

# Heavy Equipment Academy

## 1st Year Program of Studies 5 courses with total of 18 credit hours

Fall Semester		Credit
DEMR 1401	<b>Shop Safety and Procedures</b> <i>A study of shop safety, rules, basic shop tools, and test equipment.</i>	4
DEMR 1406 <small>*10-Hour OSHA *HOLT CAT ProTech Electricity TG01</small>	<b>Diesel Engines</b> <i>An introduction to the basic principles of diesel engines and systems.</i>	4
<b>Fall Semester Total</b>		<b>8</b>
Spring Semester		Credit
DEMR 1405 <small>*10-Hour OSHA *HOLT CAT ProTech Electricity TG01</small>	<b>Basic Electrical Systems*</b> <i>A review of applied math models and study of different blueprints, with emphasis on machine blueprints and the application of each.</i>	4
DEMR 1416 <small>*HOLT CAT ProTech Hydraulics TM 28</small>	<b>Basic Hydraulics*</b> <i>Fundamentals of hydraulics including components and related systems</i>	4
<b>Spring Semester Total</b>		<b>8</b>
Summer Semester		Credit
DEMR 2288	<b>Internship: Diesel Mechanics Technology/Technician</b> <i>Practical, general workplace training supported by an individualized learning plan.</i>	2
<b>Summer Total</b>		<b>2</b>
<b>Year 1 Program Total</b>		<b>18</b>

## 2nd Year Program of Studies 4 courses with total of 11 or 12 credit hours

Fall Semester		Credit
DEMR 1329	<b>Preventative Maintenance</b> <i>Introduction to proper servicing practices. Content includes record keeping and condition of major systems.</i>	3
DEMR 2432	<b>Electronic Controls</b> <i>Advanced skills in diagnostic and programming techniques of electronic control systems.</i>	4
<b>Fall Semester Total</b>		<b>6</b>
Spring Semester		Credit
DEMR 2434 <small>*HOLTCAT ProTech Electronic Troubleshooting DE205</small>	<b>Advanced Diesel Tune-Up and Troubleshooting*</b> <i>Advanced concepts &amp; skills required for tune-up &amp; troubleshooting procedures of diesel engines. Emphasis on the science of diagnostics with a common sense approach.</i>	4
DEMR 2435	<b>Advanced Hydraulics</b> <i>Advanced study of hydraulic systems &amp; components including diagnostics &amp; testing of hydraulic systems.</i>	4
<b>Spring Semester Total</b>		<b>8</b>
<b>Year 2 Program Total</b>		<b>15</b>

**Level I Certificate of Completion  
Diesel Heavy Equipment**

**Level I Certificate of Completion  
Advanced Diesel Heavy Equipment**

**Two Year Program of Studies: 9 Courses totaling 33 credit hours**

# Heavy Equipment Academy

## Level I Certificate of Completion Diesel Heavy Equipment

### ASSOCIATE OF APPLIED SCIENCES

## Diesel Construction Equipment Technician

Semester 1	Credit
DEMR 1405 Basic Electrical Systems	4
DEMR 1416 Basic Hydraulics	4
DEMR 1329 Preventative Maintenance	3
MATH 1333 Contemporary Mathematics II or other	3
<b>1st Semester Total</b>	<b>14</b>
Semester 2	Credit
DEMR 1417 Basic Brake Systems	4
DEMR 1406 Diesel Engine	4
ITSC 1301 Introduction to Computers	3
PHYS 1305 Introductory to Physics I Lecture	3
<b>2nd Semester Total</b>	<b>14</b>
Semester 3	Credit
DEMR 2432 Electronic Controls	4
DEMR 1423 Heating, Ventilation, & Air Conditioning	4
DEMR 2435 Advanced Hydraulics	4
ENGL 1301 Composition I	3
Select Social & Behavioral Sciences (80) Core	3
<b>3rd Semester Total</b>	<b>18</b>
Semester 4	Credit
DEMR 2434 Advanced Diesel Tune-Up & Troubleshooting	4
HEMR 1401 Tracks & Undercarriages	4
DEMR 2366 Practicum: Diesel Mechanics Technology Technician	3
Select Language, Philosophy & Culture (40) Core or other*	3
<b>4th Semester Total</b>	<b>14</b>
<b>Program Total</b>	<b>60</b>

DC/AA: 27	Total AAS Hours: 60
Hours needed Post DC/AA: 33	General Academics: 15
	Specific Hours: 15