

Carroll County Career & Technology Center

Heavy Equipment & Truck Technology



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

Certifications

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

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



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

Grade →	9	10	11	12
Exact scheduling depends on student's plan and school's master schedule.	English 9 (1)	English 10 (1)	English 11 (1)	English 12 (1)
	US Government (1)	US History (1)	World History (1)	
	Conceptual Physics (1)	Chemistry (1)	Biology (1)	
	Algebra I / Data Analysis (1)	Intermediate Algebra / Data Analysis (1)	Geometry (1)	Algebra II / Data Analysis (1)
	PE (.5) / Health (.5)		PE (.5) / Financial Literacy (.5)	
	Fine Arts (1)	Foundations of Technology (1)		
	World Language (1)	World Language (1)		
	Freshman Seminar (.5)			
Completer Program Requirements			Heavy Equipment & Truck Technology I (3)	Heavy Equipment & Truck Technology II (3)
Career Specific Electives (may be taken any year offered after prerequisites have been satisfied) 8 credits possible per year	Technical Drawing & CADD (1), Power, Energy & Transportation (1) OR Electronics (1), Math Elective beyond Alg. II/DA (.5-1), Agricultural Mechanical Technology (1), Business Principles & Practices (1), Business Communications & Keyboarding (1), Materials Science (1), AP Physics (1), Public Speaking (.5), Technological Impacts & Issues (1), Work-Based Learning Experience (.5-1)			
Value Added: From: Program:	Up to 8 Articulated Credits Pennsylvania College of Technology Diesel Technology: Heavy Construction Equipment: Technician, Operator or CAT Emphasis; or Electric Power Generation Technology			
End of Program Test: Industry: Taken:	NOCTI Exam in Diesel Engine Technology National Automotive Technicians Education Foundation (NATEF) At the end of Heavy Equipment & Truck Technology II			