



Industrial Maintenance Technology

Schedule for Spring 2011

You can now earn a degree and certificates in the Industrial Maintenance Technology program which will prepare you for entry level employment as an industrial maintenance technician.

Industrial Maintenance Technology – Mechanical AAS Degree

BUS 118 Business Survival Skills Technology	3
• 201 M 5-8 PM (ARVADA)	
ENT 106 Print Reading	3
ENT 238 Fluid Power and Controls	3
HVA 105 Electricity for HVAC/R	4
• 001 T 1-5:05 PM	
• 002 M 6-10:05 PM	
• 003 T 5:30-9:35 PM	
• 004 W 5:30-9:35 PM	
• 601 S 6-10:05 PM	
IMA 120 Pumps, Seals and Rotating Equipment	3
• 201 W 5-8 PM (ARVADA)	
IMA 100 Introduction to Industrial Maintenance	3
• 201 T 5-8 PM (ARVADA)	
IMA 150 Industrial Problem Solving Methods	2
• 201 W 6-8 PM (ARVADA)	
IMA 210 Vibration Principles I	3
MAC 105 Introduction to Machining Technology	4
• WT (Warren Tech) T 5-9 PM	
IMA 250 Industrial Machine Lubrication	3
• 201 R 5-8 PM (ARVADA)	
MIL 107 Installing Belts, Chain Drives And Bearings	4
PLU 101 Piping Skills	4
• 001 W 5:30-9:35 PM	
PRO 110 Safety, Health and Environment	3
• 201 W 5-8 PM (ARVADA)	
PRO 280 Internship	4
WEL 130 Maintenance Welding	4
Required Course Credits	50
General Education Courses –	15
Multiple Course Sections Offered. Consult the Fall 2010 Red Rocks Schedule at www.rccc.edu/schedule .	
Total Degree Credits	65

Industrial Maintenance Technology – Electrical AAS Degree

BUS 118 Business Survival Skills Technology	3
• 001 M 5-8 PM (ARVADA)	
EIC 160 Electrical Instruments and Measurements	4
• 001 T 6-10:05 PM	
EIC 167 Electrical Maintenance	4
EIC 220 Industrial Electrical Controls I	4
• 001 T 6-10:05 PM	
EIC 223 Advanced Industrial Electrical Controls	4
• 001 W 6-9:20 PM	
EIC 230 Instrumentation & Controls I	4
• 001 R 6-10:05 PM	
EIC 225 Programmable Controllers	4
• 001 R 6-10:05 PM	
ENT 106 Print Reading	3
HVA 105 Electricity for HVAC/R	4
• 001 T 1-5:05 PM	
• 002 M 6-10:05 PM	
• 003 T 5:30-9:35 PM	
• 004 W 5:30-9:35 PM	
• 601 S 6-10:05 PM	

IMA 100 Introduction to Industrial Maintenance	3
• 201 T 5-8 PM (ARVADA)	
PRO 110 Safety, Health and Environment	3
• 201 W 5-8 PM (ARVADA)	
Choose a minimum of 8 credits from the following courses:	
EIC 226 PLC Controllers Advanced	4
MTE 210 Networks and Controls Systems	4
PRO 280 Internship	3
Total Required Course Credits	48
General Education Requirements	15
Total Credits	63

Electro-Mechanical Industrial Maintenance Electrical AAS Degree

EIC 110 Electrical Installations I	4
• 001 W 6-10:05 PM	
• 002 W 6-10:05 PM	
• 003 MTWRF 8-4:30 PM 2/3-2/9	
EIC 120 Electrical Installations II	4
• 001 R 6-10:05 PM	
EIC 220 Industrial Electrical Controls I	4
• 001 T 6-10:05 PM	
HVA 102 Basic Refrigeration	4
• 001 M 6-10:05 PM	
• 002 R 6-10:05 PM	
HVA 105 Electricity for HVAC/R	4
• 001 T 1-5:05 PM	
• 002 M 6-10:05 PM	
• 003 T 5:30-9:35 PM	
• 004 W 5:30-9:35 PM	
• 601 S 6-10:05 PM	
HVA 113 Refrigerant Recovery Training	1
• 601 S 8-4:30 PM 4/2-4/9	
• 602 S 8-4:30 PM 4/30-5/7	
HVA 132 Air Conditioning & Refrigeration Controls	4
• 001 T 6-10:05 PM	
HVA 231 Pneumatic Controls	4
Required Course Credits	29

