MEDIUM & HEAVY DIESEL TRUCK TECH (MTRK)

MTRK 101
Introduction to Medium and Heavy Truck Maintenance and Inspection
6 Units (AA/AS; CSU)
90 lecture hours, 60 lab hours
Grade Mode: Pass/No Pass, Standard Letter
Strongly recommended: ENGL C1000.
Intended for students seeking a career in the medium and heavy duty truck service and repair industry, this course covers essential maintenance theory, along with inspection procedures of the following systems: Engine cooling and lubrication systems, power-train systems, brakes, steering and suspension systems. This course prepares students for entry into the medium and heavy duty truck technology program.

MTRK 148
Medium and Heavy Truck Maintenance and Inspection
6 Units (AA/AS; CSU)
90 lecture hours, 60 lab hours
Grade Mode: Pass/No Pass, Standard Letter
Strongly recommended: ENGL C1000.
Intended for students seeking a career in the medium and heavy duty truck service and repair industry, this course covers essential maintenance theory, along with inspection procedures of the following systems: cooling systems, lubrication systems, power-train systems, brakes, steering and suspension systems. This course prepares students for the Preventative Maintenance Inspection (T8) ASE certification.

MTRK 152A
Medium and Heavy Truck Engines Service, Diagnosis, and Repair
6 Units (AA/AS; CSU)
81 lecture hours, 81 lab hours
Equivalent to: MTRK 151
Grade Mode: Pass/No Pass, Standard Letter
Prerequisite(s): MTRK 101 (or concurrent enrollment) or MTRK 148 (or concurrent enrollment) or AUTO 101 or both AUTO 101A and AUTO 101B or by department consent based upon individual's experience or ASE certifications or manufacturer certification.
Intended for those students majoring in Medium and Heavy Duty Truck or those currently employed with a medium and heavy truck service/repair establishment seeking to improve their skills. This course covers essential engine theory, inspection, diagnosis, service and repair. Engine inspection and measurements are covered, with emphasis on in-vehicle repairs. This course prepares students for ASE Truck Gas and Diesel Engine Repair (T-1, T-2) certification exam.

MTRK 156A
Medium/Heavy Truck Electrical/Electronic Systems I
5 Units (AA/AS; CSU)
72 lecture hours, 60 lab hours
Equivalent to: MTRK 156
Grade Mode: Standard Letter
Prerequisite(s): MTRK 148 (or concurrent enrollment) or MTRK 101 (or concurrent enrollment) or AUTO 101 (or concurrent enrollment) or both AUTO 101A and AUTO 101B or by department consent based upon individual's experience and ASE certifications or manufacturer certifications.
Strongly recommended: MATH 144.
Intended for those seeking a career in the medium and heavy duty truck service and repair industry, this is the first of the electrical series in the MTRK program. This class covers essential electrical and electronic systems theory, along with inspection, diagnosis, service and repair of specific electrical systems including the battery, starting systems, charging systems, lighting systems, gauges, and instrument-panel warning lights. Prepares students for ASE Electrical & Electronic Systems (T6) certification.

MTRK 156B
Medium/Heavy Truck Electrical/Electronic Systems II
4 Units (AA/AS; CSU)
54 lecture hours, 60 lab hours
Equivalent to: MTRK 166
Grade Mode: Pass/No Pass, Standard Letter
Prerequisite(s): MTRK 156A or AUTO 156 or by department consent based upon individual's work experience and ASE certifications or manufacturer certifications.
Strongly recommended: MATH 144.
Intended for those seeking a career in the medium and heavy duty truck service and repair industry, course is one component of the MTRK program. This class covers advanced electrical and electronic systems theory, along with inspection, diagnosis, service and repair of specific accessory systems including supplemental restraint, navigation, entertainment, power windows/locks/seats, customizable body electronics, hybrid vehicle controls and multiplex systems. Prepares students for ASE Electrical and Electronic Systems (T6) certification.

MTRK 159
Diesel Engine Management Systems
5 Units (AA/AS; CSU)
72 lecture hours, 54 lab hours
Equivalent to: MTRK 179
Grade Mode: Pass/No Pass, Standard Letter
Prerequisite(s): AUTO 151 and AUTO 166 or MTRK 152A and MTRK 156B or by department consent based upon individual's experience or ASE certifications or manufacturer certification.
Strongly recommended: MATH 144.
Intended for Automotive and Medium/Heavy Truck students, this course covers the theory of operation of 4-stroke diesel engines along with the theory of operation, testing and inspection, and service repair of air-inlet systems (including forced induction), exhaust systems, fuel-delivery systems (including mechanical and electronic engine controls), and emission-control systems. Course prepares students for ASE A9 and/or T2 certification.

MTRK 160
Medium and Heavy Truck Hydraulics
3.5 Units (AA/AS; CSU)
54 lecture hours, 27 lab hours
Grade Mode: Pass/No Pass, Standard Letter
Prerequisite(s): MTRK 156A or AUTO 156 or SPWG 170A or by department consent based upon individual's experience or ASE certifications or manufacturer certification.
Strongly recommended: MATH 144.
Intended for diesel technology majors, this course takes a practical approach to the understanding of fluid power and hydraulic systems. This course focuses on mobile vehicle hydraulic systems that require maintenance or troubleshooting. Coverage includes a study of terminology, industrial standards, symbols and basic circuitry design as related to hydraulic systems. Course will focus on heavy truck, earth-moving, and agricultural equipment.

