

**Energy Management Technology Short-Term Certificate** 150503 ECT

Available: Shoals Campus  
 Advisor: J. Hackworth (5335) [joehackworth@nwscc.edu](mailto:joehackworth@nwscc.edu)

The Energy Management certificate is offered to students in Heating and Air Conditioning, Industrial Electricity, and Industrial Electronics and in-field personnel who have a high school diploma or GED. This certificate would enable a student to enhance his/her career potential in the area of energy control and use technology. Students should contact advisor for further information.

**Entering students are required to complete ORT 100. Transfer students are exempt from this requirement.**

	Semester		Hours
	Theory	Lab	
ECT 241 Introduction to Energy Management	1	6	3
ECT 242 Audit-Accounting Conservation	2	6	3
ECT 243 Basic Energy Management Systems (ELT 231 Programmable Controls I)	2	6	3
ECT 244 Energy Management Systems (ELT 232 Programmable Controls II)	2	6	3
ECT 252 Advanced Energy Management (ELT 222 Advanced Electronics for the Electrician)	2	6	3
ECT 253 Direct Digital Control (ELT 221 Electronics for Electricians I)	2	6	3
ECT 254 Test and Balance Instrumentation (ACR 205 System Sizing and Air Distribution)	2	6	3
Electives			3
<b>Total Semester Credit Hours</b>			<b>24</b>

- Electives:
- FSC 211 Building Construction and Related Codes
  - FSC 270 Fire Protection Systems
  - ACR 115 Heating Systems
  - ACR 123 HVACR Electrical Components
  - ACR 138 Customer Relation in HVAC
  - ACR 143 HVAC Industry Codes
  - ACR 182 Parallel Refrigeration
  - ACR 203 Commercial A/C
  - ACR 204 Commercial Air Conditioning
  - ELT 121 Basic AC/DC Machines
  - ELT 122 Advanced AC and DC Machines
  - ELT 131 Commercial/Industrial Wiring I
  - ELT 211 Motor Control I
  - ELT 212 Motor Control II
  - ELT 233 Applied Programmable Controls

**Environmental Health and Safety Technician Associate in Applied Science Degree** 150507 EVT

Available: Shoals Campus  
 Advisors: S. McGouyrk (5246) [stevem@nwscc.edu](mailto:stevem@nwscc.edu)  
 C. Eubanks (5293) [eubanks@nwscc.edu](mailto:eubanks@nwscc.edu)

This degree is designed to prepare students for employment as Environmental, Health and Safety Technicians. Students will be trained in the use and application of environmental technology, as well as the management and support of industrial safety processes. Also see the A.S. degree program.

**Entering students are required to complete ORI 101. Transfer students are exempt from this requirement.**

General Education Requirements	Semester Hours
BIO 103 Principles of Biology I	4
BIO 201 Human Anatomy and Physiology I	4
CHM 104 Introduction to Inorganic Chemistry	4
CHM 105 Introduction to Organic Chemistry	4
CIS 146 Microcomputer Applications	3
**ENG 101 English Composition I	3
*ENG 130 Technical Report Writing	3
MTH 103 Introduction to Technical Mathematics	3
Fine Arts Elective	3
Social Science Elective	3
*Speech Elective	3
<b>Total General Education Requirements</b>	<b>37</b>

Major Requirements	Semester Hours
EVT 101 Introduction to Environmental Science and Technology or PHS 120 Environmental Science ..	4
EVT 105 Introduction to Occupational Safety and Health ...	3
EVT 107 Environmental Health and Safety Assessments and Reporting	3
EVT 110 Introduction to Environmental Laws and Regulations	3
EVT 201 Environmental Internship I	3
EVT 210 Environmental Sampling and Analysis	4
EVT 220 Toxicology	3
EVT 250 Hazardous Waste Operations and Emergency Response	4
EVT 260 Introduction to Industrial Hygiene	3
EVT 280 Hazardous Materials Management	3
<b>Total Major Requirements</b>	<b>33</b>
<b>Total Semester Credit Hours</b>	<b>70</b>

\*Students planning to transfer should take ENG 102 and SPH 107.

