

HEAVY/MEDIUM DUTY TRUCK TECHNOLOGY

The Heavy/Medium Duty Truck Technology program offers students high technology training and skills that may be utilized for immediate employment after certificate completion. Students will receive training in various subjects including brake and suspension, computer-controlled engines, emphasis in electrical and heavy-duty maintenance. Students working for certificates must have a basic knowledge of arithmetic, reading and writing in order to learn and work in the occupations they select.

Contact Information

Division: Applied Technology, Transportation, and Culinary Arts (T - 108)

Division Phone Number: (909) 384-4451

Faculty Chair: Kenny Melancon (bmelancon@sbccd.edu), A.S.

- Heavy/Medium Duty Truck Technology Associate of Science Degree (<http://catalog.valleycollege.edu/degree-certificate-program-index/hmdt/heavy-medium-duty-truck-technology-as-degree/>)
- Heavy-Medium Duty Truck Technology Certificate of Achievement (<http://catalog.valleycollege.edu/degree-certificate-program-index/hmdt/heavy-medium-duty-truck-technology-certificate-achievement/>)
- Heavy/Medium Duty Clean Vehicle Technology Certificate of Achievement (<http://catalog.valleycollege.edu/degree-certificate-program-index/hmdt/heavt-medium-duty-clean-vehicle-technology-certificate-achievement/>)
- Heavy/Medium Duty Truck Engine and Fuel Injection Technology Certificate of Achievement (<http://catalog.valleycollege.edu/degree-certificate-program-index/hmdt/heavy-medium-duty-truck-engine-and-fuel-injection-technology-certificate-achievement/>)
- Heavy/Medium Duty Truck Engine and Fuel Injection Technology Certificate of Completion (<http://catalog.valleycollege.edu/degree-certificate-program-index/hmdt/heavy-medium-duty-truck-engine-and-fuel-injection-technology-certificate-completion/>)

HMDT 021 4 Units

Heavy-Duty Truck Engines

Lecture: 54 contact hours

Lab: 54 contact hours

This course covers theory and practical shop work in the repair, operation, and maintenance of heavy-duty industrial truck engines and fuel injection systems including general troubleshooting and diagnostic testing. This course may be used in preparation for the Automotive Service Excellence (ASE) National Test. (Formerly DIESEL 021)

Associate Degree Applicable

HMDT 022 4 Units

Heavy-Duty Truck Brakes

Lecture: 54 contact hours

Lab: 54 contact hours

This course covers theory and practical shop work in the construction, operation, and repair of heavy-duty truck brake systems and components including principles of hydraulic and pneumatic brake systems, anti-lock, and computer controlled braking systems used in today's modern heavy-duty trucks and busses. (Formerly DIESEL 022)

Associate Degree Applicable

HMDT 023 4 Units

Heavy-Duty Truck Suspension and Steering

Lecture: 54 contact hours

Lab: 54 contact hours

This course covers theory and practical shop work in the construction, operation, and repair of heavy-duty truck suspension and steering components including principles of hydraulic and pneumatic steering and suspension systems. (Formerly DIESEL 023)

Associate Degree Applicable

HMDT 024 4 Units

Advanced Heavy-Duty Truck Engines

Lecture: 54 contact hours

Lab: 54 contact hours

Prerequisite: HMDT 021

This course is an advanced engine rebuilds class that covers theory and practical shop work in the repair, operation, and maintenance of various heavy-duty truck engines. Topics include general troubleshooting and diagnostic testing of engine components and systems found in most engines from a variety of engine manufacturers. This course may be used in preparation for the Automotive Service Excellence (ASE) National Test. (Formerly DIESEL 024)

Associate Degree Applicable

HMDT 026 4 Units

Computer Controlled Truck Engines

Lecture: 54 contact hours

Lab: 54 contact hours

Prerequisite: HMDT 064 or AUTO 064

This course covers theory and practical shop work in the repair, operation, and maintenance of computer controlled truck engines. Topics include general troubleshooting and diagnostics using assorted electronic and computerized test equipment on operable computer controlled diesel engines. (Formerly DIESEL 026)

Associate Degree Applicable

HMDT 028 4 Units

Heavy-Duty Truck Systems

Lecture: 54 contact hours

Lab: 54 contact hours

Prerequisite: HMDT 064 or AUTO 064

This course covers theory and practical shop work in maintenance, air conditioning, Antilock Brake System (ABS), computers, and operations of the heavy-duty truck and bus systems. Course is designed to provide students the needed skills and knowledge to perform advanced level labor tasks in the heavy-duty truck and bus service industry. (Formerly DIESEL 028)

Associate Degree Applicable

HMDT 034 4 Units

Diesel Alternative Fuels

Lecture: 54 contact hours

Lab: 54 contact hours

This course provides theory and hands-on experience in the operation, service, inspection, and maintenance of compressed natural gas (CNG) vehicle systems. This course prepares students for the ASE Alternate Fuels Test (F-1). (Formerly DIESEL 034)

Associate Degree Applicable

HMDT 035 2 Units

Heavy-Duty Vehicle Automatic Transmissions

Lecture: 27 contact hours

Lab: 27 contact hours

This course provides theory and hands-on experience with heavy- and medium-duty automatic transmission operation, construction, service and overhaul procedures. (Formerly DIESEL 035)

Associate Degree Applicable

HMDT 042 2 Units

Zero Emission Heavy Duty Truck

Lecture: 18 contact hours

Lab: 54 contact hours

The Zero Emission Heavy-Duty Truck course is to provide students with training in servicing and maintaining electric vehicles.

