

**Air Conditioning Technology**  
**CERTIFICATE OF ACHIEVEMENT (CoA)**

**REQUIRED CREDITS: 44**

**DEGREE CODE: AC-CT**

**DESCRIPTION**

The Air Conditioning Technology Program is an 18-month course of study that prepares students to install, maintain, service, troubleshoot, and repair residential heating and cooling systems. Additionally, this program includes commercial refrigeration, allowing the student to learn how to maintain, troubleshoot, and repair walk-in freezers, ice machines, ice cream machines, and other related machinery. Instruction includes classroom, laboratory, and actual in-the-field hands-on course work.

**STUDENT LEARNING OUTCOMES**

- Perform the basic tasks of a Heating, Ventilation, Air Conditioning, and Refrigeration (HVAC/R) technician in a residential and light commercial environment.
- Read and interpret electrical schematics; troubleshoot and diagnose mechanical and electrical problems using methods and equipment appropriate to this industry.
- Utilize currently accepted EPA rules, techniques, and regulations in the performance of HVAC/R duties; observe proper safety practices when working with high- and low-voltage electricity, and when working with refrigerants under pressure.

**PLEASE NOTE** - The courses listed below may require a prerequisite or corequisite. Read course descriptions before registering for classes. All MATH and ENG courses numbered 01-99 must be completed before reaching 30 total college-level credits. No course under 100-level counts toward degree completion.

**GENERAL EDUCATION REQUIREMENTS (3 CREDITS)**

**COMMUNICATIONS (3-5 credits)**

Recommended: COM 115 Applied Communications

**SPECIAL PROGRAM REQUIREMENTS (41 CREDITS)**

**CORE REQUIREMENTS (35 credits)**

AC 102B	Introduction to HVAC Electrical Theory and Application	5
AC 103B	Introduction to HVAC Mechanical Theory and Application	5
AC 106B	Residential Gas Heating	5
AC 110B	Intermediate HVAC Electrical Theory and Application	5
AC 111B	Heat Pumps	5
AC 115B	Troubleshooting	5
AC 200B	Commercial Refrigeration I	5

**ELECTIVES (choose 6 credits)**

AC 114B	Heat Load and Duct Design	5
AC 116B	Copper Fundamentals	1
AC 119B	Professionals in Customer Service	1.5
AC 120B	Air Conditioning Duct Work Fabrication	3
AC 202B	Commercial Refrigeration II	5
AC 210B	Boiler Operation and Maintenance	5
AC 220B	Chiller Operations and Maintenance	5
AC 221B	Gas Heat Pump Technology I	5
CADD 100	Introduction to Computer Aided Drafting	3
CONS 120B	Construction Plans and Specifications	3
IS 101	Introduction to Information Systems	3

Computation included in AC 102B

Human Relations included AC 103B

**FULL-TIME STUDENT DEGREE PLAN**

*Plan can be modified to fit the needs of part-time students by adding more semesters.*

<b>FIRST SEMESTER</b>	<b>Credits</b>
COM 115 Applied Communication	3-5
AC 102B Intro to HVAC Electrical Theory and Application	5
AC 103B Intro to HVAC Mechanical Theory and Application	5
<b>TOTAL CREDITS</b> .....	<b>13-15</b>
<b>SECOND SEMESTER</b>	<b>Credits</b>
AC 106B Residential Gas Heating	5
AC 110B Intermediate HVAC Electrical Theory and Application	5
<b>TOTAL CREDITS</b> .....	<b>10</b>
<b>THIRD SEMESTER</b>	<b>Credits</b>
AC 111B Heat Pumps	5
AC 200B Commercial Refrigeration	5
<b>TOTAL CREDITS</b> .....	<b>10</b>
<b>FOURTH SEMESTER</b>	<b>Credits</b>
AC 115B Troubleshooting	5
Complete Electives (see courses this page)	6
<b>TOTAL CREDITS</b> .....	<b>11</b>
<b>DEGREE PLAN TOTAL CREDITS</b> .....	<b>44-46</b>

- NOTE**
- Course numbers with the “B” suffix may be non-transferable for a NSHE baccalaureate degree.
  - Course numbers with the “H” suffix are designated Honors-level courses and can be used to fulfill equivalent general education requirements. For more information visit [www.csn.edu/honors](http://www.csn.edu/honors).
  - In no case, may one course be used to meet more than one requirement except for the Values and Diversity general education requirement (only AA, AS, and AB degrees) which may be used to fulfill the corresponding general education or emphasis requirement.
  - Students may elect to graduate using the degree requirements in effect at the time of matriculation, or when they declared or changed major or the current catalog. If a program is official after a student has matriculated, the student may choose the degree requirements of the new program. In no case may a student use a catalog which is more than six years old at the time of graduation.

