# Diesel and Heavy Equipment Technology (DHET)

**DHET 100**  F  5 credits  
**ESSENTIALS OF MECHANICS**  RE  
Develops beginning mechanical skills and knowledge essential to successful completion of the automotive and/or diesel technology program. Includes shop safety, fasteners, measurements, cutting tools, lifting, tool usage, shop orientation, manuals (including computer retrieval systems), bearings and seals, and special emphasis on preventative/predictive maintenance. This is an introductory course for beginning students of Automotive or Diesel Technology. Course can be waived if student has completed principles of technology and auto program in high school. (was ADT 100)  
Prerequisite: None

**DHET 101**  W  5 credits  
**ELECTRICAL SYSTEMS I**  RE  
Covers the theory of electricity from fundamentals through solid state. Includes Ohm’s Law, series, parallel, and series-parallel circuits. Automotive wiring and circuits will be included as well as how to read wiring diagrams and circuit tracing and repair. Course can be waived if student has completed principles of technology and auto program in high school. (was ADT 101)  
Prerequisite: None

**DHET 102**  W  10 credits  
**ELECTRICAL SYSTEMS II**  RE  
Presents brief review of the theory of electricity. Covers theory, diagnosis and repair of low voltage systems (12V), including batteries, starting systems, charging systems, instrumentation and warning devices, lighting systems, power accessories, (e.g. power windows, power seats), and computer operation and circuit analysis. Also covered are high voltage energy, distributorless, and breaker point ignition systems. (was ADT 102)  
Prerequisite: DHET 101 or instructor permission.

**DHET 104**  Sp  8 credits  
**VEHICLE CLIMATE CONTROL**  RE  
Covers the theory of operation, design, diagnosis and repair of both manual and automatic heating, ventilation and air conditioning systems (HVAC) used in automobiles, trucks and heavy equipment. Emphasis is on component identifications, performance testing, recovering, evacuation and recharging. Covers materials necessary to pass ASE (A7) test.  
Prerequisites: DHET 102 or instructor permission.

**DHET 111**  Sp  5 credits  
**HYDRAULIC BRAKES**  RE  
Covers the theory of hydraulics, fundamentals of manual, power, drum, and disc brake systems. This is a first-year course and may be waived with the instructor permission. (was ADT 111)  
Prerequisite: None

**DHET 115**  Sp  5 credits  
**AIR BRAKE SYSTEMS**  RE  
Offers training on vehicle air brake systems with coverage of compressors, valves and brake foundation. Emphasis will be placed on maintaining Federal Motor Vehicle Safety Standards.  
Prerequisite: None

**DHET 125**  Sp  5 credits  
**HEAVY DUTY CHASSIS MAINTENANCE**  RE  
Offers training in the repair, maintenance, and diagnosis of heavy equipment frames, steering, suspension, wheels, tires and undercarriage.  
Prerequisite: None

**DHET 141**  F  5 credits  
**HYDRAULICS I**  RE  
Presents the basic principles, operation, and maintenance of mobile hydraulic systems. Topics include: Fluids, Filters, and Fluid conductors. This is the first of a required two-course sequence for diesel students, or it can be used as a stand-alone course for those desiring a more in-depth look at the basics of mobile hydraulics.  
Prerequisites: None.

**DHET 142**  F  6 credits  
**HYDRAULICS II**  RE  
Provides a more in-depth look at hydraulic pumps, valves, and actuators in mobile hydraulic systems. Emphasizes testing, diagnosis and the repair of hydraulic systems.  
Prerequisite: DHET 141 or MFG 140 or concurrent enrollment.

**DHET 210**  W  16 credits  
**DIESEL ENGINE REBUILD**  RE  
Studies the operation, maintenance, repair, and overhaul of diesel engines used in heavy equipment. Required course for all Diesel/Heavy Equipment Technology majors. (was ADT 223)  
Prerequisite: DHET 100.

**DHET 215**  F  15 credits  
**HEAVY DUTY ENGINE PERFORMANCE**  RE  
Studies factors and components that affect diesel engine performance, fuel economy, and exhaust emissions. Includes fuel system and valve train problem diagnosis, maintenance, repair, and adjustment. (was ADT 226)  
Prerequisite: DHET 102 or instructor permission.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHET 216</td>
<td>F 5</td>
<td>AUTO/DIESEL TUNE UP AND PERFORMANCE RE Provides a study of the diesel fuel systems and electronic engine controls found in modern high speed diesel engines. This course will introduce students to the theory of fuel system operation, troubleshooting and the servicing of modern high speed diesel engines found in light and medium duty vehicles, cars and boats. Prerequisite: DHET 102 or instructor approval.</td>
</tr>
<tr>
<td>DHET 220</td>
<td>Sp 10</td>
<td>HEAVY DUTY POWER TRAINS RE Provides study of the principles of operation, maintenance, problem diagnosis, and repair of clutch systems, manual transmission, automatic transmission, power take-off, transfer cases, drive lines, differential assemblies and final drives used in trucks and heavy equipment. (was ADT 206) Prerequisite: None</td>
</tr>
<tr>
<td>DHET 228</td>
<td>1-4</td>
<td>TRUCK DRIVING/TECHNICIAN RE Provides instruction to prepare students for the Washington State Class A commercial driver's license exam. 2-credit option is intended for students who have already received a portion of the required classroom training in truck systems. 4-credit option provides the Washington State required 40 hours of classroom training for individuals who have not completed the required classroom training in truck systems. Prerequisites: None.</td>
</tr>
<tr>
<td>DHET 229</td>
<td>6</td>
<td>COMMERCIAL TRUCK DRIVING OPERATION Provides the required 120 hours of truck driving skill development to prepare students for the Washington State Class A commercial driver's license exam. Prerequisites: DHET 228. Student must have DOT physical and pass the DOT alcohol and substance abuse test. Student must have a commercial learner's permit.</td>
</tr>
<tr>
<td>DHET 230</td>
<td>Sp 5</td>
<td>ADVANCED SHOP PRACTICES RE Provides a review of key skills learned in previous diesel program courses and reinforce industry shop practices. Emphasis will be placed on time management and documentation. A course for Diesel AAS students. Prerequisite: Completion of 60 DHET credits.</td>
</tr>
</tbody>
</table>