BUILDING CAREERS | TRAINING FOR THE FUTURE

TRAINING FUND

OF THE I.U.O.E. LOCAL UNION 94-94A-94B-AFL-CIO

TRAINING PROGRAM

THE TRAINING FUND OF THE
INTERNATIONAL UNION OF OPERATING ENGINEERS
LOCAL UNION NO. 94-94A-94B

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TRAINING PROGRAM

TRAINING CENTER

Howard Styles / Robert Fantine

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Training Fund Of The I.U.O.E. Local Union 94-94A-94B-AFL-CIO

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BRIEF HISTORY OF LOCAL 94's TRAINING PROGRAMS

It was April of 1986 that Local 94, in cooperation with building ownership and management, announced the mandatory Training Program. Until that time all refrigeration, air conditioning and pneumatic control training were available to employees of contributing employers on a voluntary basis.

In June the first sessions of the mandatory core program were being held. By October, four full classes providing advanced voluntary courses were being offered. A new, vibrant Training Program was born.

The first graduates were celebrated in the April 1989 Cutting Edge newsletter. Under the headline Local 94 Training Center Graduates First Class, the story captured the pride in its initial success: "Although not an Apprentice program, members new and old alike have, in general, found the program to be rewarding and worth the time and effort."

In that same issue then-Business Representative Tom Costello, explained the intent, goals and long-term goals of the program: "The officers of Local 94 have elected to take steps to insure the union's future by having all new members attend the Local 94 Training Program. Due to the fact that the demand for a/c package unit mechanics is very high, we are asking that all veteran members increase their knowledge of such equipment by either attending 94's special training courses or through outside courses. The key to our success is knowledge and continuing education."

On January 1, 1993, the Mandatory portion of the Training Program was extended to 360 hours of training.

Today nearly 30 years later, the Local 94 Training Program continues to ensure our membership is provided every opportunity to enhance their skills and remain on the cutting edge of modern building efficiencies.

TRAINING OBJECTIVES AND INTENT

The design and goal of Local 94's training program is to provide the necessary tools and information to our members to meet the increasing demands of today's commercial real estate industry. Our program is designed to enhance the technical, mechanical, electrical skill sets to address and control problems with air quality, environmental control, electrical systems and computer controlled buildings.

Upon completion of the mandatory program the trainee will be a skilled professional able to operate their buildings in the proud tradition of Local 94.

At Local 94, training does not end there. Our training center is committed to provide our members the advanced training designed to expedite opportunities for the highest advancement in our industry.

COURSES EARN COLLEGE CREDIT

Through program accreditation by, and a cooperative study alliance with the Building Owners and Manager's Institute (BOMI), graduates of Local 94's Training Center are eligible to receive BOMI certification as Systems Maintenance Technician (SMT). Through further study with BOMI, graduates of the Training Center may train for BOMI certification as Systems Maintenance Administrator (SMA). Graduates of Local 94's Training Program who complete the Energy Conservation Course and the Mechanical Drafting Course will be awarded 15 college credits toward an Associate in Applied Science (AAS) degree in Environmental Control Technology from New York City College of Technology (NYCCT).

This AAS can be applied to a Bachelor of Technology degree in Facilities Management from NYCCT.

Each of our courses, including our core courses, have Local 94 certificates associated with them. Certificates of Completion for a course are awarded to trainees who attend for the required hours and obtain a 70% minimum score on the final exam. For trainees who obtain a score of 80% or better on final exam, the certificate will read Cum Laude; those with a score of 90% or better the certificate will read Magna Cum Laude.

By virtue of the available training, graduates of the Training center may also qualify for the following professional certificates:

Howard Styles

Robert Fantine

LOCAL 94 QUALIFYING COURSES

- Building Operator Certification Level I & II (BOC)
- Category 7G Cooling Tower Water Treatment License (DEC)
- Universal Technician Certification (EPA)
- Fire Safety/Emergency Action Plan Director Certificate of Fitness (FDNY)
- Refrigerating System Operating Engineer Certificate of Qualification (FDNY)
- Sprinkler S-12 Certificate of Fitness (FDNY)
- Standpipe S-13 Certificate of Fitness (FDNY)
- Air Compressor Certificate of Fitness A-35 (FDNY)
- OSHA 10 Hour General Industry Course (OSHA)

I.U.O.E Certificates

HVACR-1
HVACR-2
Basic Electricity
Basic HVAC Controls
Indoor Air Quality
Energy Conservation
Mission Critical Seminar
Chief Engineer Training
Basic Boiler

COURSE DURATION

Courses operate on a Spring/Fall Semester basis. Each unit consists of 60 classroom hours and spanning a five (5) month period. Classes meet for three (3) hours, once a week, for twenty (20) weeks.

ATTENDANCE

The goal of the Training Program is to educate our members on the important technological changes which impact our industry. In order to benefit from this education you must attend the classes.

Under an agreement with the Trustees of the Training Fund, the maximum allowable absenteeism is 10% of the total number of sessions.

Based on the 10% formula you are allowed to miss only two (2) of the twenty (20) sessions. While we expect 100% attendance, trainees who record more than two (2) unexcused absences will be placed on the default list.

Extenuating circumstances such as serious illness or injury, family problems or other major calamities may qualify as an excuse for exceeding the 10% limit. A third missed session can only be excused by a doctor's note; a written explanation from your immediate supervisor; or death in your family. Acceptance and approval of the excuse will be at the sole discretion of the Training Director.

MISSED CLASSES MUST BE MADE-UP

Excused absence does not mean the missed class does not have to be made up. Any student who does not attend a minimum of 14 sessions (42 hours) of classes will have to repeat the entire unit in the next term. There will be no exceptions.

