

## COAD Ohio Weatherization Training Center Course Overview

### **AEA MULTI-FAMILY ENERGY AUDITING AND HEATING SYSTEMS (MEAHS)**

This 10-day class will prepare weatherization workforce for multifamily weatherization energy auditing. Each step of a multifamily audit will be covered and knowledge verified by end-of-module tests. Each module is sequential and attendees must pass the test at the end of each module to advance to the next module.

### **BASIC WEATHERIZATION TACTICS (BWT):**

This three and 1/2-day course introduces field personnel to basic weatherization practices and techniques.

**NO PREREQUISITES**

### **BLOWER DOOR USE (BDU):**

This one-day class is designed to instruct field personnel in the basic use of a valuable tool, the Blower Door. Students will spend time in the classroom learning and discussing the use of the blower door, then spend time in the lab implementing the knowledge they have gained.

**NO PREREQUISITES**

### **BOILER HEATING SYSTEMS INSPECTION:**

In this one day course, students learn to properly inspect boilers for safety and efficiency. Students learn about the differences between forced-air and hydronic systems, how to perform safety inspections of critical parts, and how to analyze the distribution system. Students perform a draft test (including a smoke test for oil units) and inspection of other components in both lab and field-based settings.

**PREREQUISITES: HUI**

### **CODES AND STANDARDS (COST):**

This one-day class is intended to be an introduction to the Ohio Weatherization Performance Standards, and the three most frequently utilized National Fire Protection Association code books (54, 31, and 211). It is designed for personnel that are Inspectors or are going through the Inspection Series.

**NO PREREQUISITES**

### **COMBUSTION ANALYSIS FOR CONTRACTORS (COMB):**

A one-day class designed to provide the heating contractor with the necessary information to perform all residential heating system work per the Ohio Weatherization Performance Standards (OWPS). Classroom discussions will include review of relevant OWPS sections, the national codes, new furnace installation practices, furnace maintenance and repair requirements, combustion testing and health and safety issues.

**NO PREREQUISITES**

**OWTC – Euclid Hub**  
**23555 Euclid Avenue**  
**Euclid, OH. 44117**  
**216-446-2739**

**OWTC**  
**1 Pinchot Lane**  
**Athens, OH. 45701**  
**740-594-8499**

**CONSUMER ENERGY EDUCATION (CEE):**

The one-day class is designed to enhance communication techniques with a wide variety of consumers. This class will train the students on how to educate and involve the people living in their homes to participate within the energy efficiency process.

**NO PREREQUISITES**

**DUCT TESTING (DT):**

This ½-day class will help the student identify the severity and locations of leaky ductwork located in and throughout the structure and discuss methods for sealing ducts in a manner suitable to the particular situation.

**PREREQUISITE: BDU**

**EA-QUIP: (EQUI)**

This one-day class guides field inspectors through the energy audit process for multi-family housing units. EA-QUIP is a multi-family audit tool specific for this protocol. Students will learn strategies for reducing energy usage in these multi-family structures.

**NO PREREQUISITES**

**ELECTRIC BASELOAD MEASUREMENT (EBM):**

E.B.M. is a ½-day class that instructs students in the protocol of measuring electrical use in the home that is not heating and cooling related. Necessary tools and monitoring equipment will be used to measure usage and determine the cost effectiveness of replacing appliances that are energy inefficient.

**NO PREREQUISITES**

**ELECTRIC PARTNERSHIP PROGRAM (EPP)**

This five day course is designed for base load auditors. The class teaches them to perform in-home audits and install appropriate electric base load and thermal energy efficiency measures. Students also learn consumer education skills to help program participants get the most benefit from their electricity while learning ways to lower the amount of it they use.

**EPA 608 REFRIDGERANT (608 REF)**

COAD may Proctor for testing pursuant to Section 608 of Federal Clean Air Act which requires that all persons who maintain, service, repair, or dispose of appliances that contain regulated refrigerants, be certified in proper refrigerant handling techniques.

**NO PREREQUISITES**

**HEAT PUMP AND AIR CONDITIONERS (HP/AC):**

This one-day class covers key inspection points common to site-built and mobile home heat pump and air conditioning installations. Classroom discussions will cover component identification, proper installation practices, cleaning procedures for evaporators and condensers to increase efficiency and safe wiring practices. Discussions will include deciding when to call in an EPA-certified technician for work beyond the scope of HWAP training.

**PREREQUISITES: HUI**

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**HEATING TECH REFRESHER (HTR):**

This three-day course is a refresher and recertification for field heating technicians. It focuses primarily on residential heating units, domestic hot water tanks and combustion analysis of both. National, state, and local codes are reviewed and discussed. Classroom and lab time are equally weighted to ensure that the participant has exposure to all relevant facets of heating mechanics and theory.

**PREREQUISITES: HUI, AND HTT**

**HEATING TECHNICIAN TRAINING (HTT):**

This five-day course is geared toward field personnel who are planning to become furnace technicians. Participants will have classroom guidance explaining how to properly repair and maintain various types of heating units and lab time to practice cleaning and tuning residential gas furnaces. This course will emphasize the importance of mechanical and electrical troubleshooting methods through hands-on practice. The participants will learn in depth heating system wiring and how to properly read wiring schematics as well as how to use a multimeter to check heating components.

