

## HEATING, VENTILATION, A/C, REFRIGERATION

### Associate in Applied Science A.A.S.: Refrigeration/Air Conditioning Technology Degree

The courses in this curriculum are theory- designed and service-oriented. Theory courses study heat laws, gas laws, pressures and thermodynamics for energy conservation. Service courses are designed around a strong hands-on philosophy. Emphasis is placed on operation maintenance, service and repairs of heating, air-conditioning and refrigeration systems.

Graduates from this 61 credit-hour program may be employed as service technicians, technical consultants, equipment installers, facility operation engineers, property managers, project managers, insurance adjusters and sales personnel.

#### FIRST SEMESTER:

Number	Course Title	Credits	Course Category
ELT 110	Introductory Electronics .....	4	Program Requirement
HVA 101	Refrigeration Fundamentals .....	3	Program Requirement
HVA 103	Heating Principles .....	3	Program Requirement
HVA 104	Residential Comfort Systems .....	3	Program Requirement
MTH 097	Basic Technical Mathematics <sup>1</sup> .....	3	AAS General Education

#### SECOND SEMESTER:

Number	Course Title	Credits	Course Category
ENG 101	Composition I .....	3	AAS General Education
HVA 102	Refrigeration Systems .....	3	Program Requirement
HVA 105	Heating and Cooling Controls .....	3	Program Requirement
HVA 108	Domestic Refrigeration Appliances .....	3	Program Requirement
	Natural Science <sup>2</sup> .....	3	AAS General Education

#### THIRD SEMESTER:

Number	Course Title	Credits	Course Category
ELT 144	AC and DC Motors .....	2	Program Requirement
ENG 103	Technical and Report Writing .....	3	AAS General Education
HVA 106	Pneumatic Controls Systems .....	3	Program Requirement
HVA 107	Commercial Air Conditioning Systems .....	3	Program Requirement
HVA 109	Commercial Heating Systems .....	3	Program Requirement
HVA 110	Blueprints and Plans for HVAC .....	2	Program Requirement

#### FOURTH SEMESTER:

Number	Course Title	Credits	Course Category
ELT 145	Variable Frequency Drives .....	2	Program Requirement
	Humanities or Social and Behavioral Science <sup>+</sup> .....	3	AAS General Education
HVA 200	HVAC/R Mechanical Codes and Standards .....	2	Program Requirement
HVA 201	Refrigeration System Design .....	2	Program Requirement
HVA 203	Load Calculations .....	2	Program Requirement
HVA 204	Air Distribution .....	2	Program Requirement
HVA 205	Customer Service and Support .....	1	Program Requirement

<sup>1</sup> Students may take MTH 097 or MTH 101 or higher.

<sup>2</sup> See full list of [AAS General Education Electives](#).

<sup>+</sup> The Humanities or Social and Behavioral Science course must meet the World Cultures and Diversity graduation requirement. See full list of [AAS General Education Electives](#).