Default students will be placed on a default termination list, which will be provided to the Contributing Employers. Reinstatement may be established through the participant's Union Representative and Management Representative. If reinstatement cannot be resolved, participants in default may be terminated from the Program and prohibited from attending training courses in the future.

It is the responsibility of each student to re-enroll in the Training Program each semester until the required hours of study have been completed. In the event of any extenuating circumstances you must notify the Training Center in advance to be excused from re-enrolling.

We at the Training Center strive to assist you as best we can and we do not wish to jeopardize anyone in the pursuit of their career.

If you have questions please contact Ms. Lucy Del Valle at the Student Services. You may call (212) 956-4854 (Mon. through Fri. 8:00 a.m., to 4:00 p.m.).

MAKE-UPS

We all understand there are circumstances beyond your control which may cause you to be absent. The training staff is committed to assisting participants in making up missed sessions. Wherever and whenever practical, the staff will work diligently to assist you in making up missed or failed examinations; or entire or partial classroom sessions missed.

You, the student, must attempt to make up any and all lessons missed. It is the responsibility of the student to check the class schedule for the make-up lesson or exam that corresponds to the lesson or exam needed.

Your instructor must sign a make-up slip to verify the student has fulfilled the make-up requirement.

Important note: If you are aware of a scheduling conflict in advance and you notify the training staff, the training staff will work with you and may be able to arrange for you to attend an alternate session.

EXAM GRADES AND CERTIFICATES

The minimum passing grade for receiving a Local 94-94A-94B Union Certificate of Completion is 70%. Participants who achieve a grade of 80%, the Certificate will read Cum Laude; if 90%, it will read Magna Cum Laude. All grades issued by your instructor are final and not subject to appeal.

The Training Fund will also issue a perfect attendance certificate for each unit. This certificate will be awarded to students enrolled in the mandatory programs who attend all 20 sessions. Students who achieve an overall grade of at least 70% for all six (6) units will receive a graduation certificate upon completion.

In addition certificates from the International Union of Operating Engineers are available for Unit 3 through Unit 5 of the core courses.

Many of the volunteer courses have certificates associated with them.

LOCAL 94'S COLLEGE PROGRAM

The CUNY Murphy Institute, NYCCT and Local 94 developed this program to offer you a great opportunity to advance your skills and enhance your career possibilities with professional credentials and expertise.

Pathways to High Performance Careers, is an exciting program offered by IUOE Local 94 and the City University of New York, the Murphy Institute for Worker Education and New York City College of Technology.

Through this partnership you can link your Local 94 training towards a college degree program. Not only will you acquire the necessary knowledge and technical skills, you will be on a path to earn a college degree which is so vital to career advancement. Members of Local 94 who complete the core program training, the Energy Conservation Course and the Mechanical Drawing Course can:

- Be awarded 15 credits toward an Associate in Applied Science (AAS) degree in Environmental Control Technology from New York City College of Technology (NYCCT).
- Apply the associate degree (AAS) credits toward a Bachelor of Technology degree in Facilities Management at NYCCT.
- Receive tuition reimbursement for up to 30 credits upon completion of either the Associate in Environmental Control Technology or the Bachelor of Technology in Facilities Management.

COLLEGE PROGRAMS

ASSOCIATE IN APPLIED SCIENCE IN ENVIRONMENTAL CONTROL TECHNOLOGY

Environmental Control Technology is the study of the science, equipment and systems that are essential to creating and maintaining a comfortable indoor environment.

New York City Technical College provides the theory, design and practical laboratory courses that enable their graduates to secure a substantial skill and credential upgrade while continuing their professional growth.

BACHELOR OF TECHNOLOGY IN FACILITIES MANAGEMENT TECHNOLOGY

The Bachelor's Degree in Facilities Management adds the financial, management, legal and additional

technical skills that are required to enable our graduates to function very effectively as facilities managers. The transition from the associate's to the bachelor's degree program is seamless with no loss of credit.

BOMI CERTIFICATION

As an accredited program for BOMI for more than 25 years, BOMI awards credits toward their SMT (Systems Maintenance Technician) and SMA (Systems Maintenance Administration) Certificates to students who complete compatible Local 94 courses.

SMT

The following requirements are in effect:
• Maintain adequate attendance,
And,
• Achieve a minimum final exam grade of not less than 70% in all of the six units.
• Complete EC and IAQ courses

SMA

The following requirements are in effect:
• Complete SMT requirements
• Complete BOMI 6, 7 & 8

BOARD OF TRUSTEES

The Training program was officially established by the Board of Trustees to provide Local 94 members with a means of obtaining education. The education provided by the Training Program is separate and distinct from any educational programs or seminars you may attend privately.

This program is specific to our needs.

The Training Fund is governed by the Board of Trustees. Half of the Trustees represent the employees and half represent the participating employers. The Board of Trustees review all financial matters pertaining to the Fund; as well as training content and policy.

The basic agreement as to the Training Program can solely be amened by the Board of Trustees.

