

Air Conditioning Technology - Critical Systems

ASSOCIATE OF APPLIED SCIENCE DEGREE (AAS)

REQUIRED CREDITS: 61.5

DEGREE CODE: ACTCS-AAS

DESCRIPTION

This program prepares students to install, maintain, service, troubleshoot, and repair critical systems such as in data process centers and hospitals. The program enables students to learn how to maintain, troubleshoot, and repair HVAC equipment for equipment cooling and other related machinery. Instruction includes classroom, laboratory, and hands-on work in the laboratory or 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 commercial air conditioning equipment; critical systems; chillers.

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 (23 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)

Required: COM 115 Applied Communication

HUMAN RELATIONS (3 credits)

Required: MGT 100B Practical Human Relations for Business

NATURAL SCIENCE (4 credits)

Required: MT 102B Fundamentals of Electricity

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 (38.5 CREDITS)**CORE REQUIREMENTS (33.5 credits)**

AC 102B	Introduction to HVAC Electrical Theory and Application	5
AC 103B	Introduction to HVAC Mechanical Theory and Application	5
AC 110B	Intermediate HVAC Electrical Theory and Application	5
AC 115B	Troubleshooting	5
AC 119B	Professionals in Customer Service	1.5
AC 201B	HVAC Automatic Controls	3
AC 212B	Equipment Cooling	5
MT 104B	Industrial Electricity	4

Choose five credits from the following

AC 220B	Chiller Operations and Maintenance	5
AC 295B	Internship HVAC Career	1-16

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.

- 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.
 - 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.



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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.*

FIRST SEMESTER	Credits
MATH 104B Applied Mathematics	3
ENG 100 or 101 or 107 or 113	3-5
AC 102B Introduction to HVAC Electrical Theory and Application	5
AC 103B Introduction to HVAC Mechanical Theory and Application	5
TOTAL CREDITS	16-18
SECOND SEMESTER	Credits
MGT 100B Practical Human Relations for Business	3
MT 102B Fundamentals of Electric	4
GEOG 106 World Geography	3
AC 110B Intermediate HVAC Electrical Theory and Application	5
IS 100B or IS 101	0-3
TOTAL CREDITS	15-18
THIRD SEMESTER	Credits
AC 119B Professionals in Customer Service	1.5
AC 201B HVAC Automatic Controls	3
AC 212B Equipment Cooling	5
MT 104B Industrial Electricity	4
TOTAL CREDITS	13.5
FOURTH SEMESTER	Credits
COM 115 Applied Communication	3
PSC 101 Introduction to American Politics	4
AC 115B Troubleshooting ¹	5
AC 220B or 295B	5
TOTAL CREDITS	17
DEGREE PLAN TOTAL CREDITS	61.5-66.5

¹This course has prerequisites of AC 106B and AC 111B. Contact the department of Applied Technologies for permission to complete this class in this semester.