**PREREQUISITES: HUI**

**HEATING UNIT INSPECTION (HUI):**

This is an intensive six-day course that will teach participants how to properly inspect heating units. Participants will learn to identify heating unit components, domestic water heater components, and the ability to inspect the units for efficiency and health and safety issues. Combustion testing will be practiced in the lab and classroom guidance will be provided in accessing and understanding combustion air issues as well how to properly size heating unit vent systems.

**PREREQUISITES: IO, BDU, COST or MATH**

**HOME WEATHERIZATION INSPECTION: (INSP)**

This four-day course introduces participants to techniques and equipment necessary to perform a thorough and accurate pre- and post-weatherization housing shell inspection. The prospective inspector learns efficient auditing techniques, including the use of diagnostic equipment (blower door, infrared camera, baseload meter, combustion analyzer, digital camera, etc.). The participants then create thorough and effective work orders from virtual and real house situations.

**PREREQUISITES: IIO, BDU, HUI**

**INFRARED CAMERA (IR):**

Participants in this one-day class learn effective methods of assessing and auditing a structure for energy conservation measures. The inspector will assess structural issues as well as what will be necessary to do a cost effective weatherization job on these structures. Appropriate diagnostic tools and equipment will be explained and then utilized infield by the participants.

**PREREQUISITES: BDU**

**INSPECTOR REFRESHER (INSR):**

This three-day course serves as a recertification for experienced personnel as well as an outlet concerning new information and regulations. Hands-on labs and field exercises serve to reinforce and refresh the individuals on proper inspection procedures.

**PREREQUISITES: HUI**

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**EPA LEAD RENOVATION, REPAIR AND REMODELING (LEAD RRP – INITIAL AND REFRESHER):**

This one-day class will inform and train weatherization staff concerning the importance of working lead safe in homes that were built prior to 1978, or are child-occupied facilities. Participants will be trained in the correct and safe way to perform weatherization measures and how to apply these procedures in the field. Participants will demonstrate an understanding of the basic concepts of working lead safe. There is also a ½-day refresher option for those who have participated in an EPA approved lead training within the last three years.

**NO PREREQUISITES**

**MOBILE HOME ENERGY AUDIT (MHEA):**

MHEA is the most widely used energy audit software within the Weatherization Assistance Program, and plays a key role in the production of the initial energy audit and work order. The 8 hour MHEA course trains students to effectively utilize the software and better understand the elements of a successful audit. MHEA is often trained in conjunction with NEAT. The OWTC will schedule MHEA training upon request.

**PREREQUISITES: BASIC COMPUTER LITERACY**

**MOBILE HOME WEATHERIZATION (MHWx):**

A four-day course during which the Weatherization of mobile homes will be taught in the classroom followed by two days in the lab to give students the opportunity to install energy conservation measures to clients who live in manufactured housing. The students will be trained in and perform appropriate safety testing; perform repairs necessary for weatherization, health, and safety, and will install energy conservation measures.

**NO PREREQUISITES**

**MOBILE HOME WEATHERIZATION INSPECTION (MHWI)**

This one day Mobile Home Weatherization Inspection class is required for any Inspector conducting initial or final HWAP Inspection on a mobile home. This class is in addition to the normal HWAP Inspector series of classes, and identifies areas of concern such as roof measures.

**NO PREREQUISITES**

**MOBILE HOME WEATHERIZATION REFRESHER (MHWXR)**

The two day Mobile Home Weatherization Refresher is for weatherization staff who have successfully completed the old MHWXN class AFTER January 1, 2007, but have not had the MHWX10 class. This class is intended to update staff on the proper insulation of mobile home roofs and sidewalls.

**NO PREREQUISITES**

**NATIONAL ENERGY AUDIT TOOL (NEAT):**

This one-day class explains how the evaluation of homes to be weatherized can be facilitated by using NEAT, a Department of Energy--approved residential energy audit tool. The NEAT classroom students learn the use of the computerized auditing tool that helps simplify the identification of measures that should be completed on the homes in the field. Savings-to-Investment Ratios (SIR) are calculated by the computer program to identify cost effective measures.

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**OIL FURNACE MAINTENANCE AND REPAIR (OFMR):**

This two-day course addresses maintenance and repair procedures unique to oil-fired heating units. Participants will learn how to perform proper combustion testing techniques and how to evaluate these tests to achieve clean energy efficient operation. Lab time will include disassembly of a burner, cleaning and adjusting, re-assembly and firing. Classroom discussions will cover the requirements of state and national codes.

**PREREQUISITES: HTT**

**RESIDENTIAL VENTILATION (VENT):**

In this one-day class, students will learn how to determine ventilation strategies for homes based on the number of permanent residents, their living style, and other issues within the house. Crawlspace and whole house ventilation techniques will also be explored.

**NO PREREQUISITES**

**SHORT FORM MANUAL J (MANJ):**

This one-day class is designed to instruct heating technicians in the proper sizing of residential heating units installed in the weatherization program using modified Manual J (revision 7) calculations. Sizing is calculated after energy conservation measures are performed to provide a realistic sizing estimate for replacement heating units.

**NO PREREQUISITES**

**Wx ASSOCIATED SAFETY AWARENESS (WASA)**

Wx Associated Safety Awareness (WASA) is a one-day class that combines the information from our former Pollution Safe Wx Work Practices course with an overview of OSHA requirements for worksite safety. The course material covers descriptions of worker safety as it relates to both environmental hazards and tool/equipment safety in weatherization.

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