LOCAL 94'S TRAINING CENTER

CORE PROGRAM FORMAT

UNIT 1 INTRODUCTION TO COMMERCIAL OFFICE BUILDINGS

UNIT 2 HEATING SYSTEMS AND PUMPS

UNIT 3 BASIC REFRIGERATION

UNIT 3B CHILLER SYSTEMS

UNIT 4 ELECTRICITY FOR BUILDING EQUIPMENT OPERATIONS

UNIT 5 CONTROLS AND CONTROL STRATEGIES

LOCAL 94'S TRAINING CENTER

ELECTIVE ENROLLMENT PROGRAM FORMAT

UNIT 3C Refrigerating System Operating Engineer
Course Tuition Fee: $300.00

UNIT 3R Universal Technician Certification
Tuition Fee: $50.00

EC Energy Conservation (SMT)
Tuition Fee $150.00

IAQ Indoor Air Quality (SMT)
Tuition Fee: $150.00

UNIT 6 BOMI SMA 6: Building Design and Maintenance Tuition Fee: $300.00

UNIT 7 BOMI SMA 7: Managing the Organization
Tuition Fee: $300.00

UNIT 8 BOMI SMA 8: Environmental Health and Safety Issues Tuition Fee: $300.00

BOC 1 Building Operator Certification

FSD Fire Safety Director

EAP Emergency Action Plan Director

PU Package Unit (hands on) Course

CS Critical Systems

CE Chief Engineer

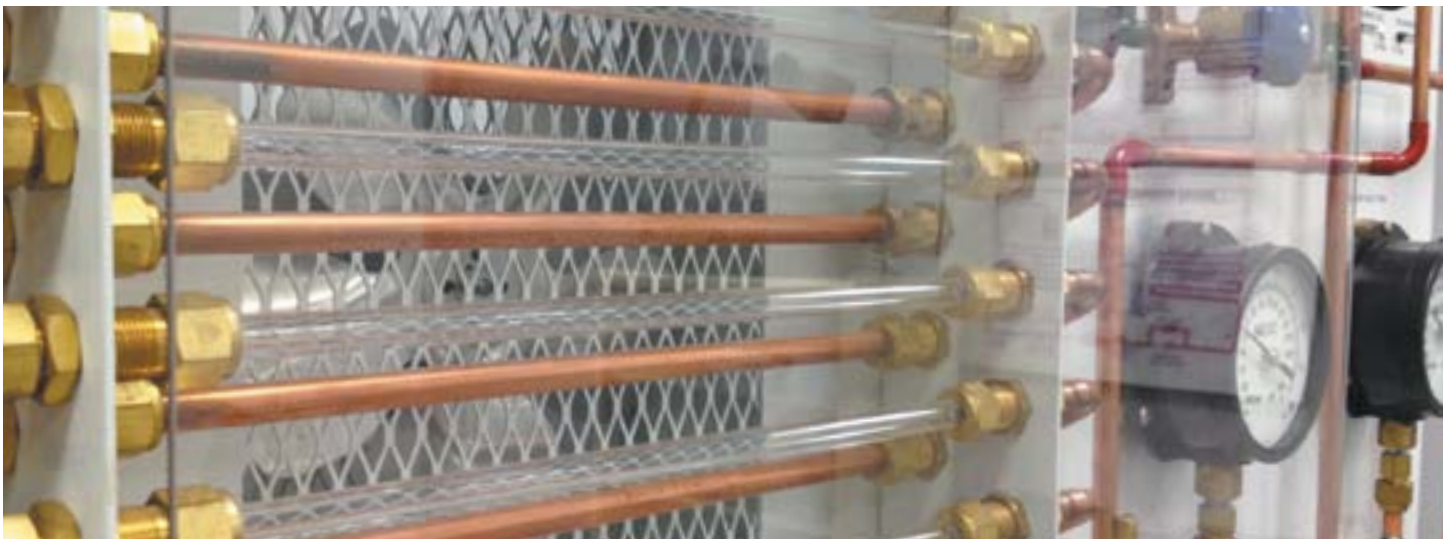
UNIT 2B Water Treatment and Pesticide Applicator Certification

OSHA OSHA General Industry Course

MD Mechanical Drafting

LPB Low Pressure Boiler Course

DDC/BMS Advanced Direct Digital Control/Building Management Systems.



UNIT 1

MANDATORY COURSE OF STUDY

INTRODUCTION TO COMMERCIAL OFFICE BUILDINGS

UNIT OUTLINE: This unit is designed to develop specific technical competence along with a foundation of practical skills. Emphasis is placed on a complete understanding of what makes up Commercial Office Buildings. Students will be able to understand their role in the normal operation of a Commercial Office Building. Students will also be introduced to the different functions required to operate a Commercial Office Building, i.e., air systems, water systems and all facets of life safety. In addition, Students well versed in major building equipment, i.e., water tanks and cooling towers. After completing Unit 1, the student will have increased his/her knowledge and value to the Commercial Real Estate Industry.

The Students should also be able to obtain a New York City Standpipe and Sprinkler as well as an Air Compressor Certificate of Fitness.

UNIT 2

MANDATORY COURSE OF STUDY

HEATING SYSTEMS AND PUMPS

UNIT OUTLINE: This unit is designed to continue the student's mechanical and engineering development. Unit 2 introduces the student to various heating systems. This Unit of study proceeds into a complete array of valves and pumps and their functions within an Engine Room.

Students will learn the different types of pumps and their particular functions. Students will be able to identify the individual parts that make-up a pump and, as part of the hands-on lab, be able to disassemble a pump and completely rebuild it. Unit 2 will also cover hot water and steam heating systems including maintenance of hot water and steam equipment, such as steam traps.

Hands-On Lab Sessions will account for a large portion the class hours. Lab sessions are designed to develop the Students understanding of valves, pumps and heating systems. Students will become familiar with varied building equipment and their maintenance procedures including preventive maintenance requirements.

Upon successful completion of Unit 2 students will have increased their value to their employer by their knowledge of different equipment, and their ability to prevent breakdowns.

