HEATING & AIR CONDITIONING (HVAC)

HVAC A100 **3 Units (45 lecture hours; 36 lab hours)**
Air Conditioning and Refrigeration Principles
Grading Mode: Standard Letter
Transfer Credit: CSU.

Course covers heat principles, heat loads, refrigeration cycle, system components, refrigerant properties, system operation, soldering and oxy-acetylene brazing.

HVAC A101 **3 Units (45 lecture hours; 36 lab hours)**
Basic Electrical for HVAC-R
Advisory: HVAC A100.

Grading Mode: Standard Letter
Transfer Credit: CSU.

Basic electrical theory & application. Students will build a variety of series and parallel circuits using switches, contactors, relays, thermostats, transformers and other controls used in the HVAC-R field in addition to using miscellaneous electrical components.

HVAC A102 **3 Units (45 lecture hours; 36 lab hours)**
Refrigeration Service
Prerequisite(s): HVAC A100 and HVAC A101.

Grading Mode: Standard Letter
Transfer Credit: CSU.

Operation, Maintenance, Troubleshooting and repair of Commercial refrigeration systems. This course may be taken two times. Theory, operation, maintenance and trouble-shooting of absorption system.

HVAC A103 **3 Units (45 lecture hours; 36 lab hours)**
Air Conditioning Service
Prerequisite(s): HVAC A100 and HVAC A101.

Advisory: HVAC A105.

Grading Mode: Standard Letter
Transfer Credit: CSU.

Operation, maintenance, diagnosis and repair of air conditioning systems and their components for proper function.

HVAC A104 **3 Units (45 lecture hours; 36 lab hours)**
Air Balance
Prerequisite(s): HVAC A100 and HVAC A101.

Advisory: HVAC A103 and HVAC A105.

Grading Mode: Standard Letter
Transfer Credit: CSU.

Operation and maintenance of air conditioning and heating ducts and their controls; various methods of distribution and the means to deliver proper air flow.

HVAC A105 **3 Units (45 lecture hours; 36 lab hours)**
Air Conditioning and Refrigeration Controls
Prerequisite(s): HVAC A100 and HVAC A101.

Grading Mode: Standard Letter
Transfer Credit: CSU.

Controls used in the Heating, Air Conditioning and Refrigeration that include temperature, pressure, overload and safety controls. This course may be taken two times.

HVAC A106 **3 Units (45 lecture hours; 36 lab hours)**
Non-Residential Applications for HVAC
Prerequisite(s): HVAC A100 and HVAC A101.

Grading Mode: Standard Letter
Transfer Credit: CSU.

Fundamentals of operation, maintenance, and trouble shooting of non-residential equipment and systems. Topics include but are not limited to chillers, centrifugal, reciprocal, absorption, and other current systems.

HVAC A110 **3 Units (45 lecture hours; 36 lab hours)**
Pneumatic Controls
Prerequisite(s): HVAC A100 and HVAC A101.

Grading Mode: Standard Letter, Pass/No Pass
Transfer Credit: CSU.

Students will operate, maintain, diagnose and repair basic pneumatic controls from installation to service requirements. Graded or Pass/No Pass option.

HVAC A111 **3 Units (45 lecture hours; 36 lab hours)**
Ice Machine Service & Repair
Prerequisite(s): HVAC A100 and HVAC A101.

Advisory: HVAC A102.

Grading Mode: Standard Letter
Transfer Credit: CSU.

The operation, diagnostics, repair, and service of current ice machines. Course to include hands-on training with tools of the trade, i.e., gauges, electrical meters and all hand tools used for service and repair.

HVAC A112 **2 Units (36 lecture hours)**
EPA 608
Grading Mode: Standard Letter
Transfer Credit: CSU.

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.

HVAC A140 **3 Units (45 lecture hours; 36 lab hours)**
Building Automation
Prerequisite(s): HVAC A100 and HVAC A101.

Grading Mode: Standard Letter
Transfer Credit: CSU.

Fundamental applications and design of building automation systems for HVACR.