Technical Elective Course Credits	16
Select from Electives group 1	
General Educations Requirement	15
Total Credits	60

Electives Group 1

Consult the Fall 2010 Red Rocks Schedule at www.rccc.edu/schedule

EIC 160 Electrical Measurement	4
EIC 167 Electrical Maintenance	4
EIC 221 Trouble Shooting Control Circuits	1.5
EIC 223 Advanced Industrial Electrical Controls	4
EIC 225 Programmable Controls	4
EIC 226 PLC Controllers Advanced	1.5
EIC 229 AC & DC Variable Speed Drives	1.5
EIC 230 Instrumentation & Controls I	4
ENT 106 Print Reading for Manufacturing	3
ENT 238 Basic Fluid Power	3
HVA 110 Heating Fundamentals	4
HVA 113 Refrigerant Recovery Training	1
HVA 114 Centrifugal Pumps	1.5
HVA 162 Heating Controls	4
HVA 231 Pneumatic Controls	4

HVA 247 How Water Heating	4
HVA 251 Building Automation I	4
HVA 263 Chillers	4
IMA 100 Introduction to Industrial Maintenance	4
IMA 150 Problem Solving Methods	2
IMA 210 Vibration Principles I	3
MAC 105 Introduction to Machining Technology	3
IMA 250 Industrial Machine Lubrication	3
MIL 107 Installing Belts, Chains, Drives and Bearings	4
PLU 101 Pipe/Piping Systems	4
PRO 110 Safety, Health and Environment	3
WEL 130 Maintenance Welding	4
Total Select Courses	16

Industrial Maintenance Technology Certificate

EIC 110 Electrical Installations I	4
• 001 W 6-10:05 PM	
• 002 W 6-10:05 PM	
• 003 MTWRF 8-4:30 PM 2/3-2/9	
EIC 120 Electrical Installations II	4
• 001 T 6-10:05 PM	
EIC 220 Industrial Electrical Controls I	4
• 001 T 6-10:05 PM	
HVA 102 Basic Refrigeration	4
• 001 M 6-10:05 PM	
• 002 R 6-10:05 PM	
HVA 105 Electricity for HVAC/R	4
• 001 T 1-5:05 PM	
• 002 M 6-10:05 PM	
• 003 T 5:30-9:35 PM	
• 004 W 5:30-9:35 PM	
• 601 S 6-10:05 PM	
HVA 113 Refrigerant Recovery Training	1
• 601 S 8-4:30 PM 4/2-4/9	
• 602 S 8-4:30 PM 4/30-5/7	
HVA 132 Air Conditioning & Refrigeration Controls	4
• 001 T 6-10:05 PM	
HVA 231 Pneumatic Controls	4
Required Course Credits	29

Elective Courses for Certificate

Consult the Fall 2010 Red Rocks Schedule at www.rccc.edu/schedule

EIC 160 Electrical Measurement	4
EIC 167 Electrical Maintenance	4
EIC 221 Trouble Shooting Control Circuits	1.5
EIC 223 Advanced Industrial Electrical Controls	4
EIC 225 Programmable Controls	4
EIC 226 PLC Controllers Advanced	1.5
EIC 229 AC & DC Variable Speed Drives	1.5
EIC 230 Instrumentation & Controls I	4
ENT 106 Print Reading for Manufacturing	3
ENT 238 Basic Fluid Power	3
HVA 110 Heating Fundamentals	4
HVA 113 Refrigerant Recovery Training	4
IMA 120 Pumps, Seals and Rotating Equipment	3
HVA 162 Heating Controls	4
HVA 231 Pneumatic Controls	4
HVA 247 How Water Heating	4
HVA 251 Building Automation I	4
HVA 263 Chillers	4
IMA 100 Introduction to Industrial Maintenance	4
IMA 150 Problem Solving Methods	2
IMA 210 Vibration Principles I	3
MAC 105 Introduction to Machining Technology	3
IMA 250 Industrial Machine Lubrication	3
MIL 107 Installing Belts, Chains, Drives and Bearings	4
PLU 101 Pipe/Piping Systems	4
PRO 110 Safety, Health and Environment	3