UNIT 3A

MANDATORY COURSE OF STUDY

BASIC REFRIGERATION

UNIT OUTLINE: This Unit is designed to build an understanding of the refrigeration cycle, its environmental responsibilities and the varied applications. The refrigeration cycle and each component of the mechanical refrigeration system will be covered in detail as to operation, maintenance and troubleshooting. Safety factors, tools and functions of refrigeration systems will also be a focus of this Unit.

Materials for Unit 3A include an approved International textbook. Theory and hands-on lab sessions which include our internal package unit trainers will be combined to best present basic refrigeration. Your Instructor will demonstrate methods of using refrigeration tools, equipment and special devices. You will perform actual refrigeration tasks as well as soldering and brazing assignments.

Students will have established the groundwork toward attaining their New York City refrigeration License and the Universal Certificate for Refrigerant handling.

UNIT 3B

MANDATORY COURSE OF STUDY

CHILLER SYSTEMS

UNIT OUTLINE: The intention of this Unit is to further your education in the refrigeration field.

As part of Unit 3B, we will be studying the larger systems. We will look at the different types of systems, the many methods of controlling them and how they interface with your building operations.

Unit 3B will address chilled water systems, as well as the drive mechanisms for these types of machines.

All of the accessory items such as the cooling towers and air handlers will be detailed as to operation and maintenance. We will present the steam turbine as a drive for centrifugal machines and address the operation and maintenance requirements for the steam turbine. We will additionally address the absorption systems and their applications.

We will look at different types of chilled water systems and their applications and operations. Your troubleshooting skills will increase with the knowledge you will gain throughout this Unit. We will also do three field trips to familiarize you with the different types of chillers and the other major equipment which make up Unit 3B.

UNIT 4

MANDATORY COURSE OF STUDY

ELECTRICITY FOR BUILDING EQUIPMENT OPERATIONS

UNIT OUTLINE: This Unit is designed to develop specific technical competence along with a foundation of practical skills. Emphasis is placed on schematic reading and troubleshooting.

Hands-On lab sessions will account for a large portion of the class hours. Lab sessions are designed to develop comprehension of individual component functions, wiring and interaction of components within a circuit.

The controls and circuitry studied in this Unit are coordinated with the equipment and systems involved in previous Units. Emphasis is placed on the controls and circuitry found on today's highly automated packaged air conditioning units.

Students will be able to follow manufacturers' instructions thereby performing preventive maintenance and simple motor replacement. Students will also be able to operate, install, service and troubleshoot/diagnose electrical controls and circuits.

Specialized training equipment is available for hands-on experience, which duplicates on-the-job situations.

UNIT 5

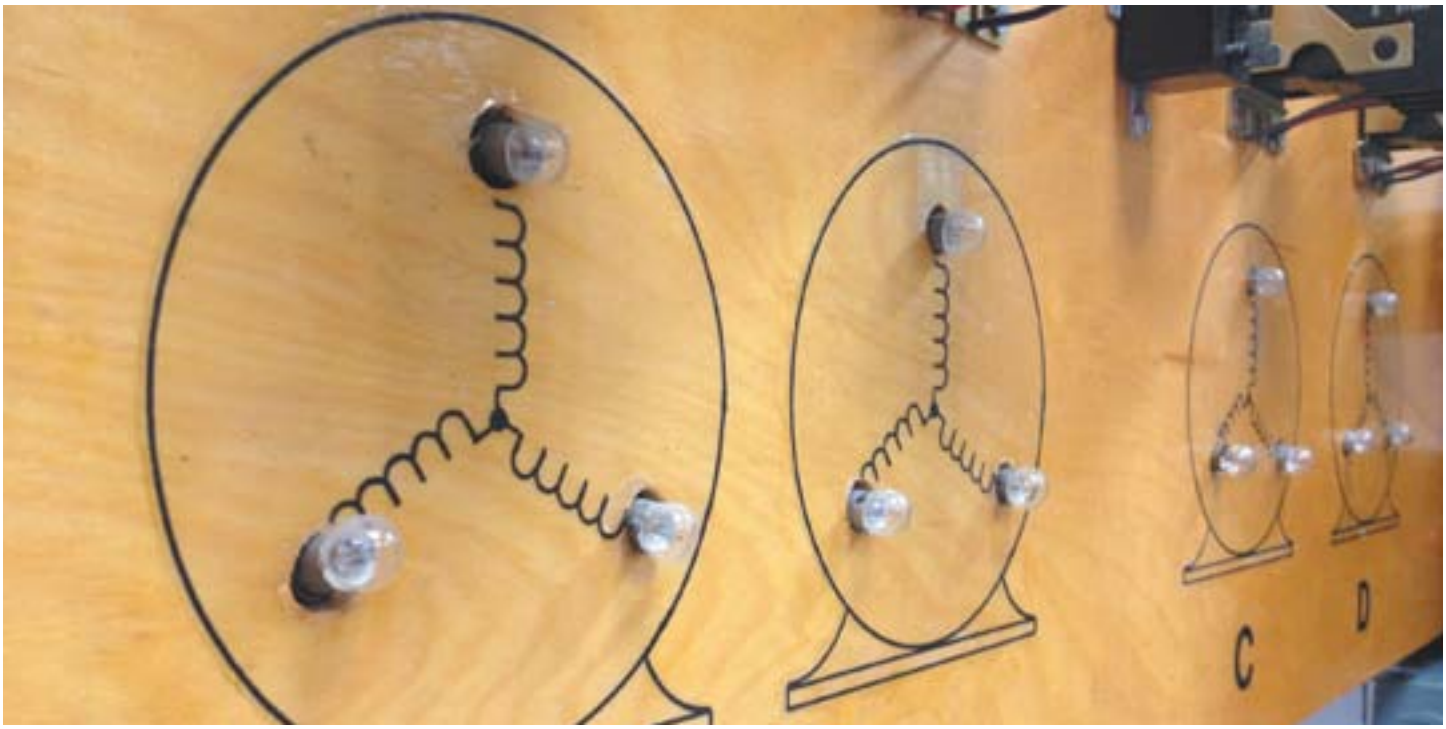
MANDATORY COURSE OF STUDY

CONTROLS AND CONTROL STRATEGIES

UNIT OUTLINE: This unit is designed to provide the student with the basic control theory and then continue on to the most intricate control strategies. The student will have obtained a control foundation, in both PNEUMATIC and DDC controls. Knowledge learned in Unit 4 will aid the student for this unit.

