HVAC A112: EPA 608

Item	Value
Curriculum Committee Approval Date	12/06/2023
Top Code	094600 - Environmental Control Technology
Units	2 Total Units
Hours	36 Total Hours (Lecture Hours 36)
Total Outside of Class Hours	0
Course Credit Status	Credit: Degree Applicable (D)
Material Fee	No
Basic Skills	Not Basic Skills (N)
Repeatable	No
Grading Policy	Standard Letter (S)

Course Description

An introductory course to train students for 608 certification in the proper use of environmentally safe refrigerants. Details of recovery, recycling, and reclamation of refrigerants will be studied in detail. This course will train you for certification for technician Universal status in types I, II, and III. In this course a proctored exam for the Universal EPA 608 Certification will be provided for a proctoring fee. Transfer Credit: CSU.

Course Level Student Learning Outcome(s)

1. Will have a complete understanding of the Clean Air Act and substitute refrigerants and oils.
2. Properly demonstrate recover, reclaim and recharge refrigerant.
3. Successfully become EPA 608 Certified to properly use environmentally safe refrigerants.

Course Objectives

Lecture Content

Core Core Safety Course Introduction Technician Types Certifications Ozone Depletion Clean Air Act Substitute Refrigerants and Oils Recovery Techniques Repairs/Leaks Detection Evacuation Type 1 (Small Appliance-5lbs or less) Type 1 Technician Requirement Type 1 Appliance Applications Type 1 Appliance Recovery Requirements Type 1 Equipment Type 1 Recovery Methods Small Appliance Safety Type 2 (High-Pressure Appliances) Type 2 Technician Requirements Type 2 Refrigerants Type 2 Recovery requirements Type 2 Equipment Type 2 Repair/Leak Repairs Type 2 Charging/Recharging Type 2 Safety Type 3 (Low-Pressure Appliances) Type 3 Technician Requirements Type 3 Refrigerants Type 3 Recovery requirements Type 3 Equipment Type 3 Repair/Leak Repairs Type 3 Charging/Recharging Type 3 Safety

Method(s) of Instruction

- Lecture (02)
- DE Live Online Lecture (02S)
- DE Online Lecture (02X)

Instructional Techniques

Lecture and hands on demonstrations for recovering refrigerants, evacuation and recharge refrigeration systems after repair to return to efficient operating standards. Book, videos, and hands-on demonstrations by instructor to show proper use of diagnostic tools to troubleshoot a system.

Reading Assignments

Students will assigned to read Mainstream Engineering Study Guide for EPA 608.

Writing Assignments

Students will have a writing assignment on the Clean Air Act, The Significant new Alternatives policy (SNAP) Program.

Out-of-class Assignments

Students will create account with Mainstream Engineering and review test question for Core, Type I, Type II and Type III. Students will take Practice Test for Core, Type I, Type II and Type III.

Demonstration of Critical Thinking

Quizzes, Final Exam using multiple choice, true/false, fill in the blanks and hands on demonstration using the tools of the trade for repair and diagnostics, including gauges and electrical test meters and EPA 608 Univeral Certifation Exam.

Required Writing, Problem Solving, Skills Demonstration

Homework from texts and lectures; hands-on demonstrations using diagnostic equipment and tools of the trade.

Eligible Disciplines

Air conditioning, refrigeration, heating (solar energy technician): Any bachelors degree and two years of professional experience, or any associate degree and six years of professional experience.

Textbooks Resources

1. Required Scaringe, R., Rettich, K., Bromberg, A. . Environmentally Safe Refrigerant Service Tips and Techniques, Fourth ed. Florida : Mainstream Engineering Corporation, Rockledge, 2020

Other Resources

1. Mainstream Engineering Corporation QwikStudy -EPA 608 Certification - 9th Edition