

HEATING AIR COND TECH (HART)

HART 1401

Basic Electricity for HVAC

CRT HRS:4 LEC HRS:3 LAB HRS:4 OTH HRS:0

This course covers principles of electricity as required by HVAC, including proper use of test equipment, electrical circuits, and component theory and operation.

Prerequisite: None.

HART 1407

Refrigeration Principles

CRT HRS:4 LEC HRS:3 LAB HRS:4 OTH HRS:0

This course is an introduction to the refrigeration cycle, heat transfer theory, temperature / pressure relationship, refrigerant handling, refrigeration components and safety.

Prerequisite: None.

HART 1410

HVAC Shop Practices and Tools

CRT HRS:4 LEC HRS:3 LAB HRS:4 OTH HRS:0

This course covers tools and instruments used in the HVAC industry. It includes proper application, use and care of these tools, and tubing and piping practices.

Prerequisite: None.

HART 1445

Gas and Electrical Heating

CRT HRS:4 LEC HRS:3 LAB HRS:4 OTH HRS:0

This course is the study of the procedures and principles used in servicing heating systems including gas fired furnaces and electric heating systems.

Prerequisite: HART 1401, HART 1407, HART 1410.

HART 2431

Advanced Electricity for HVAC

CRT HRS:4 LEC HRS:3 LAB HRS:4 OTH HRS:0

This course is advanced electrical instruction and skill building in installation and servicing of air conditioning and refrigeration equipment, including detailed instruction in motors and power distribution, motors, motor controls, and application of solid state devices.

Prerequisite: HART 1401, HART 1407, HART 1410.

HART 2434

Advanced Air Conditioning Controls

CRT HRS:4 LEC HRS:3 LAB HRS:4 OTH HRS:0

This course is a study in the theory and application of automation controls, electrical control devices, electromechanical controls, and/or pneumatic controls.

Prerequisite: HART 1401, HART 1407, HART 1410, HART 1445, HART 2431, HART 2445.

HART 2438

Capstone: Air Conditioning Installation and Startup

CRT HRS:4 LEC HRS:3 LAB HRS:4 OTH HRS:0

This course is the study of air conditioning system installation, refrigerant piping, condensate disposal, and air cleaning equipment with emphasis on startup and performance testing.

Prerequisite: Completion of HART 1401, HART 1407, HART 1410, and completion of or concurrent enrollment in HART 1445, HART 2431, HART 2445.

HART 2441

Commercial Air Conditioning

CRT HRS:4 LEC HRS:3 LAB HRS:4 OTH HRS:0

This is a study of components, applications, and installation of air conditioning systems with capacities of 25 tons or less.

Prerequisite: HART 1401, HART 1407, HART 1410, HART 1445, HART 2431, HART 2445.

HART 2442

Commercial Refrigeration

CRT HRS:4 LEC HRS:3 LAB HRS:4 OTH HRS:0

Theory of and practical application in the maintenance of commercial refrigeration; medium and low temperature applications and ice machines are introduced in this course.

Prerequisite: HART 1401, HART 1407, HART 1410.

HART 2445

Residential Air Conditioning Systems Design

CRT HRS:4 LEC HRS:3 LAB HRS:4 OTH HRS:0

This course is a study of the properties of air and results of cooling, heating, humidifying or dehumidifying; heat gain and heat loss calculations including equipment selection, duct fabrication, and balancing the air system.

Prerequisite: HART 1401, HART 1407, HART 1410.

HART 2588

Internship - Heating, Air Conditioning, Ventilation and Refrigeration Maint. Technology/Technician

CRT HRS:5 LEC HRS:0 LAB HRS:0 OTH HRS:15

This course is a work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer.

Prerequisite: HART 1401, HART 1407, HART 1410, HART 1445, HART 2431, HART 2445, HART 2434, HART 2438, HART 2441, and HART 2442.