Through knowledge of the text, the student can develop an in-depth understanding of the varied pneumatic and other control system applications for HVAC air handlers and associated equipment. Both aged and modern designs, using different manufacturer controls, are studied and worked with during hands-on sessions.

This course introduces the student to building automation systems and their applications. The main focus of this course is an application of theory designed to help the student develop hands-on skills to work on a typical pneumatically or DDC controlled systems at his/her workplace. The course will develop calibration, as well as troubleshooting skills with pneumatic systems and DDC systems.



UNIT 3C

VOLUNTARY COURSE OF STUDY

REFRIGERATION MACHINE OPERATION CERTIFICATE OF QUALIFICATION COURSE

UNIT OUTLINE: This Unit will prepare students for both the written and practical examinations administered by the City of New York. All subjects pertaining to safety and professional operation of large tonnage refrigeration equipment will be covered. Refrigeration principles, NYC codes and all topics related to refrigeration are studied.

Refrigeration components, refrigerants, systems, and codes, are discussed in detail. The mathematics required for the testing will also be part of this course.

Specific preparation for the exams is accomplished by a comprehensive review of all material and extensive use of visual aids.

The student who has paid for this course can attend the written and/or practical sessions until he or she passes the New York City examination at no additional cost.

BOMR

VOLUNTARY COURSE OF STUDY

BUILDING OPERATION, MAINTENANCE & RECORDKEEPING

UNIT OUTLINE: Effective January, 1, 2016, all Refrigeration Operating Engineers who are up for renewal holding a certificate of qualification (Q-01/Q-99) must submit evidence of having completed the Building Operation, Maintenance and Recordkeeping Course (BOMR) or valid FSD (F58/F25) Certificate of Fitness. The BOMR course is a 2 day 7 hour course.

The Local 94 Training Center is an accredited school and an approved BOMR school serving the existing members who are Q-01/Q-99 holders. The course consists of primary fire systems, fire-safety related building systems and fire safety operational and maintenance requirements.

UNIT 3R

VOLUNTARY COURSE OF STUDY

UNIVERSAL TECHNICIAN CERTIFICATION

UNIT OUTLINE: The regulations of the U.S. Environmental Protection Agency require an individual performing the

duties of a refrigeration system operating engineer to possess Universal Technician Certification (UTC). Therefore at the time you apply for the Certificate of Qualification for the Refrigeration Operating Engineer exam you must present evidence of the UTC.

Students will be introduced to the concepts of recovery, recycling, reclamation and proper refrigerant handling.

Students will be prepared to take the four-part examination, which will result in the Universal Technician Certification upon passing the core and all of the following:

- Type I - Small Appliance
- Type II - High/Very High Pressure
- Type III - Low Pressure Appliance

EC

VOLUNTARY COURSE OF STUDY

ENERGY CONSERVATION

UNIT OUTLINE: With this state-of-the-art training, Local 94 is poised to be part of the solution to reduce the inefficient use of energy resources and to effect a corresponding reduction of environmental emissions and dependency on foreign oil. Individuals who complete this extensive training will lay the foundation for other courses such as the Building Operator Certification.

Energy saving opportunities will be the foundation for optimizing all types of facilities. The ultimate goal of the energy conservation program is to produce effective energy principles, which can be applied to the student's facility.

The profitability to be derived from this program will be related directly to the existing performance of the facility and the level to which an individual employer wishes to implement these cost-saving measures.

Local 94 engineers, with their intense training and specialized skills, are already some of the most significant contributors to cost-effective, safe and efficient use. The course teaches energy calculations, metering and monitoring, lighting, automation systems, steam, HVAC systems, audits and energy bills. Our unique, comprehensive energy conservation training course will assist public and private sector employers improve their bottom line.

