Air Conditioning Technology
ASSOCIATE OF APPLIED SCIENCE DEGREE (AAS)

REQUIRED CREDITS: 63

DEGREE CODE: AC-AAS

DESCRIPTION
This program prepares students to install, maintain, service, troubleshoot, and repair residential heating and cooling systems. Additionally, the program includes commercial refrigeration courses enabling students to learn how to maintain, troubleshoot, and repair walk-in freezers, ice machines, and other related machinery. Instruction includes classroom, laboratory, and hands-on work in the field. Along with core classes, academic skills emphasizing related math, science, and human relations components are stressed to help students prepare to meet challenges commonly found in the workplace.

STUDENT LEARNING OUTCOMES
• Incorporate workforce safety principals while performing basic tasks of a Heating, Ventilation, Air Conditioning, and Refrigeration (HVAC/R) technician.
• Interpret electrical/mechanical schematics on HVAC/R equipment to diagnose mechanical or electrical problems in a residential or light commercial environment.
• Appraise EPA rules, regulations, and refrigerant handling techniques in the performance of HVAC/R duties.
• Diagnose and repair electrical or mechanical problems on residential air conditioning equipment; light commercial air conditioning equipment; critical systems; boilers; chillers; equipment cooling systems.

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 (22 CREDITS)

MATHEMATICS (3 credits)
Recommended: MATH 104B Applied Mathematics

ENGLISH COMPOSITION (3-5 credits)
ENG 100 or 101 or 107 or 113

COMMUNICATIONS (3 credits)
Recommended: COM 115 Applied Communication

HUMAN RELATIONS (3 credits)
Recommended: ALS 101 College Success

NATURAL SCIENCE (3 credits)
Recommended: ENV 101 Introduction to Environmental Science

FINE ARTS/HUMANITIES/SOCIAL SCIENCE (3 credits)
Recommended: GEOG 106 World Geography

U.S. AND NEVADA CONSTITUTIONS (4-6 credits)
Recommended: PSC 101 Introduction to American Politics

SPECIAL PROGRAM REQUIREMENTS (41 CREDITS)

CORE REQUIREMENTS (30 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

Choose five credits from the following
AC 200B Commercial Refrigeration I 5
AC 210B Boiler Operation and Maintenance 5
AC 220B Chiller Operations and Maintenance 5

Choose six credits from the following
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 201B HVAC Automatic Controls 3
AC 202B Commercial Refrigeration II 5
AC 210B Boiler Operation and Maintenance 5
AC 212B Equipment Cooling 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

Choose one from the following (0-3 credits)
IS 100B Core Computing Competency 0
IS 101 Introduction to Information Systems 3

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ENG 100 or 101 or 107 or 113

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Recommended: ALS 101 College Success

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Recommended: ENV 101 Introduction to Environmental Science

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Recommended: GEOG 106 World Geography

U.S. AND NEVADA CONSTITUTIONS (4-6 credits)
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CORE REQUIREMENTS (30 credits)
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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

Choose five credits from the following
AC 200B Commercial Refrigeration I 5
AC 210B Boiler Operation and Maintenance 5
AC 220B Chiller Operations and Maintenance 5

Choose six credits from the following
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 201B HVAC Automatic Controls 3
AC 202B Commercial Refrigeration II 5
AC 210B Boiler Operation and Maintenance 5
AC 212B Equipment Cooling 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

Choose one from the following (0-3 credits)
IS 100B Core Computing Competency 0
IS 101 Introduction to Information Systems 3

See Degree Plan on next page.
### Air Conditioning Technology

**ASSOCIATE OF APPLIED SCIENCE DEGREE (AAS)**

**REQUIRED CREDITS:** 63  
**DEGREE CODE:** AC-AAS

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**FULL-TIME STUDENT DEGREE PLAN**

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

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<th>Semester</th>
<th>Course Title</th>
<th>Credits</th>
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<td><strong>FIRST SEMESTER</strong></td>
<td>MATH 104B Applied Mathematics</td>
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<td>ENG 100 or 101 or 107 or 113</td>
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<td>AC 102B Introduction to HVAC Electrical Theory and Application</td>
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<tr>
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<td>AC 103B Introduction to HVAC Mechanical Theory and Application</td>
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<td>ENV 101 Introduction to Environmental Science</td>
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<td>AC 106B Residential Gas Heating</td>
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<td></td>
<td>AC 110B Intermediate HVAC Electrical Theory and Application</td>
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<td><strong>THIRD SEMESTER</strong></td>
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<td>GEOG 106 World Geography</td>
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<td>AC 111B Heat Pumps</td>
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<tr>
<td></td>
<td>AC 200B or 210B or 220B</td>
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<td>AC 115B Troubleshooting</td>
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<td>IS 100B or IS 101</td>
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<td>Complete &quot;Choose six credits from the following&quot; (see courses previous page)</td>
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**DEGREE PLAN TOTAL CREDITS**.................................**63-68**