basic controller inputs/outputs, troubleshooting, and the implementation of a whole zone control solution using Distech Controls.

Member of Contributing Employer	\$50
Member of Non-Contributing Employer	\$300
Affiliate Rate	\$400



# Spring 2024 SEMINARS



## MOTOR BASICS101

	S	M	T	W	T	F	S	Start Date	Times
SA	S24SA809A			◆				02/28/2024	8:00 am to 3:30 pm

1 Session, 7 Hours Total.

This class will cover the basics to motors and the different motor types, what helps get them going, basic troubleshooting and basic wiring of three-phase motors.

Member of Contributing Employer	\$50
Member of Non-Contributing Employer	\$300
Affiliate Rate	\$400

## REFRIGERATION HANDS-ON RECOVERY & CHARGING

	S	M	T	W	T	F	S	Start Date	Times
HY	S24HY722A						◆	04/06/2024	8:00 am to 4:30 pm
SF	S24SF722A						◆	02/03/2024	8:00 am to 4:30 pm

1 Session, 8 Hours Total.

The instructor will cover the correct ways to recover refrigerant from a system and all the correct charging methods by using hands-on demonstrations and exercises. Some of the topics that will be discussed are the parameters for recovering, how to check the charge and all the equipment needed to perform the tasks involved in these processes.

Member of Contributing Employer	\$50
Member of Non-Contributing Employer	\$300
Affiliate Rate	\$400

## HANDS-ON COPPER BRAZING, FLARING & SWAGING

	S	M	T	W	T	F	S	Start Date	Times
HY	S24HY723A						◆	04/13/2024	8:00 am to 4:30 pm
SF	S24SF723A						◆	02/10/2024	8:00 am to 4:30 pm

1 Session, 8 Hours Total.

The instructor will cover refrigerant piping, flaring, swaging and brazing.

Member of Contributing Employer	\$50
Member of Non-Contributing Employer	\$300
Affiliate Rate	\$400

### Reminder...

When you register or are enrolled for a course or seminar at one of our facilities or at a job site, you are required to provide your Union membership information upon check-in.

Be sure to have your current Union Membership Card with you when you attend a course or seminar for the first session, or you may not be allowed to attend.





## SPREADSHEETS 4HR SEMINAR

		S	M	T	W	T	F	S	Start Date	Times
SF	S24SF956A					◆			03/07/2024	8:00 am to 12:00 pm
SF	S24SF956B					◆			05/02/2024	8:00 am to 12:00 pm

### 1 Session, 4 Hours Total.

Starting with the basics and moving at an accelerated pace to more advanced features, you'll learn how to turn Excel into your most powerful productivity tool. If you're only tapping into a few of the features of this powerful and versatile software, get set for a productivity explosion. You'll learn many ways to work faster, smarter and more efficiently.

You'll learn essential spreadsheet skills designed for the Stationary Engineer. Example files will be provided and performed on laptops in the Computer Lab. Some of the topics covered are: general budgeting and accounting principles, utilities tracking and variance reporting, cost control of material purchases and services, attendance planning and tracking, life-cycle cost analysis, preventive maintenance, energy conservation, safety programs, and tracking fire alarm testing and preparing for the annual SFFD High-Rise Inspection.

Member of Contributing Employer	\$50
Member of Non-Contributing Employer	\$300
Affiliate Rate	\$400

## VARIABLE AIR VOLUME BASICS

		S	M	T	W	T	F	S	Start Date	Times
SF	S24SF834A		◆						04/08/2024	8:00 am to 3:30 pm

### 1 Session, 7 Hours Total.

This seminar will provide the fundamentals of understanding Variable Air Volume Systems, the concept of air movement, some indoor air quality checks and balances, also Local 39 Training Center now has Johnson Controls hooked up to the VAV trainers so the students can learn how to log onto a Building Management System and check the air flow that a VAV is moving, as well as how to change the airflow rates.

Member of Contributing Employer	\$75
Member of Non-Contributing Employer	\$400
Affiliate Rate	\$500

## VARIABLE FREQUENCY DRIVE BASICS

		S	M	T	W	T	F	S	Start Date	Times
SA	S24SA312A							◆	03/23/2024	8:00 pm to 3:30 pm
SF	S24SF312A							◆	05/11/2024	8:00 pm to 3:30 pm

### 2 Weeks, 7 Hours per Session, 14 Hours Total.

This seminar expands on the 3 hour class with hands-on exercises. This class will provide a fundamental understanding of variable frequency drives (VFD's) as applied to Heating, Ventilation and Air Conditioning. Students will learn how VFD's work and their application on fan motors and pump motors in HVACR Systems, how VFD's extend the motor life, and how they reduce maintenance costs.