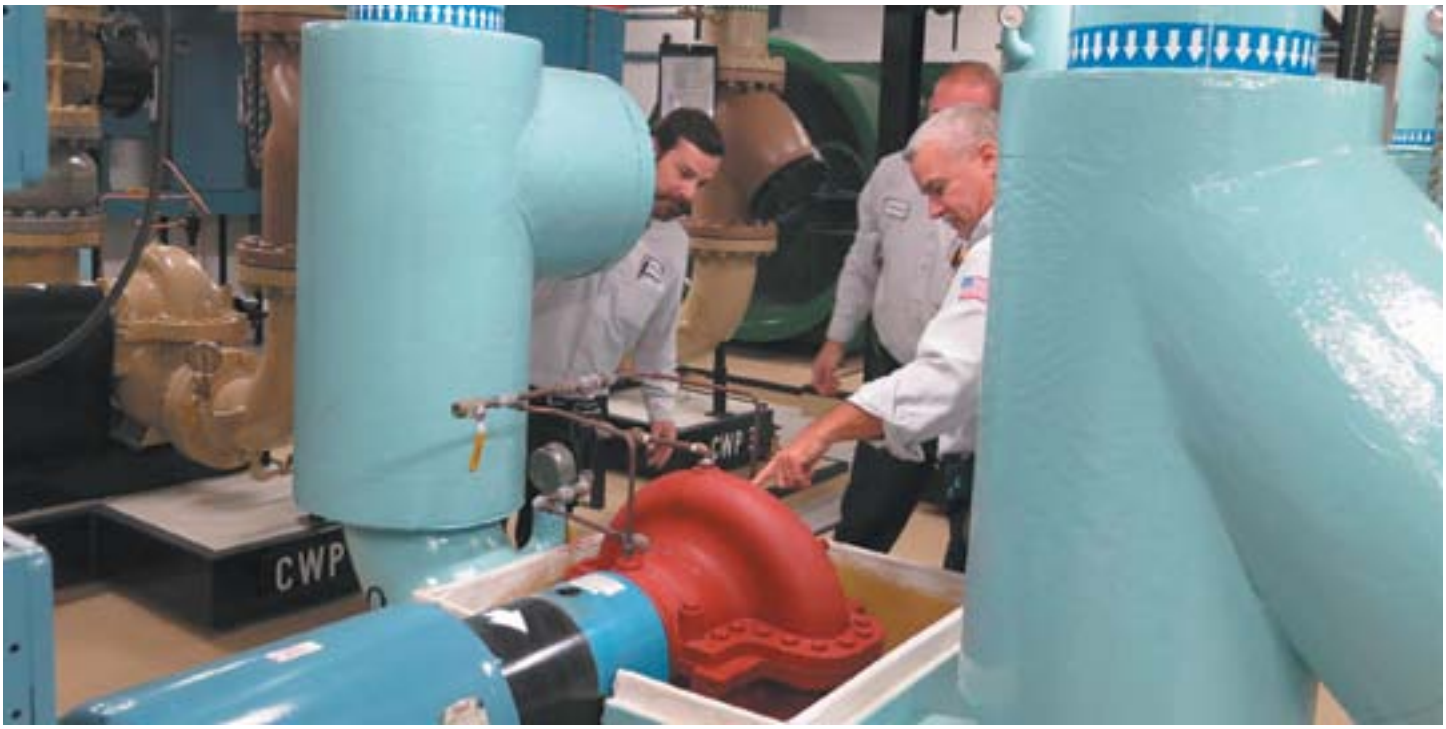
This course will apply towards your SMT Certificate and college credits

IAQ

VOLUNTARY COURSE OF STUDY

INDOOR AIR QUALITY

UNIT OUTLINE: The IAQ course teaches about health concerns, contaminants and safety.



The course will teach the techniques required for preventing and mitigating most IAQ problems.

These techniques center on how to operate an effective preventive maintenance program that includes regular visual inspections and a schedule for periodic air sampling. You will also learn how to troubleshoot heating, ventilating, and air conditioning problems. This course teaches IAQ concerns and their usual causes. The necessary skills to perform different tasks to identify and mitigate the most common IAQ problems will be taught. Measurement of HVAC systems to a higher standard, beyond the traditional standards will also be taught. The student will learn how to provide thermal and air quality through this intense training.

Water system balancing, building commissioning, preventive maintenance and homeland security are among the topics in this course of study.

This course will give you a new perspective on how to appreciate air quality and better enable you to prevent and correct indoor air quality problems.

This course will apply towards your SMT Certificate.

UNITS 6-7-8

VOLUNTARY COURSE OF STUDY

BOMI

UNIT 6 BUILDING DESIGN AND MAINTENANCE

This course will help the student to become familiar with maintenance procedures and equipment, preventive maintenance, as well as construction documents. In this course, the student will cover the characteristics, uses, and properties of common building materials, as well as building regulations, codes, and standards. The student will learn to compare building system components and to identify appropriate inspection and maintenance techniques. The student will develop the knowledge to establish procedures and standards for monitoring building operations and preventive maintenance.

The student learns to read and use construction documents, studying from a textbook that features a set of drawings and an architect's pocket scale. The information that accompanies this course features illustrations and resources, such as governmental and industry websites, this course can help you operate and maintain a sound, safe building.

BOMI SMT Certification is prerequisite for this course of study. This course will also apply towards your SMA Certificate.

UNIT 7 MANAGING THE ORGANIZATION

This course will help you become an effective Chief Engineer, Assistant Chief and a leader in your organization. Your role will take on new meaning as you learn to understand the impact you can have on your organization and the individuals who work for you.

The course will reinforce the theories and strategies with a new case study in which management practices are applied to address industry trends and issues related to enhancing the value of an asset.

BOMI SMT Certification is prerequisite for this course of study. This course will also apply toward your SMA Certificate.

UNIT 8 ENVIROMENTAL HEALTH AND SAFTEY ISSUES

Protecting the environment with green initiatives and promoting worker health and safety such as OSHA regulations are issues at the center stage of today's property industry.

This course provides the student with an overview of the environmental health and safety considerations in building operations. The student will learn to develop and manage proactive environmental/occupational health and safety measures in their facilities, comply with regulatory standards and guidelines governing facility health and safety issues, and assess when to obtain technical assistance.

BOMI SMT Certification is prerequisite for this course of study. This course will also apply toward your SMA Certificate.

BOC 1

BUILDING OPERATOR CERTIFICATION

BUILDING OPERATOR CERTIFICATION (BOC) is a nationally recognized, competency-based training and certification program which offers facilities personnel the improved job skills and knowledge to transform the workplace to be more comfortable, energy efficient and environmentally friendly.

