In the Diesel Technology program, students will gain a knowledge of all phases of repair work on diesel engines, and the accessories used to power buses, ships, trucks, railroads, electric generators, farm equipment, and construction machinery. Instruction and practice are provided in troubleshooting, failure analysis, disassembly, examination, reconditioning, and replacement of parts. The students will also repair and adjust injections systems, oil and water pumps, generators, auxiliary power units, controls, and transmissions. The use of technical manuals, blueprints, repair orders, and a variety of hand and power tools, testing and diagnostic equipment are also studied.

Major Units of Study

- Deck Machinery
- Electrical Systems
- Engine Principals
- Four Flow Systems (Air/Lube/Fuel/Cooling)
- Hydraulic Systems
- Marine Equipment
- Oxyacetylene Cutting
- Power Trains
- Reconditioning Diesel Engines
- Rigging and Hoisting
- Suspensions Systems
- Troubleshooting-Failure Analysis

Career Opportunities

- Automotive Machine Shop Mechanic
- Diesel Technician/Generator Technician
- Equipment Operator
- Fuel Injection Servicer
- Hydraulic Mechanic/Tractor Mechanic
- Marine Mechanic
- Mechanical Engineering Technician
- Military-related Trades
- Parts Salesperson
- Service Manager
- Service Writer
- Shop Foreman
- Stationary Engineering

Post-Secondary

- Apprentice Programs
- Colleges
- Articulation with the Community College of Baltimore County
- Articulation with Pennsylvania College of Technology
- Equipment Manufacturer Schools
- Military Services
- On-The-Job-Training
- Trade and Technical Schools

Certifications

Possible Automotive Service Excellence (ASE) certifications for students include Diesel Engines, Diesel Engine Electronics, and Air Brakes.

Visit the Carroll County Career and Technology Center website:
http://www2.carrollk12.org/ccctc/
**Completer: Heavy Equipment & Truck Technology**

**Credits: 6**

- Guideline for Course Selections
- Refer to Graduation Requirements in the Program of Studies for specific course requirements in each content area

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<th>Grade</th>
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<td>English 9 (1)</td>
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<td>English 11 (1)</td>
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<td>Chemistry (1)</td>
<td>Biology (1)</td>
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<td>Intermediate Algebra / Data Analysis (1)</td>
<td>Geometry (1)</td>
<td>Algebra II / Data Analysis (1)</td>
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<td>PE (.5) / Financial Literacy (.5)</td>
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<td>Fine Arts (1)</td>
<td>Foundations of Technology (1)</td>
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<td>World Language (1)</td>
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**Completer Program Requirements**

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<tr>
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<th>Heavy Equipment &amp; Truck Technology I (3)</th>
<th>Heavy Equipment &amp; Truck Technology II (3)</th>
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<tbody>
<tr>
<td>Career Specific Electives</td>
<td></td>
<td>Advanced Design Applications (1), Technological Design (1), Math Elective beyond Alg. II/DA (.5-1), Agricultural Mechanical Technology (1), Business Principles &amp; Practices (1), Business Communications &amp; Keyboarding (1), AP Physics (1), Public Speaking (.5), Technological Impacts &amp; Issues (1), Work-Based Learning Experience (.5-1)</td>
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</tbody>
</table>

8 credits possible per year

**Value Added:**

- **From:** Pennsylvania College of Technology: Diesel Technology: Heavy Construction Equipment: Technician, Operator or CAT Emphasis; or Electric Power Generation Technology
- **Program:** Up to 8 Articulated Credits

- **From:** University of Northwestern Ohio: Diesel Technology
- **Program:** Up to 12 Articulated Credits

**End of Program Test:**

- **Industry:** Diesel Engines and Electrical/Electronic Systems
- **Taken:** National Automotive Student Skills Standards Assessment (NA3SA)
- **At:** At the end of Heavy Equipment & Truck Technology II

**ADA STATEMENT**

The Board of Education of Carroll County does not discriminate on the basis of disability in employment or provision of services, programs or activities. Information concerning the Americans with Disabilities Act is available from the Director of Facilities, 410-751-3177. Persons needing auxiliary aids and services for communication should contact the Office of Community and Media Relations at 410-751-3020 or publicinfo@carrollk12.org, or write to Carroll County Public Schools, 125 North Court Street, Westminster, Maryland 21157. Persons who are deaf, hard of hearing, or have a speech disability, use Relay or 7-1-1. Please contact the school system at least one (1) week in advance of the date the special accommodation is needed.