A.A.S. - Applied Technology: Air Conditioning and Refrigeration (HVAC) option

This program emphasizes the fundamental principles for air conditioning and refrigeration. Instruction is provided in the theory and principles of refrigeration and heat transfer, HVAC/R system components, common, and specialty tools for HVAC/R, and application of the concepts of basic compression refrigeration. Upon completion, students should identify system components and understand their functions, identify and use common and specialty HVAC/R tools, and maintain components of a basic compression refrigeration system.

		credit hours
Area I:	**Written Composition**	**3**
	ENG 101 English Composition	3
Area II:	**Humanities and Fine Arts**	**6**
	SPH 106 Fundamentals of Oral Communications	3
	or SPH 107 Fundamentals of Public Speaking	3
	*Humanities/Fine Arts Elective	3
Area III:	**Natural Science and Mathematics**	**10**
	MTH 100 Intermediate College Algebra (or higher level math)	3
	CIS 146 Microcomputer Applications	3
	PHS 112 Physical Science II	4
Area IV:	**History, Social, and Behavioral Sciences**	**3**
	PSY 200 General Psychology	3
Area V:	**Preprofessional, Major, and Elective Courses**	**49**
	ADM 100 Industrial Safety	3
	ADM101 Precision Measurement	3
	ADM 102 Computer Aided Design	3
	ADM 103 Intro to Computer Integrated Manufacturing/Material Processes	3
	ADM 104 Introduction to Thermal/Electrical Principles	3
	ADM 105 Fluid Systems	3
	ADM 106 Quality Control Concepts	3
	INT 101 DC Fundamentals	3
	INT 103 AC Fundamentals	3
	ACR 111 Principles of Refrigeration	3
	ACR 112 HVACR Service Procedures	3
	ACR 113 Refrigeration Piping Practices	3
	ACR 119 Fundamentals of Gas Heating Systems	3
	ACR120 Fundamentals of Electric Heating Systems	3
	ACR121 Principles of Electricity for HVACR	3
	ACR 148 Heat Pump Systems	3
	ACR 183 Special Topics in Air Conditioning and Refrigeration	1
Additional degree requirements		**3**
	**ORI 101 Orientation to College	1
	WKO 101 Workplace Skills Development	2
	Total	**74**

* Students must choose from among the courses listed on page 78.

** Students may use ORI 105, Orientation and Student Success, to satisfy this requirement. Enrollment in this three credit-hour class will add two semester hours to the student's program total.

A.A.S. - Applied Technology: Automotive Manufacturing option

This program prepares individuals to apply basic engineering principles and technical skills to the identification and resolution of production problems in the manufacture of products. This program includes instruction in machine operations, production line operations, engineering analysis, systems analysis, instrumentation, physical controls, automation, computer-aided manufacturing (CAM), manufacturing planning, quality control, and informational infrastructure.

		credit hours
Area I:	**Written Composition**	**3**
	ENG 101 English Composition	3
Area II:	**Humanities and Fine Arts**	**6**
	SPH 106 Fundamentals of Oral Communications	3
	or SPH 107 Fundamentals of Public Speaking	3
	*Humanities/Fine Arts Elective	3
Area III:	**Natural Science and Mathematics**	**10**
	MTH 100 Intermediate College Algebra (or higher level math)	3
	CIS 146 Microcomputer Applications	3
	PHS 112 Physical Science II	4
Area IV:	**History, Social, and Behavioral Sciences**	**3**
	PSY 200 General Psychology	3
Area V:	**Preprofessional, Major, and Elective Courses**	**50**
	ADM 100 Industrial Safety	3
	ADM101 Precision Measurement	3
	ADM 102 Computer Aided Design	3
	ADM 103 Intro to Computer Integrated Manufacturing/Material Processes	3
	ADM 104 Introduction to Thermal/Electrical Principles	3
	ADM 105 Fluid Systems	3
	ADM 106 Quality Control Concepts	3
	INT 101 DC Fundamentals	3
	INT 103 AC Fundamentals	3
	INT 117 Industrial Mechanics	3
	INT 184 Intro to Programmable Logic Controllers	3
	INT 284 Advanced Programmable Logic Controllers	3
	INT 288 Applied Programmable Logic Controllers	3
	INT 134 Prin. of Industrial Maintenance Welding and Metal Cutting Techniques	3
	AUT 210 Industrial Robotics	3
	AUT 211 Industrial Robotics Lab	2
	AUT 212 Robot operation and Programming	3
Additional degree requirements		**3**
	**ORI 101 Orientation to College	1
	WKO 101 Workplace Skills Development	2
	Total	**75**

* Students must choose from among the courses listed on page 78.

