

The Service Fitters' Industry Educational Fund

48-03 32nd Place
Long Island City, NY 11101
P (718) 472-0414
F (718) 433-0676
www.steamfitters.com

ADVANCED EDUCATION PROGRAM

CLASSES ARE FOR MEMBERS OF LOCAL UNION 638 ADVANCED EDUCATION PROGRAM WINTER 2015

The trustees of the Service Fitters' Educational Fund are pleased to announce various classes in a planned series of advanced education programs for **HVACR –LU 638 Service Technicians**.

PLACE: HVACR Service Technicians Training Center
48-03 32nd Place
Long Island City, New York 11101

TIME: See below

ENROLL: Space is limited and registrations will be accepted in order of receipt. **To register call Margarita Velez at (718) 472-0404/14 or fax your registration form at (718) 433-0676 or email mvelez@steamny.com**

NOTE: If you are interested in taking a class and you do not see it currently listed, please let us know and we will do our best to accommodate your needs. Courses that are available upon request will be scheduled provided we have enough technicians requesting the class; your name will be placed on a waiting list and you will be contacted with class information if scheduled.

CLASS NAME	Class Description	Dates
ADVANCED COPPER CONNECTIONS:	No more leaks, hands-on copper connection class provides 95% shop class on soldering and brazing, flare, swaging, understanding the correct methods of connecting copper, steel, brass and different alloys.	4 Session Course On: Wednesdays: 3/4/15, 3/11/15, 3/18/15 & 3/25/15 5:00 p.m. Start
	Space is limited. Maximum number of Participants: 14	
	Shop opens at 4:00 p.m. for those students who wish to get an early start on this course.	

AIR FLOW SYSTEM PERFORMANCE

1 Session Course
Available Upon Request

Textbook Fee: Technicians who sign for this course must mail at \$45 check or money order payable to Service Fitters Industry Educational Fund. Payment should be sent to: 48-03 32nd Place, Long Island City, NY 11101, Attention: Margarita. Only technicians who submit the payment will receive the textbook for this course.

1 Session Course: Space is limited to 16 students.

Course Date: Available Upon Request

Course Description: This class will use ESCO HVAC Excellence Manual "System Performance - Maximizing Energy Efficiency in Heating & Cooling". The class will cover Airflow.

Subjects Covered include properties of Air, Airflow Measuring tools, Measuring Airflow, Blower Performance Chart, Measuring Airflow Using A Pitot Tool Traverse, Hands on Course!

COMFORT BY DESIGN: AN INTRODUCTIONS TO HVAC'S VARIABLE REFRIGERANT FLOW ZONING SYSTEMS (VRFZ)

Provider: Mitsubishi Electric HVAC
(2 Hour Course)

1 Session Course on:
Available Upon Request

Description: This course takes an in depth look at functions, features and environmental impact of various types of HVAC, especially the new, emerging Variable Refrigerant Flow Zoning (VRFZ) systems.

Learning Objectives: Upon completion of this course, participants will be able to:

Identify the fundamentals of heating, ventilation and air conditioning systems, including basic system components.

Evaluate the energy efficiency and environmental impact of Variable Refrigerant Flow Zoning (VRFZ) technology.

Identify the many building design options available with VRFZ technology.

Indicate how the indoor environmental quality of buildings can be enhanced with VRFZ technology.

How Taught: The CES facilitator will utilize a PowerPoint presentation to provide an interactive, in-depth look into VRFZ technology. The presentation will include digital animation and the presenter will encourage feedback and questions from attendees.

LOW AMBIENT CONTROLS:

**1 Session Course on:
Wed., March 25, 2015
5:30 p.m. Start**

The purpose of low ambient controls, when to use low ambient controls, which type to select and how to set them up. Topics will include: variable speed controllers for condenser fans, damper type low ambient control (piston and modulating); temperature and fan cycling controls, refrigerant gas head pressure controls valves, step controllers for low ambient controllers will be discussed: Alco & Sporlan Headmasters, Robert Shaw Low Ambient Pistons, Hoffman, Carrier, ICM, ACT & Johnstone Speed Controllers. Handouts will include wiring diagrams and the operation of various controls.

**OUTREACH TRAINING COURSE ON
SAFETY (OSHA)**

OSHA courses are scheduled as two-session courses and are usually given **every month**. Metal Trades members can call the Training Center (718) 472-0414, ask for Kathleen or email khertel@steamny.com to get on the list for the next available set of OSHA classes; please have your book number handy. Space is limited and we expect technicians to take attendance seriously.

Who Should Attend: This (12) hour's outreach-training course is designed for service technicians. The course will give the service technicians an in-depth look at the importance and value of safety and health in the workplace. This course will emphasize hazard identifications, avoidance, control and prevention.

Testing: Quizzes and tests will be given at the end of each session to ensure technicians understand key objectives.

Evaluations: Technicians will evaluate the course at the end of the two-day sessions. Feedback will help the Center determine whether the course is accomplishing its goals.

Completion Cards: Students will receive a 10-hour OSHA course completion card. It will take approximately three weeks to process the completion cards.

**HOT GAS BYPASS, LIQUID
INJECTIONS AND HEAT
RECLAIM VALVES**

Course Topic: Purpose and use of the above type valves; where and on what systems they are utilized; how they operate and how to adjust them to meet the different applications.

**1 Session Course on:
Wednesday, April 1, 2015
5:30 p.m. Start**

INTRO TO BLUEPRINT READING

Introduction to Blueprint Reading with electrical and mechanical symbols

**2 Session Course on:
Available Upon Request**

R-410 SAFETY TRAINING & EXAMINATION

In collaboration with ESCO Institute*, the Trustees of the Service Fitters' Educational Fund, its Executive Committee and the Staff of the HVAC Service Technicians Training Center are pleased to announce a course on **R-410 SAFETY TRAINING AND CERTIFICATION EXAMINATION** in a planned series of advanced education programs for HVACR service technicians.