MTRK 163
Medium and Heavy Truck Drivetrain Service, Diagnosis, and Repair
7 Units (AA/AS; CSU)
90 lecture hours, 108 lab hours
Equivalent to: MTRK 152, MTRK 172, MTRK 173
Grade Mode: Pass/No Pass, Standard Letter
Prerequisite(s): MTRK 156B or AUTO 166 or by department consent based upon individual's experience and ASE certifications or manufacturer certifications.
Strongly recommended: MATH 144.
Intended for those seeking a career in the medium and heavy truck service and repair industry. This course focuses on the service, diagnosis and repair of the manual and automatic automotive drivetrain systems. Appropriate lab activities in medium/heavy truck drivetrain inspection, service and repair are included. The course prepares students for the ASE Drivetrain(T3) certification exams.

MTRK 164
Medium and Heavy Truck Chassis Service, Diagnosis and Repair
6 Units (AA/AS; CSU)
72 lecture hours, 112 lab hours
Equivalent to: MTRK 154
Grade Mode: Pass/No Pass, Standard Letter
Prerequisite(s): MTRK 101 or MTRK 148, or by department consent based upon individual's experience or ASE certifications or manufacturer certification.
Intended for those seeking a career in the medium and heavy duty truck service and repair industry, this course covers essential chassis system theory, along with inspection, diagnosis, service & repair of the following systems: brake, steering, suspension, alignment, wheel/tire, and ABS. Course prepares students for ASE Suspension and Steering (T4) and ASE Brakes (T5) certification.

MTRK 167
Medium and Heavy Truck HVAC Service, Diagnosis & Repair
3 Units (AA/AS; CSU)
45 lecture hours, 51 lab hours
Grade Mode: Pass/No Pass, Standard Letter
Prerequisite(s): MTRK 156A or AUTO 156 or by department consent based upon individual's experience and ASE certifications or manufacturer certifications.
Strongly recommended: MATH 144.
Intended for those seeking a career in the medium and heavy duty truck service and repair industry, this course is one component of the MTRK program. This class covers essential heating, ventilation and air conditioning system theory, along with inspection, diagnosis, service and repair of specific HVAC subsystems including: refrigeration, air distribution and automatic temperature control. Course prepares students for ASE Heating and Air Conditioning (T7) certification.

MTRK 698A
Cooperative Education
1 Unit (AA/AS)
60 lab hours arranged
Grade Mode: Pass/No Pass, Standard Letter
Prerequisite(s): The student must be simultaneously enrolled in a class that relates to the Cooperative Education class.
A course designed to assist students in planning and accomplishing meaningful learning objectives related to diesel technology at their place of volunteer employment or training sites.

MTRK 698B
Cooperative Education
2 Units (AA/AS)
120 lab hours arranged
Grade Mode: Pass/No Pass, Standard Letter
Prerequisite(s): The student must be simultaneously enrolled in a class that relates to the Cooperative Education class.
A course designed to assist students in planning and accomplishing meaningful learning objectives related to diesel technology at their place of volunteer employment or training sites.

MTRK 698C
Cooperative Education
3 Units (AA/AS)
180 lab hours arranged
Grade Mode: Pass/No Pass, Standard Letter
Prerequisite(s): The student must be simultaneously enrolled in a class that relates to the Cooperative Education class.
A course designed to assist students in planning and accomplishing meaningful learning objectives related to diesel technology at their place of volunteer employment or training sites.

MTRK 698D
Cooperative Education
4 Units (AA/AS)
240 lab hours arranged
Grade Mode: Pass/No Pass, Standard Letter
Prerequisite(s): The student must be simultaneously enrolled in a class that relates to the Cooperative Education class.
A course designed to assist students in planning and accomplishing meaningful learning objectives related to diesel technology at their place of volunteer employment or training sites.

MTRK 699A
Cooperative Education
1 Unit (AA/AS)
75 lab hours arranged
Grade Mode: Pass/No Pass, Standard Letter
Prerequisite(s): The student must be simultaneously enrolled in a class that relates to the Cooperative Education class.
A course designed to assist students in planning and accomplishing meaningful learning objectives related to diesel technology at their place of paid employment or training sites.

MTRK 699B
Cooperative Education
2 Units (AA/AS)
150 lab hours arranged
Grade Mode: Pass/No Pass, Standard Letter
Prerequisite(s): The student must be simultaneously enrolled in a class that relates to the Cooperative Education class.
A course designed to assist students in planning and accomplishing meaningful learning objectives related to diesel technology at their place of paid employment or training sites.

MTRK 699C
Cooperative Education
3 Units (AA/AS)
225 lab hours arranged
Grade Mode: Pass/No Pass, Standard Letter
Prerequisite(s): The student must be simultaneously enrolled in a class that relates to the Cooperative Education class.
A course designed to assist students in planning and accomplishing meaningful learning objectives related to diesel technology at their place of paid employment or training sites.

MTRK 699D
Cooperative Education
4 Units (AA/AS)
300 lab hours arranged
Grade Mode: Pass/No Pass, Standard Letter
Prerequisite(s): The student must be simultaneously enrolled in a class that relates to the Cooperative Education class.
A course designed to assist students in planning and accomplishing meaningful learning objectives related to diesel technology at their place of paid employment or training sites.