Member of Contributing Employer	\$75
Member of Non-Contributing Employer	\$400
Affiliate Rate	\$500

# Spring 2024 - FREE WEBINARS



## A CLASS FOR CONTROL FREAKS: GETTING THE MOST FROM YOUR BUILDING AUTOMATION SYSTEM

	S	M	T	W	T	F	S	Start Date	Times
SF			◆	◆				03/12/2024	8:30 am to 12:30 pm

2 days, 4 hours per session, 8 hours total as a Webinar.

Member of Contributing Employer	FREE
Member of Non-Contributing Employer	FREE
Affiliate Rate	FREE

Getting the most from your Building Automation System as a webinar. State-wide energy savings goals are depending more and more on the optimization of our existing buildings through low-cost measures. Many of these projects originate from the control systems we use to manage the operations of our HVAC and lighting equipment. This class will explore common control strategies including schedules, setbacks, resets, lockouts, vacancy controllers, demand control ventilation, CO controllers, economizer operation, and the control of variable speed equipment. We will also look at strategies for diagnosing improper operation of Building Automation Systems using graphics from these systems, trend data, and data from loggers. We will emphasize the control strategies required in Title 24 and include material on how to approach specific strategies as part of a retro-commissioning project.

## CHILLED AND CONDENSER WATER SYSTEMS: DESIGN, PERFORMANCE, AND COMMISSIONING

	S	M	T	W	T	F	S	Start Date	Times
SF			◆	◆				04/16/2024	8:30 am to 12:30 pm

2 days, 4 hours per session, 8 hours total as a Webinar.

Member of Contributing Employer	FREE
Member of Non-Contributing Employer	FREE
Affiliate Rate	FREE

This class will use the "System Concept" as a method to focus on the integrated design and operation of chilled and condenser water systems. We will cover opportunities beyond simply selecting a high efficiency chiller and lowering the condenser water temperature.

## POWER, ENERGY AND THERMS: FUNDAMENTAL CONCEPTS, MONITORING TECHNIQUES AND LOAD

	S	M	T	W	T	F	S	Start Date	Times
SF			◆	◆				04/30/2024	8:30 am to 12:30 pm

2 days, 4 hours per session, 8 hours total as a Webinar.

Member of Contributing Employer	FREE
Member of Non-Contributing Employer	FREE
Affiliate Rate	FREE

This class will explore methods to identify significant electric and natural gas loads using utility meters, sub-meters, dataloggers and building control systems. Training will include the application of power meters to better understand energy-efficiency, demand response and renewable energy projects.



# Training Locations



## SAN FRANCISCO

Local 39 San Francisco Training Center (HQ)  
560 Barneveld Avenue  
San Francisco, CA 94124  
Office: (415) 285-3939  
Fax: (415) 285-6916

Office Hours:  
Monday - Friday 8:00am - 4:30pm



## SAN JOSE

South Bay Union Hall and Training Center  
2102 Almaden Road, Suite 107  
San Jose, CA 95125



## HAYWARD

Hayward Center for Education and Careers  
22100 Princeton Street, Room S-5  
Hayward, CA 94541



## SACRAMENTO

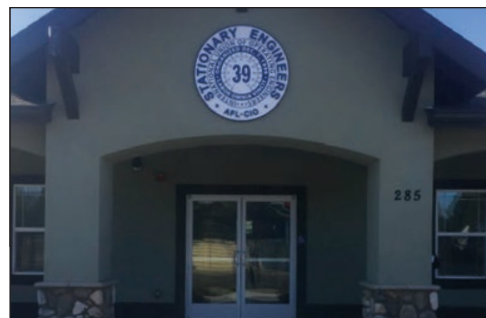
Local 39 Sacramento Training Center  
3325 Myrtle Ave.  
North Highlands, CA 95660  
Office: (916) 928-0200  
Fax: (916) 928-0210

Office Hours:  
Monday - Friday 8:00am - 4:30pm



## FRESNO

Local 39 Union Hall and Training Center  
4644 West Jacquelyn Avenue  
Fresno, CA 93722



## RED BLUFF

Local 39 Union Hall  
285 Sale Lane  
Red Bluff, CA 96080



Local 39 Training Department  
560 Barneveld Avenue  
San Francisco, CA 94124

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For the latest training information, visit us online.  
View the course schedule, get directions and  
download a registration form or register  
online at our site.

Local 39 Spring 2024

Bart Florence Business Manager-Recording Secretary, I.U.O.E. Trustee

Shane Mortensen Director of Training

