

CONSTRUCTION TECHNOLOGIES, AAS

Critical Systems

The Associate of Applied Science, Construction Technologies, Critical System Emphasis 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.

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.

Code	Title	Units
General Education Requirements		
Communications 3		
Recommended:		
ENG 107	Technical Communications I	
<i>English</i> 3		
Required:		
ENG 101	Composition I	
<i>Fine Art/Humanities/Social Science</i> 3		
Required:		
AAD 201	History of the Built Environment	
<i>Human Relations</i>		
Required:		
CE 201	Workplace Readiness	3
<i>Mathematics</i> 3		
Recommended:		
MATH 108	Math for Technicians	
<i>Science</i> 3		
Additional College Requirements		
<i>Diversity</i>		
Required:		
AAD 201	History of the Built Environment	[3]
<i>U.S. and Nevada Constitutions</i> 3		
Recommended:		
PSC 101	Introduction to American Politics	

Degree Requirements

AC 102	Refrigeration Theory	3
AC 107	Electrical and Controls for HVAC	6
AC 113	Schematic Reading for HVAC/R	3
AC 150	Basic Refrigeration Servicing	6
AC 201	HVAC Automatic Controls	3
AC 205	Commercial HVAC 2	3
AC 206	Commercial HVAC Systems 3	3
AC 220	Chiller Operations and Maintenance	5
AC 295	Internship HVAC Career	3
IS 101	Introduction to Information Systems	3
OSH 222	General Industry Safety	1

Total Units 60

1st semester		Units
AC 102	Refrigeration Theory	3
AC 107	Electrical and Controls for HVAC	6
AC 113	Schematic Reading for HVAC/R	3
MATH 108	Math for Technicians	3
OSH 222	General Industry Safety	1
Semester Total		16

2nd semester		Units
AC 150	Basic Refrigeration Servicing	6
Communications ¹		3
ENG 101	Composition I	3
U.S. and Nevada Constitutions ²		3
Semester Total		15

3rd semester		Units
AC 201	HVAC Automatic Controls	3
AC 205	Commercial HVAC 2	3
AC 206	Commercial HVAC Systems 3	3
CE 201	Workplace Readiness	3
Science ¹		3
Semester Total		15

4th semester		Units
AAD 201	History of the Built Environment	3
AC 204	Cooling Tower Systems- Operation and Maintenance	3
AC 220	Chiller Operations and Maintenance	5
IS 101	Introduction to Information Systems	3
Semester Total		14
Total Units		60

³ See program recommendations or requirements.