The BOC credential is recognized by employers throughout the country as a sign of the value and contributions certified facilities management personnel can bring to their organizations.

Running a building isn't the job is used to be. The complexities and interdependencies of a facilities' systems – HVAC, electric, lighting, etcetera – require an understanding of the big picture so that they work in concert to promote energy efficiency.

The Building Operator Certification Program trains

engineers to understand how these systems work together, and how to bring them to their most efficient level of operation.

FSD

VOLUNTARY COURSE OF STUDY

FIRE SAFETY DIRECTOR

UNIT OUTLINE: In accordance with Local Law 5, the fire safety director course is designed to familiarize the student of fire safety in commercial office buildings. Local law 41 and 58 are also covered as it relates to the fire safety director. Class E systems are covered along with flame proofing, elevators, fire safety plans and fire drills. This course provides the information needed to pass the Fire Department written and on site exam.

EAP

VOLUNTARY COURSE OF STUDY

EMERGENCY ACTION PLAN DIRECTOR

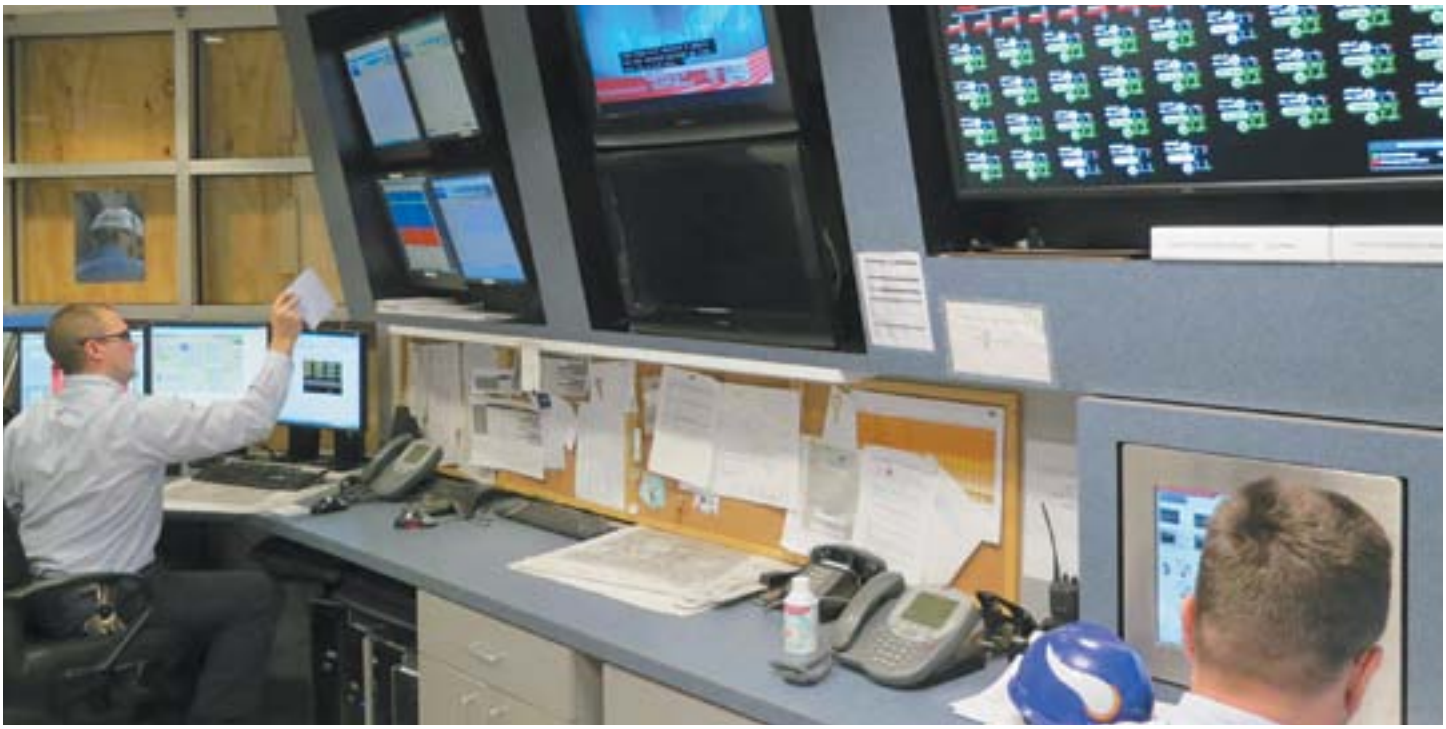
UNIT OUTLINE: In accordance with Local Law 26, the EAP course is designed to familiarize the student with an emergency action plan for NYC. This course covers evacuation concepts, emergency response operations, building communications, ventilation options, elevator operations, threat analysis, terrorism, natural disasters and how the emergency action plan is prepared. This course prepares the student for the written and on-site exam.

DDC/BMS

VOLUNTARY COURSE OF STUDY

ADVANCED DDC/BMS COURSE

UNIT OUTLINE: Unit 5 lays down the foundation of control technology. Buildings should not only be energy efficient, they must also be "smart." That is why we implemented an advanced Direct Digital Controls and Building Management System course. This course will reflect the type of systems used in modern buildings. The word automated buildings is also called smart buildings. The DDC/BMS course will teach students the latest technology in building management systems. The student will be able to make the connection from energy management to control technology. The student will learn how to be both efficient and smart in building operations. Lab sessions are part of the course. The student should be able to implement what he/she learned from the classroom to the jobsite.



