

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 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.