WEL 130 Maintenance Welding
Total Electives Credits Required

Total Credits

Industrial Electrical Technician Certificate

Choose 9 credits from the following:

HVA 105 Electricity for HVAC/R
• 001 T 1-5:05 PM
• 002 M 6-10:05 PM
• 003 T 5:30-9:35 PM
• 004 W 5:30-9:35 PM
• 001 S 6-10:05 PM

EIC 104 Basics of Industrial Electricity

EIC 124 Electrical Safety Requirements
• 601 S 8-4:30 PM 2/12-2/19

EIC 130 National Electrical Code
• 001 T 6-9:20 PM
• 601 S 8-4:30 PM 1/29-3/12

EIC 144 Grounding and Bonding
EIC 166 Tuning Ddc/Process Cont. Loops
EIC 221 Trouble Shooting Control Cir
EIC 222 Intro Instr. & Process Control
EIC 224 Understanding PLC's
EIC 229 AC & DC Variable Speed Drive
EIC 234 High Voltage Elect. Safety

Codes and Standards Certificate

Choose 7.5 credits from the following:

EIC 124 Electrical Safety Requirements
• 601 S 8-4:30 PM 2/12-2/19

EIC 130 National Electrical Code
• 001 T 6-9:20 PM
• 601 S 8-4:30 PM 1/29-3/12

EIC 132 National Electrical Code 2005
EIC 134 Life Safety Code (NFPA 72)
EIC 144 Grounding and Bonding
EIC 234 High Voltage Elect. Safety
EIC 242 National Fire Alarm Code
• 001 W 6-9:20

Commercial and Industrial Heating and Cooling – CIHC Certificate

Choose 7.5 credits from the following:

HVA 105 Electricity for HVAC/R
• 001 T 1-5:05 PM
• 002 M 6-10:05 PM
• 003 T 5:30-9:35 PM
• 004 W 5:30-9:35 PM
• 001 S 6-10:05 PM

EIC 166 Tuning Ddc/Process Cont. Loops
EIC 122 Electrical Distribution Theory II
HVA 114 Centrifugal Pumps
HVA 131 Refrigeration & Air Conditioning
HVA 192 Refrigerant Retrofit Training
HVA 194 Fundamentals of Pneumatic Comfort Controls
HVA 263 Chillers

Low Voltage Technician Certificate

Choose 7.5 credits from the following:

HVA 105 Electricity for HVAC/R
• 001 T 1-5:05 PM
• 002 M 6-10:05 PM
• 003 T 5:30-9:35 PM
• 004 W 5:30-9:35 PM
• 001 S 6-10:05 PM

4 EIC 124 Electrical Safety Requirements
• 601 S 8-4:30 PM 2/12-2/19

45 EIC 104 Basic of Industrial Electricity

HVA 132 Air Conditioning & Refrigeration Controls
• 001 T 6-10:05 PM

EIC 132 Electrical Code
EIC 250 Fiber Optics Training
EIC 251 Fiber Optics Advanced Training
EIC 252 Structured Cabling
EIC 253 Fiber Optics Certification
EIC 254 Telephony
EIC 268 Fiber Optics Networks

Introduction to Industrial Maintenance Team Leadership Certificate

4 PRO 110 Safety, Health and Environment
• 201 W 5-8 PM (ARVADA)

BUS 118 Business Survival Skills Technology
• 001 N 5-8 PM (ARVADA)