Prep and Test on:
Saturday, April 18, 2015

8:00 a.m. Start

Registrations are confirmed upon receipt of **\$51.00 Non-Refundable** fee.

Make check or money order payable to:
Service Fitters' Educational Fund
48-03 32nd Place
Long Island City, NY 11101
Attention: Margarita

Highlights

1. A preparatory course is scheduled prior to certification examination.
2. The examination consists of 50 questions.
3. The passing score of the close book proctored examination is 70%.
4. Candidates must correctly answer 35 questions of the 50 questions to receive a passing score of 70%.
5. Each candidate will receive an official score report approximately 2-3 weeks after the exam.
6. Upon successful completion of the certification examination, technicians will receive from ESCO Institute a wallet sized certification card.
7. Candidates must bring some form of identification to the test session. Examples of acceptable forms of identification are: driver's license, employee identification card bearing the candidate's picture and signature.
8. Registration to the course will be officially confirmed Upon receipt of the Examination Fee. Please make check out to Service Fitters' Educational Fund in the amount of **\$51.00 (Non-Refundable)**. **This will cover testing and literature.**
9. Space is limited and registration will be accepted in order of receipt. If you need more information, please feel free to call Margarita Velez at (718) 472-0414.

****R-410A Safety Training is a result of a cooperative Effort of several HVACR industry groups that formed a coalition (AC & R Coalition) to address various safety issues; the ESCO Institute was chosen to provide the grading services for the coalition.***

INTRODUCTION TO COMPUTERS

This class offers participants with no computer experience a chance to become familiar with a personal computer. The course concentrates on identification of the basic parts of a computer, an introduction to the use of email and an introduction to Microsoft Word. For those participants who have a hard time finding files after they were saved, this class will offer help in File Management by creating a folder system and for those students looking to Surf the Web, this class is designed to give novice users a brief introduction to the internet.

**2 Session Course on:
Mon. March 9, 2015
Wed. March 11, 2015
4:30 p.m. Start**

MICROSOFT EXCEL BASICS

If you have not used Microsoft Excel before, this basis Excel training course is just right for you. At the end of this course you will have a good working knowledge of the basics of Excel.

**2 Session Course on:
Mon., March 16, 2015
Wed., March 18, 2015
4:30 p.m. Start**

Please note: You will be learning the 2010 version of Excel.

Microsoft Excel has let the spreadsheet market for many years and continues to be the most popular spreadsheet program for both businesses and consumers. You will learn to create spreadsheets from scratch; you will save time and become more efficient by learning how to organize your job lists, tools or personal finances into easy to find spreadsheets.

MECHANICAL & ELECTRICAL OPEN SHOP

A/C and Refrigeration Systems Diagnostics

Technicians will perform system Surveys, operational diagnosis, and Troubleshooting procedures.

**1 Session Course:
Sat., April 11, 2015
8:00 a.m. Start**

This class will be “Hands On”! You must
BRING YOUR TOOLS: Hand Tools, Gauges,
Meters and Safety Glasses.

Class will include checking system performance, calculating superheat and sub-cooling of various air conditioning and refrigeration equipment. some trainers require wiring using the associated wiring schematic. Wiring material and schematics will be supplied. After the trainer has been wired correctly and proper operation has been confirmed, faults can be installed for troubleshooting.

Equipment List:

- 2 Rooftop Package Units
- 5 Refrigeration Trainers with electric defrost time clocks
- 1 Low/Medium Temperature walk-in box with a defrost cycle
- 1 Dunham Bush chiller and water tower
- 1 Carrier water source heat pump
- 2 “New” Hampden Heat Pump Electrical Trainers with fault options for an enhanced training experience
- 3 Diagnostic Trainers, Air Conditioner, Heat Pump, and Refrigerator, with fault Options for an enhanced training experience
 - Install and set up electronic Refrigeration control, Paragon ERC-2.
 - Wire up a two-stage cool/heat training project that has simulated compressors, electric heat elements, evaporator fans and condenser fans.
 - Wire an ICM and Hoffman condenser fan speed control to a motor and check its operation.
 - Help clean up the shop upon conclusion.

**COMMERCIAL REFRIGERATION
(FROM DELIS TO SUPERMARKETS)**

**1 Session Course On:
Saturday, March 21, 2015
(Class may extend to 2 sessions)
8:00 a.m. Start**

Technicians in teams will work on Individual stations and will follow a step-by-Step, hands-on learning process that will introduce them to:

- Understanding & installing, Evaporator pressure reg valves; Crankcases, pressure regulator Valves and TXV valves, oil Separators, accumulators.
- Adjusting pressure controls, technology of controls settings, and refrigeration temp and coils, coil to air temp, desire relative humidity.
- Defrosting, setting, types of defrost and Controls
- Refrigeration, piping, sizing, trapping

**ANATOMY OF A SERVICE CALL
(NEW COURSE)**

**1 Session Course:
Thu., March 19, 2015
5:30 p.m. Start**

This class is designed to help students understand that there are many aspects to being a service technician. For Example, how your attitude affects the outcome of a service call, how customer interaction is critical, and how common sense based on logical thinking is essential.

This course will focus on how technicians can use basic air conditioning theory to diagnose problems often without even opening a tool box. In addition, there will be a focus on safety considerations as well as addressing how service calls can bring economic value to both, your customers and your company.