\*\*Keyboarding skills are essential for the successful completion of English 101.

**Environmental, Health & Safety 150507 EHS  
Technician  
Short-Term Certificate**

Available: Shoals Campus  
 Advisor: S. McGouyrk (5246) [stevem@nwsc.edu](mailto:stevem@nwsc.edu)  
 C. Eubanks (5293) [eubanks@nwsc.edu](mailto:eubanks@nwsc.edu)

This short-term certificate is designed to prepare students for employment as Environmental, Health and Safety Technicians. Also, see the A.S. & A.A.S. Degree Programs.

**Entering students are required to complete ORI 101. Transfer students are exempt from this requirement.**

	Theory	Lab	Semester Hours
CHM 104 Introduction to Inorganic Chemistry	3	3	4
EVT 101 Introduction to Environmental Science and Technology or PHS 120 Environmental Science	3	2	4
EVT 105 Introduction to Occupational Safety and Health	3	0	3
EVT 107 Environmental Health and Safety Assessments and Reporting	3	0	3
EVT 110 Introduction to Environmental Laws and Regulations	3	0	3
EVT 250 Hazardous Waste Operations and Emergency Response	4	0	4
EVT 260 Introduction to Industrial Hygiene	3	0	3
<b>Total Semester Credit Hours</b>			<b>24</b>

**Fire Science/Fire Services 430202 FSC  
Management  
Short-Term Certificate**

Available: Shoals Campus  
 Advisors: S. McGouyrk (5246) [stevem@nwsc.edu](mailto:stevem@nwsc.edu)

This short-term certificate is designed to prepare students for employment in fire science or related business fields. Also, see the A.S. Degree Program.

**Entering students are required to complete ORI 101. Transfer students are exempt from this requirement.**

	Theory	Lab	Semester Hours
FSC 101 Introduction to Fire Science	3	0	3
FSC 200 Fire Combat Tactics and Strategy	3	0	3
FSC 210 Building Construction for the Fire Service	3	0	3
FSC 240 Fire Cause Determination	3	0	3
FSC 292 Elements of Supervision/ Fire Service Supervision	3	0	3
<b>Total Semester Credit Hours</b>			<b>15</b>

**Industrial Mechanics 470303 INS  
Short-Term Certificate**

Available: Shoals Campus  
 Advisors: R. Garner (5254) [wgarner@nwsc.edu](mailto:wgarner@nwsc.edu)  
 T. Maupin (5247) [tmaupin@nwsc.edu](mailto:tmaupin@nwsc.edu)

The Industrial Mechanics program is designated to give students entry-level skills to be employed in the field of plant maintenance. In today's industry plant maintenance requires multi-skilled workers. These skills include: Programming PLC, working on manual motor controls, installation and maintenance of hydraulics system, and working on and maintaining various types of pumps as well as all mechanical drives. The classes are both theory and lab-based in order to produce a well-rounded mechanic.

**Entering students are required to complete ORT 100. Transfer students are exempt from this requirement.**

	Theory	Lab	Semester Hours
MSP 136 Machine Repair	1	6	3
MSP 135 Millwright	2	6	4
WDT 157 Consumable Welding Processes	3	0	3
WDT 158 Consumable Welding Processes	0	3	3
MTH 103 Intro to Technical Math	3	0	3
INT 118 Fundamentals of Industrial Hydraulics and Pneumatics	1	2	3
INT 121 Industrial Hydraulics Troubleshooting	1	2	3
INT 127 Principles of Industrial Pumps and Piping Systems	2	1	3
INT 261 Blueprint Reading for Industrial Technicians	3	0	3
<b>Total Semester Credit Hours</b>			<b>28</b>