PHY/SOC Psychology or Sociology
Consult the Fall 2010 Red Rocks Schedule at www.rccc.edu/schedule

IMA 150 Problem Solving Methods
• 201 W 6-8 PM (ARVADA)

Total Credits

Industrial & Commercial HVAC Technician Certificate

HVA 102 Basic Refrigeration
• 001 M 6-10:05 PM
• 002 R 6-10:05 PM

HVA 105 Electricity for HVAC/R
• 001 T 1-5:05 PM
• 002 M 6-10:05 PM
• 003 T 5:30-9:35 PM
• 004 W 5:30-9:35 PM
• 001 S 6-10:05 PM

HVA 110 Heating Fundamentals
• 001 M 5:30-9:35 PM

HVA 113 Refrigerant Recovery Training
• 601 S 8-4:30 PM 4/2-4/9
• 602 S 8-4:30 PM 4/30-5/7

HVA 132 Air Conditioning & Controls
• 001 T 6-10:05

HVA 162 Heating Controls
• 001 R 6-10:05 PM

HVA 247 Hot Water Heating

HVA 263 Chillers

Total Credits

Introduction to Predictive Maintenance Technology Certificate

3 PRO 110 Safety, Health and Environment
• 201 W 5-8 PM (ARVADA)

IMA 210 Vibration I

IMA 250 Industrial Machine Lubrication
• 201 R 5-8 PM (ARVADA)

Total Credits

1 Electro-Mechanical Technician Certificate

1.5 Choose 9 credits from the following:

4 HVA 105 Electricity for HVAC/R
• 001 T 1-5:05 PM
• 002 M 6-10:05 PM
• 003 T 5:30-9:35 PM
• 004 W 5:30-9:35 PM
• 001 S 6-10:05 PM

4 HVA 102 Basic Refrigeration
• 001 M 6-10:05 PM
• 002 R 6-10:05 PM

1.5 EIC 104 Basic of Industrial Electricity

1 EIC 124 Electrical Safety Requirements
• 601 S 8-4:30 PM 2/12-2/19

1.5 EIC 144 Grounding and Bonding

1.5 EIC 166 Tuning Ddc/Process Cont. Loops
1.5 EIC 221 Trouble Shooting Control Circuits
1.5 EIC 222 Intro Instr. & Process Control
1.5 EIC 224 Understanding PLC's

4 EIC 226 PLC's Controllers Advanced
• 001 M 6-10:05 PM

1.5 EIC 227 Mechanical Drives
1.5 EIC 229 AC & DC Variable Speed Drive
1.5 EIC 231 Electro-Pneumatic Training
1.5 EIC 234 High Voltage Elect. Safety
1.5 HVA 114 Centrifugal Pumps
4 HVA 124 Advanced Air Conditioning
1.5 HVA 192 Refrigerant Retrofit Training

Introduction to Industrial Control Systems Certificate

4 EIC 220 Industrial Electrical Controls I
• 001 T 6-10:05 PM

1.5 EIC 227 Mechanical Drives

4 EIC 225 Programmable Controls

9.5 Total Credits

Introduction to Industrial Electrical Maintenance Certificate

4 HVA 105 Electricity for HVAC/R
• 001 T 1-5:05 PM
• 002 M 6-10:05 PM
• 003 T 5:30-9:35 PM
• 004 W 5:30-9:35 PM
• 001 S 6-10:05 PM

4 EIC 220 Industrial Electrical Controls I
• 001 T 6-10:05 PM

4 EIC 226 PLC's Controllers Advanced

12 Total Credits

Introduction to Industrial Instrumentation and Controls Certificate

4 EIC 230 Instrumentation & Controls I
• 001 R 6-10:05 PM

4 EIC 225 Programmable Controllers

8 Total Credits



Industrial Maintenance Technology, Box 12
13300 West Sixth Avenue
Lakewood, CO 80228-1255

www.rccc.edu/isod

For more information about Industrial Maintenance Technology:

Chuck Beck
Program Coordinator
chuck.beck@rccc.edu
303.914.6063