** Students may use ORI 105, Orientation and Student Success, to satisfy this requirement. Enrollment in this three credit-hour class will add two semester hours to the student's program total.

A.A.S. - Applied Technology: Industrial Maintenance option

This program prepares individuals to apply technical knowledge and skills to repair and maintain industrial machinery and equipment such as cranes, pumps, engines and motors, pneumatic tools, conveyor systems, production machinery, marine deck machinery, and steam propulsion, refinery, and pipeline-distribution systems.

		credit hours
Area I:	**Written Composition**	**3**
	ENG 101 English Composition	3
Area II:	**Humanities and Fine Arts**	**6**
	SPH 106 Fundamentals of Oral Communications	3
	or SPH 107 Fundamentals of Public Speaking	3
	*Humanities/Fine Arts Elective	3
Area III:	**Natural Science and Mathematics**	**10**
	MTH 100 Intermediate College Algebra (or higher level math)	3
	CIS 146 Microcomputer Applications	3
	PHS 112 Physical Science II	4
Area IV:	**History, Social, and Behavioral Sciences**	**3**
	PSY 200 General Psychology	3
Area V:	**Preprofessional, Major, and Elective Courses**	**48**
	ADM 100 Industrial Safety	3
	ADM101 Precision Measurement	3
	ADM 102 Computer Aided Design	3
	ADM 103 Intro to Computer Integrated Manufacturing/Material Processes	3
	ADM 104 Introduction to Thermal/Electrical Principles	3
	ADM 105 Fluid Systems	3
	ADM 106 Quality Control Concepts	3
	INT 101 DC Fundamentals	3
	INT 103 AC Fundamentals	3
	INT 113 Motor Controls	3
	INT 117 Industrial Mechanics	3
	INT 253 Industrial Robotics	3
	INT 184 Intro to Programmable Logic Controllers	3
	INT 284 Advanced Programmable Logic Controllers	3
	INT 288 Applied Programmable Logic Controllers	3
	INT 134 Prin. of Industrial Maintenance Welding and Metal Cutting Techniques	3
Additional degree requirements		**3**
	**ORI 101 Orientation to College	1
	WKO 101 Workplace Skills Development	2
	Total	**73**

* Students must choose from among the courses listed on page 78.

** Students may use ORI 105, Orientation and Student Success, to satisfy this requirement. Enrollment in this three credit-hour class will add two semester hours to the student's program total.

A.A.S. - Applied Technology: Sustainable Construction/ Renewable Energy option

This program emphasizes the tools and materials used in the construction industry. Topics include safety, hand tools, hand held power tools, building codes, construction measurements, and construction materials. This course also integrates renewable energy topics such as solar / thermal principals, sustainable building materials, and photovoltaic principals and design. Upon completion, students should be able to work safely within the industry and operate various hand tools and power equipment. Students will also understand how sustainable construction affects the environment and future economy.

		credit hours
Area I:	**Written Composition**	**3**
	ENG 101 English Composition	3
Area II:	**Humanities and Fine Arts**	**6**
	SPH 106 Fundamentals of Oral Communications	3
	or SPH 107 Fundamentals of Public Speaking	3
	*Humanities/Fine Arts Elective	3
Area III:	**Natural Science and Mathematics**	**10**
	MTH 100 Intermediate College Algebra (or higher level math)	3
	CIS 146 Microcomputer Applications	3
	PHS 112 Physical Science II	4
Area IV:	**History, Social, and Behavioral Sciences**	**3**
	PSY 200 General Psychology	3
Area V:	**Preprofessional, Major, and Elective Courses**	**43**
	ADM 100 Industrial Safety	3
	ADM101 Precision Measurement	3
	ADM 102 Computer Aided Design	3
	ADM 103 Intro to Computer Integrated Manufacturing/Material Processes	3
	ADM 104 Introduction to Thermal/Electrical Principles	3
	ADM 105 Fluid Systems	3
	ADM 106 Quality Control Concepts	3
	REN 105 Renewable Technology Awareness	1
	REN 115 Photovoltaic Principles and Design	3
	REN 205 Solar Thermal Principles	3
	REN 215 Photovoltaic Systems and Servicing Procedures	3
	BUC 112 Construction Measurements and Calculations	3
	BUC 133 Standard Building Codes	3
	BUC 210 Current Topics in Building Construction	3
	BUC 111 Basic Construction Layout	3
Additional degree requirements		**3**
	**ORI 101 Orientation to College	1
	WKO 101 Workplace Skills Development	2
	Total	**68**

* Students must choose from among the courses listed on page 78.

** Students may use ORI 105, Orientation and Student Success, to satisfy this requirement. Enrollment in this three credit-hour class will add two semester hours to the student's program total.