PU

VOLUNTARY COURSE OF STUDY

PACKAGE UNIT (HANDS ON TRAINING)

UNIT OUTLINE: This is a short 5 week course designed to upgrade student's skills in specific areas such as:

- Leak Testing
- Evacuation
- Recovery
- Charging

CS

VOLUNTARY COURSE OF STUDY

CRITICAL SYSTEMS

UNIT OUTLINE: This course is a comprehensive study of how to maintain a facility which has critical systems such as data centers. In this modern day of technology and complexity, data is transferred continually. This information is critical and important. This course is designed to equip the student with the fundamental skills to ensure critical equipment is kept on-line in the event of any type of power failure. The course teaches about electrical systems, standby generators, automatic and static transfer switches, power quality, UPS systems, data center cooling, and fire protection systems.

CE

VOLUNTARY COURSE OF STUDY

CHIEF ENGINEER COURSE

UNIT OUTLINE: This course is designed for the assistant Chief Engineer and the Chief Engineer specifically. This course is also for the individual who is preparing to become a chief engineer.

The course will deal with the concerns of health and safety issues, human relations, record keeping, reports and presentations, budget preparation and planning and time management. It will also address the use and benefits of computers to a Chief Engineer, touch upon energy conservation and aid the Chief in developing his/her interpersonal skills.

The successful student will be better prepared to meet the pressure and stress related to being a Chief Engineer. After completing this course the Chief Engineer should be better prepared to take the next step, and become a facility manager.

A certificate from the International Union of Operating Engineers is available upon successful completion of this course.

UNIT 2B

VOLUNTARY COURSE OF STUDY

WATER TREATMENT; PESTICIDE APPLICATION CERTIFICATION

UNIT OUTLINE: Commercial facilities require cooling towers for various types of equipment for cooling. Cooling towers require a large amount of water to function. Untreated water may contain microbiological organisms such as algae. Biocides are a type of pesticide used to control microorganisms. When biocides are used it will require special training so that when applied it will not endanger the applicator, co-workers or the environment.

If algae, slime-forming bacteria or fungi are allowed to remain in cooling towers, it will cause reduced efficiency and shorted the life of the air conditioning equipment. This course trains students on how to properly apply micro-biocides to cooling tower water. Certification is required for application in New York State. The course prepares the student for the state certification.

The course helps students identify problems common to cooling towers, identify common pest, and provide methods of application for specific problems, special safety precautions, equipment, maintenance, and operation.

OSHA

VOLUNTARY COURSE OF STUDY

OSHA GENERAL INDUSTRY COURSE

UNIT OUTLINE: This safety course provides workers a variety of training on OSHA General

Industry Standards that is applicable to the worker's safety and health.

The course includes electrical safety, fall protection, protective equipment, materials handling, power tools, and confined space safety. The OSHA course is short course that can be delivered as frequent as needed.

Students who successfully complete the 10 hour course will receive a certificate from OSHA.

MD

VOLUNTARY COURSE OF STUDY

MECHANICAL DRAFTING

UNIT OUTLINE: This drawing course will familiarize the student with various types of graphical engineering sets of diagrams. A drafting course designed to train students to read graphically in HVAC field. They learn to letter, draw line work, and use drafting instruments and standard HVAC representations, draw orthographic and isometric projections of HVAC equipment. The student also learns to work with architectural and structural plans to lay out HVAC systems.

This course can be applied to college credits

LPB

VOLUNTARY COURSE OF STUDY

HIGH EFFICIENCY LOW PRESSURE BOILERS

UNIT OUTLINE: This course provides information on the safe and efficient operation of low pressure boilers. This course is designed for individuals who have low pressure boilers in their facility. This course covers boiler classifications, pressure controls, pump principles, tanks, heating systems, safety and relief valves, and electrical safety.

Energy efficiency and environmental issues are emphasized throughout the course. Leadership in Energy and Environmental Design (LEED) principles are used as a guideline in this course.

Unless specifically noted, the policies below apply to the mandatory and voluntary training programs unless otherwise specified by the Training Center.

REGISTRATION DEADLINE

The registration deadline is one week prior to the beginning date of the course. Pre-enrollment forms are mailed to students prior to enrollment. If you do not receive notice at least three working days prior to class, call (212) 956-4854.

COURSE CANCELLATION

The Training Center reserves the right to cancel any course or modify the schedule. This includes cancellation of any class after the course has begun.

CERTIFICATES

Certificates for successful completion are issued to eligible students in most courses. For students in Units 1-5 certificates will be issued only to students who have met requirements within the 20 week span of the course. Students that are incomplete will not be issued a certificate after making up class the following semester.

CELL PHONES, READING AND SLEEPING

Students who are carrying a cellular phone must turn them off or put on silent feature before entering class. In addition, students also must refrain from leaving the classroom during the class session for telephone conversations. Reading any material other than the class material (newspapers) is not permitted in the classroom. Sleeping in the classroom is not an acceptable practice.

CLASS MEETINGS & ATTENDANCE

Unless you are notified otherwise, all courses will start according to the schedules listed for that semester.

Students are expected to attend their scheduled classes and be on time. An instructor will deduct time for lateness or leaving early. Deductions will be in 30 minute increments. If a student is 30 minutes late he could receive 2.5 hours instead of the 3 hour requirement. Excessive lateness will not be tolerated. Successful completion requires 90% attendance in most courses and an over- all passing grade.

STUDENT BEHAVIOR

Students are expected to behave in a professional manner while attending the Training Center. There is no smoking within the building as it is a smoke-free environment. Please treat fellow students and instructors, as you would like to be treated. Any misconduct incidents will be reviewed on an individual basis and could lead to disciplinary action, up to, and including termination.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