

# Air Conditioning Technology - Associate in Applied Science (60-66 credits)

Name \_\_\_\_\_ Empl ID# \_\_\_\_\_

**Madisonville**  
Advising Plan

2009  
-2010

Students placing in the following developmental courses (RDG030, ENC091, MT55/MT50) are eligible to enroll in HVAC courses.

## General Education Requirements

Course	Hrs	Grade	Semester
Writing (ENG 101)	3		
Oral Communications (COM 181 <u>or</u> COM 252)	3		
Heritage/Humanities/Foreign Language	3		
Mathematics (MT 105, MT 110, MT 115, MT 125 <u>or</u> higher level math course)	3		
Science	3		
Social Interaction	3		
Computer Literacy course <u>or</u> skill demonstration by competency exam	0-3		

**Total Credits: 18-21 hours**

## Technical Core Requirements

Course	Hrs	Grade	Semester
ACR 100 Refrigeration Fundamentals	3		
ACR 101 Refrigeration Fundamentals Lab	2		
ACR 102 HVAC Electricity <b>and</b> ACR 103 HVAC Electricity Lab <u>or</u> Comparable Electrical course	4-5		
ACR 130 Electrical Components	3		
ACR 131 Electrical Components Lab	2		
ACR 170 Heat Load/Duct Design	3		
ACR 250 Cooling and Dehumidification	3		
ACR 251 Cooling and Dehumidification Lab	2		
ACR 260 Heating & Humidification	3		
ACR 261 Heating & Humidification Lab	3		
ACR 270 Heat Pump Application	3		
ACR 271 Heat Pump Application Lab	2		
Technical Electives (Courses may be taken with approval of program instructor/advisor)	9-11		

**Total Credits: 42-45 hours**

## Air Conditioning Technology Certificates

*Environmental Control System Servicer*  
*Environmental System Repair Helper*  
*Domestic Air Conditioner*  
*Furnace Installer Refrigeration Mechanic*

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**AAS - Air Conditioning Technology (60-66 credits)**

**Diploma - Heating, Ventilation and Air Conditioning Mechanic (47-54 credits)**

<b>AAS - SAMPLE SCHEDULING PLAN</b>	
<u>Summer #1 Semester</u> ENG 101  <i>Total: 3 credits</i>	<u>Summer #2 Semester</u> Oral Communications course  <i>Total: 3 credits</i>
<u>Fall #1 Semester</u> ACR 100 & ACR 101 ACR 102 & ACR 103 or comparable electrical course Computer Literacy or demonstration of competency Mathematics course  <i>Total: 12-16 credits</i>	<u>Fall #2 Semester</u> ACR 270 & ACR 271 ACR 130 & ACR 131 ACT Technical Electives (4-5 credits)  <i>Total: 14-15 credits</i>
<u>Spring #2 Semester</u> ACR 170 ACR 250 & ACR 251 ACR 260 & ACR 261 Social Interaction course  <i>Total: 17 credits</i>	<u>Spring #2 Semester</u> Heritage/Humanities or Foreign Language Science ACT Technical Electives (5-7 credits)  <i>Total: 11-14 credits</i>

<b>Diploma - SAMPLE SCHEDULING PLAN</b>	
<u>First Year First Semester</u> ACR 100 & ACR 101 ACR 102 & ACR 103 or comparable electrical course General Education course Computer Literacy or demonstration of competency  <i>Total: 12-16 credits</i>	<u>Summer Semester</u> General Education course  <i>Total: 3 credits</i>
<u>First Year Second Semester</u> ACR 170 ACR 250 & ACR 251 ACR 260 & ACR 261 Technical Electives (3-5 credits)  <i>Total: 17-19 credits</i>	<u>Fall #2 Semester</u> ACR 270 & ACR 271 ACR 130 & ACR 131 ACT Technical Electives (5-6 credits)  <i>Total: 15-16 credits</i>

## Air Conditioning Technology Electives

*This list is not all-inclusive. Other courses may be taken with approval of the program instructor/advisor.*

<b>Courses</b>	<b>Credits</b>
ACR 112 Sheet Metal Fabrication	3
ACR 113 Sheet Metal Fabrication Lab	2
ACR 290 Journeyman Preparation	3
ACR 291 Special Problems I	1
ACR 293 Special Problems II	2
ACR 295 Special Problems III	3
ACR 298 Practicum	2
ACR 299 Cooperative Education Program	2
BA 160 Introduction to Business	3
FPX 100 Fluid Power	3
FPX 101 Fluid Power Lab	2
ETT 110 Voice and Data Installer Level 1	4
ETT 114 Voice and Data Installer Level II	4
ETT 116 Fiber Optics Systems	3
ETT 118 Residential Network Wiring	3
ETT 120 Project Management	3
ETT 122 Voice and Data Installer Technician	3
ETT 123 Voice and Data Installer Technician Lab	2
ETT 199 Cooperative Education for Voice and Data Wiring Technician	3
EET 102 Advanced Mathematics for Electronics	2
EET 116 Web Page Design	3
EET 148 Electronic Drafting	3
EET 150 Transformers	2
EET 151 Transformers Lab	1
EET 152 Electrical Drafting	2
EET 160 Mathematics for Electronics/Electricity	5
EET 198 Practicum	2
EET 199 Cooperative Education Program	2
EET 214 Television and Radio Systems	6
EET 215 Television and Radio Systems Lab	4
EET 216 Computer Electronics Fundamentals	3
EET 217 Computer Electronics Fundamentals Lab	2
EET 218 Computer Applications I	3
EET 219 Computer Applications I Lab	2
EET 236 Network Essentials	3
EET 237 Network Essentials Lab	2
EET 242 Robotics	3
EET 243 Robotics Lab	2
EET 244 Advanced Electronic Application	6

