

# UNITED ASSOCIATION SERVICE TEC (UAE)

---

## **UAE 140 Introduction to HVACR Service Technician Practices (3 Credits)**

3 total contact hours

This course is the introduction to HVACR for new apprentices. Course topics include the heritage program, use and care of tools, pipe, fittings, valves, supports and fasteners and job safety and health. Related safety is covered in all topics. Limited to United Association students. Level I Prerequisite: Academic Reading and Writing Levels of 6

## **UAE 142 Soldering and Brazing (3 Credits)**

3 total contact hours

The preparation and joining of the cup type copper tube is covered in detail in this course both by the soldering and the brazing methods. The student is taught the proper and safe use of tools, torches, solders, filler metals and fluxes used in making a soldered/brazed joint. Related safety is included in every topic. Limited to United Association students. Level I Prerequisite: Academic Reading and Writing Levels of 6

## **UAE 144 Refrigeration (2 Credits)**

2 total contact hours

This is the introductory refrigeration course. Topics include basic physics, basic electricity, and the basic refrigeration cycle of reciprocal, centrifugal, rotary, screw and absorption systems. Control and sequence of operation of the above systems is included. Introduction to environmental impact of refrigerant handling is included. Related safety is covered in each topic. Limited to United Association students. Level I Prerequisite: Academic Reading and Writing Levels of 6

## **UAE 146 Air Conditioning (2 Credits)**

2 total contact hours

This course covers air conditioning systems, installation and service. Topics include: psychrometric properties of air, building heating and cooling load calculations, control applications, energy conservation and heat recovery, in addition to a review of basic science. Limited to United Association students. Level I Prerequisite: Academic Reading and Writing Levels of 6

## **UAE 148 Electrical Controls (2 Credits)**

2 total contact hours

The purpose of this course is to teach fundamental theory and operation of electric/electronic controls used in starting, stopping and cycling electro-mechanical equipment encountered in the HVACR field. Related safety is included in each topic. Limited to United Association students. Level I Prerequisite: Academic Reading and Writing Levels of 6

## **UAE 150 DC Electronics (2 Credits)**

2 total contact hours

This course covers the fundamentals of direct current applications in control theory and basic electronics. Limited to United Association students. Level I Prerequisite: Academic Reading and Writing Levels of 6

## **UAE 152 Advanced Electrical Controls and Pneumatic Controls (3 Credits)**

3 total contact hours

The pneumatic controls portion of the course is a presentation of basic pneumatic control principles. Theory of operation, basic principles and troubleshooting are included. Related safety is included in each topic. Limited to United Association students. Level I Prerequisite: Academic Reading and Writing Levels of 6

## **UAE 154 Advanced Air Conditioning and Refrigeration (3 Credits)**

3 total contact hours

This course presents special topics in air conditioning and refrigeration. Topics may include introduction to building automation, load calculations, duct sizing, Universal CFC certification and air distribution. Limited to United Association students. Level I Prerequisite: Academic Reading and Writing Levels of 6

## **UAE 156 Air and Water Balancing and Motor Alignment (3 Credits)**

3 total contact hours

This course covers principals of balancing forced air systems, balancing flow in hydronic loops, pumps, principles of alignment and vibration elimination. Limited to United Association students. Level I Prerequisite: Academic Reading and Writing Levels of 6

## **UAE 158 Advanced HVACR Practices (3 Credits)**

3 total contact hours

Special topics covered in this course may include advanced building automation, leadership/supervision, customer relations, importance of clear and concise reporting (work orders) and safety. Limited to United Association students. Level I Prerequisite: Academic Reading and Writing Levels of 6