

AIRC – Air Conditioning Technology

AIRC 1005 - Refrigeration Fundamentals

4.000 Credits

Introduces the basic concepts, theories, and safety regulations and procedures of refrigeration. Topics include an introduction to OSHA, safety, first aid, laws of thermodynamics, pressure and temperature relationships, heat transfer, the refrigerant cycle, refrigerant identification, and types of AC systems.

AIRC 1010 - Refrigeration Principles and Practice

4.000 Credits

This course introduces the student to basic refrigeration system principles and practices, and the major component parts of the refrigeration system. Topics include refrigeration tools, piping practices, service valves, leak testing, refrigerant recovery, recycling, and reclamation, evacuation, charging, and safety.

AIRC 1020 - Refrigeration System Components
4.000 Credits

Prerequisites: AIRC 1005

This course provides the student with the skills and knowledge and skills to install, test, and service major components of a refrigeration system. Topics include compressors, condensers, evaporators, metering devices, service procedures, refrigeration systems, and safety.

AIRC 1030 - HVACR Electrical Fundamentals
4.000 Credits

This course provides an introduction to fundamental electrical concepts and theories as applied to the air conditioning industry. Topics include AC and DC theory, electric meters, electrical diagrams, distribution systems, electrical panels, voltage circuits, code requirements, and safety.

AIRC 1040 - HVACR Electrical Motors
4.000 Credits

Prerequisites: AIRC 1030

This course provides the student with the skills and knowledge necessary for application and service of electric motors commonly used by the refrigeration and air conditioning industry. Topics include diagnostic techniques, capacitors, installation procedures, types of electric motors, electric motor service, and safety.

AIRC 1050 - HVACR ELCT Components and Controls
4.000 Credits

Prerequisites: AIRC 1030

Provides instruction in identifying, installing, and testing commonly used electrical components in an air conditioning system. Topics include pressure switches, transformers, other commonly used controls, diagnostic techniques, installation procedures, solid state controls, and safety.

AIRC 1060 - Air Conditioning Systems Application and Installation
4.000 Credits

Provides instruction on the installation and service of residential air conditioning systems. Topics include installation procedures, split-systems, add-on systems, packaged systems, system wiring, control circuits, and safety.

AIRC 1070 - Gas Heat
4.000 Credits

Prerequisites: AIRC 1030

This course introduces principles of combustion and service requirements for gas heating systems. Topics include servicing procedures, electrical controls, piping, gas valves, venting, code requirements, principles of combustion, and safety.

AIRC 1080 - Heat Pumps and Related Systems
4.000 Credits

Prerequisites: AIRC 1030

This course provides instruction on the principles, applications, and operation of a residential heat pump system. Topics include installation and servicing procedures, electrical components, geothermal ground source energy supplies, dual fuel, valves, and troubleshooting techniques.

AIRC 1090 - Troubleshooting Air Conditioning Systems
4.000 Credits

Prerequisites: AIRC 1010; AIRC 1030

This course provides instruction on the troubleshooting and repair of major components of a residential air conditioning system. Topics include troubleshooting techniques, electrical controls, air flow, the refrigeration cycle, electrical servicing procedures, and safety.