Associate Degree Applicable

HMDT 064 4 Units

Auto/Truck Electrical Systems

Lecture: 54 contact hours

Lab: 54 contact hours

This course covers basic electrical theory, use of meters, test equipment, wiring diagrams, diagnosis and repair/replacement of major electrical components of automobiles and trucks. Emphasis is placed on diagnosis of starting systems, charging systems, and electrical circuits such as lights and batteries. (Formerly DIESEL 064)

Associate Degree Applicable

HMDT 098 1-4 Units

Heavy/Medium Duty Truck Work Experience

WRKEX: 300 contact hours

Supervised training, in the form of on the job employment that will enhance the student's knowledge in the selected field of study. The student's major and job must match. For paid work, 75 hours = 1 unit; for volunteer work, 60 hours = 1 unit. Students may earn a total of 16 units toward graduation in Work Experience 098 courses. See department for specific guidelines. (Formerly DIESEL 098)

Associate Degree Applicable

HMDT 621 Noncredit

Heavy-Duty Truck Engines

Lecture: 54 contact hours

Lab: 54 contact hours

This noncredit course covers theory and practical shop work in the repair, operation, and maintenance of heavy-duty industrial truck engines and fuel injection systems including general troubleshooting and diagnostic testing. This course may be used in preparation for the Automotive Service Excellence (ASE) National Test. (Formerly DIESEL 621)

HMDT 622 Noncredit

Heavy-Duty Truck Brakes

Lecture: 54 contact hours

Lab: 54 contact hours

This noncredit course covers theory and practical shop work in the construction, operation, and repair of heavy-duty truck brake systems and components including principles of hydraulic and pneumatic brake systems, anti-lock, and computer controlled braking systems used in today's modern heavy-duty diesel trucks and busses. (Formerly DIESEL 622)

HMDT 623 Noncredit

Heavy-Duty Truck Suspension and Steering

Lecture: 54 contact hours

Lab: 54 contact hours

This noncredit course covers theory and practical shop work in the construction, operation, and repair of heavy-duty truck suspension and steering components including principles of hydraulic and pneumatic steering and suspension systems. (Formerly DIESEL 623)

HMDT 624 Noncredit

Advanced Heavy-Duty Truck Engines

Lecture: 54 contact hours

Lab: 54 contact hours

Prerequisite: HMDT 621

This noncredit course is an advanced engine rebuilds class that covers theory and practical shop work in the repair, operation, and maintenance of various heavy-duty truck engines. Topics include general troubleshooting and diagnostic testing of engine components and systems found in most engines from a variety of engine manufacturers. This course may be used in preparation for the Automotive Service Excellence (ASE) National Test. (Formerly DIESEL 624)

HMDT 626 Noncredit

Computer Controlled Truck Engines

Lecture: 54 contact hours

Lab: 54 contact hours

Prerequisite: HMDT 664

This noncredit course covers theory and practical shop work in the repair, operation, and maintenance of computer controlled truck engines. Topics include general troubleshooting and diagnostics using assorted electronic and computerized test equipment on operable computer controlled diesel engines. (Formerly DIESEL 626)

HMDT 628 Noncredit

Heavy-Duty Truck Systems

Lecture: 54 contact hours

Lab: 54 contact hours

Prerequisite: HMDT 664

This noncredit course covers theory and practical shop work in maintenance, air conditioning, Antilock Brake System (ABS), computers, and operations of the heavy-duty truck and bus systems. Course is designed to provide students the needed skills and knowledge to perform advanced level labor tasks in the heavy-duty truck and bus service industry. (Formerly DIESEL 628)

HMDT 634 Noncredit

Heavy/Medium Duty Truck Alternative Fuels

Lecture: 54 contact hours

Lab: 54 contact hours

This noncredit course provides theory and hands-on experience in the operation, service, inspection, and maintenance of compressed natural gas (CNG) vehicle systems. This course prepares students for the ASE Alternate Fuels Test (F-1). (Formerly DIESEL 634)

HMDT 635 Noncredit

Heavy-Duty Vehicle Automatic Transmissions

Lecture: 27 contact hours

Lab: 27 contact hours

This noncredit course provides theory and hands-on experience with heavy - and medium - duty automatic transmission operation, construction, service and overhaul procedures. (Formerly DIESEL 635)

HMDT 638 Noncredit

Heavy-Duty Diesel Emissions

Lecture: 9 contact hours

Lab: 27 contact hours

This is an advanced noncredit course in heavy-duty diesel emissions with emphasis on exhaust after treatment and related equipment.

HMDT 664 Noncredit

Auto/Truck Electrical Systems

Lecture: 54 contact hours

Lab: 54 contact hours

This noncredit course covers basic electrical theory, use of meters, test equipment, wiring diagrams, diagnosis and repair/replacement of major electrical components of automobiles and trucks. Emphasis is placed on diagnosis of starting systems, charging systems, and electrical circuits such as lights and batteries. (Formerly DIESEL 664)