EET	250	National Electric Code	4
EET	252	Electrical Construction II	2
EET	254	Electrical Construction	3
EET	255	Electrical Construction Lab	4
EET	256	Polyphase Power Calculations	2
EET	258	Manufactured Housing	2
EET	260	Home Automated Technology	2
EET	264	Rotating Machinery	2
EET	265	Rotating Machinery Lab	2
EET	266	Rotating Machinery and Transformers	3
EET	267	Rotating Machinery and Transformers Lab	3
EET	268	Rotating Machinery Electrical Motor Controls I	3
EET	269	Rotating Machinery and Motor Controls I Lab	4
EET	270	Electrical Motor Controls I	2
EET	271	Electrical Motor Controls I Lab	2
EET	272	Electrical Motor Controls II	2
EET	273	Electrical Motor Controls II Lab	2
EET	274	Electrical Motor Controls	3
EET	275	Electrical Motor Controls Lab	4
EET	276	Programmable Logic Controllers	2
EET	277	Programmable Logic Controllers Lab	2
EET	278	Electrical Motor Controls II and PLCs	3
EET	279	Electrical Motor Controls II and PLCs Lab	4
EET	281	Special Problems I	1
EET	283	Special Problems II	2
EET	285	Special Problems III	3
EET	286	Programmable Logic Controllers II	2
EET	287	Programmable Logic Controllers II Lab	2
EET	298	Practicum	1-8
EET	299	Cooperative Education Program	1-8
ENGT	114	Circuits II	3
ENGT	115	Circuits II Lab I	1
ENGT	117	Circuits II Lab II	1
BRX	110	Basic Blueprint Reading for Machinist	2
BRX	112	Blueprint Reading for Machinist	4
BRX	120	Basic Blueprint Reading	3
BRX	210	Mechanical Blueprint Reading for Machinist	2
BRX	220	Blueprint Reading for Construction	3
BRX	230	Mechanical Blueprint Reading	3
BEX	100	Basic Electricity for Non-Majors	3
BEX	101	Basic Electricity Lab for Non-Majors	2
FEX	100	Fundamentals of Electricity for Non-Majors	3

ET	102	Blueprint Reading	2
ET	106	Mechanical Engineering Graphics II	2
ET	107	Computer Applications for Technicians	4
ET	113	Laser Optics Components	3
ET	118	Manufacturing III, Computer Numerical Control	3
ET	119	Introduction to Computer –Aided Manufacturing	3
ET	122	Mechanical Power Transmission Systems	3
ET	123	Mining Electricity I	4
ET	124	Mechanical Power Transmission Systems Lab	1
ET	155	Elements of Underground and Surface Mining	3
ET	201	Statics and Strength of Materials	4
ET	210	Thermodynamic Applications	3
ET	232	Computer Software Maintenance	3
ET	234	Computer Hardware Maintenance	3
ET	243	Electric Power Distribution	3
ET	244	Electrical Machinery and Controls	4
ET	245	Electrical Machinery	3
ET	250	Programmable Logic Controllers	4
ET	252	Electric Power Systems	3
ET	256	Microprocessor Fundamentals	4
ET	260	Fluid Flow and Heat Transfer	5
ET	261	Instrumentation and Measurements	3
ET	262	Measurement and Instrumentation	4
ET	264	Mechanical Design	4
ET	265	Applied Fluid Power	3
ET	286	Roof Control and Ventilation	3
ET	290	Selected Topics in Engineering Technology: (Topic)	1-4
ET	295	Independent Problems	1-2
ME	105	Basic Engineering Graphics	2
ME	205	Introduction to Computer Graphics	3
ME	220	Engineering Thermodynamics I	3
WLD	152	Basic Welding B	5
WLD	100	Oxy-Fuel Systems	2
WLD	101	Oxy-Fuel Systems Lab	2
WLD	110	Cutting Processes	2
WLD	111	Cutting Processes Lab	2
WLD	120	Shielded Metal Arc Welding	2
WLD	121	Shielded Metal Arc Welding Fillet Lab	2
PLB	100	Basic Theory of Plumbing	3
PLB	105	Plumbing Principles	3
PLB	150	Plumbing, Introduction to the Trade	3
PLB	151	Basic Plumbing Skills	3