

DIESEL TECHNOLOGY, TRANSPORTATION SERVICES (AAS)

Degree: Associate of Applied Science
Major: Transportation Services
Emphasis: Diesel Technology
Program Code: 1342

In the Associate of Applied Science degree with a major in Transportation Services and emphasis in Diesel Technology, students learn the fundamentals of electronics, starters, ignition, and charging systems; air conditioning, cooling and heating systems; safety; technical math; use of technical manuals; basic management skills; written and oral communication skills; and leadership. Advanced coursework includes an in-depth study of internal combustion engine disassembly, repair, reassembly, diagnosis and troubleshooting; suspension systems; and alignment and wheel balance. The diesel technology emphasis concentrates on on-road trucks and light duty diesel-powered vehicles. Students will be prepared for careers as diesel technicians, parts and service distributors, industrial sales representatives, service managers, and business owners in the transportation services industry.

For more information on what you can do with this major, visit CMU Tech's [Programs of Study](#) page.

All CMU/CMU Tech associate graduates are expected to demonstrate proficiency in specialized knowledge/applied learning, quantitative fluency, communication fluency, critical thinking, personal and social responsibility, and information literacy. In addition to these campus-wide student learning outcomes, graduates of this major will be able to:

1. Apply Mathematical concepts and practices that are required to properly perform diesel vehicle repair competencies to an (ASE) Automotive Service Excellence standard. (Quantitative Fluency)
2. Evaluate evidence discovered during the diagnosis and troubleshooting of diesel vehicles and apply those findings to strategies to properly repair the vehicle. (Critical Thinking, Information Literacy)
3. Describe the scope and application of principle features of the field of study, including core practices in the vehicle repair industry. (Specialized Knowledge, Communication Fluency)
4. Demonstrate mastery of the current terminology in the Transportation Service industry and generate substantially error-free products or processes that define the duties of a diesel repair technician. (Specialized Knowledge)
5. Perform vehicle repair practices that meet or exceed industry standards as defined by (ASE) Automotive Service Excellence. (Applied Learning)
6. Define the legal and ethical standards required of the vehicle repair industry. (Personal and Social Responsibility)

Requirements

Each section below contains details about the requirements for this program. Select a header to expand the information/requirements for that particular section of the program's requirements.

To print or save an overview of this program's information, including the program description, learning outcomes, requirements, suggested course

sequencing (if applicable), and advising and graduation information, scroll to the bottom of the left-hand navigation menu and select "Print Options." This will give you the options to either "Send Page to Printer" or "Download PDF of This Page." The "Download PDF of This Page" option prepares a much more concise presentation of all program information. The PDF is also printable and may be preferable due to its brevity.

Institutional Degree Requirements

The following institutional degree requirements apply to all CMU and CMU Tech Associate of Applied Science (AAS) degrees. Specific programs may have different requirements that must be met in addition to institutional requirements.

- 60 semester hours minimum.
- Students must complete a minimum of 15 of the final 30 semester hours of credit at CMU/CMU Tech.
- 2.00 cumulative GPA or higher in all CMU/CMU Tech coursework.
- A course may only be used to fulfill one requirement for each degree/certificate.
- No more than six semester hours of independent study courses can be used toward the degree.
- Non-traditional credit, such as advanced placement, credit by examination, credit for prior learning, cooperative education and internships, cannot exceed 20 semester credit hours for an AAS degree.
- Pre-collegiate courses (usually numbered below 100) cannot be used for graduation.
- Capstone exit assessment/projects (e.g., Major Field Achievement Test) requirements are identified under Program-Specific Degree Requirements.
- The Catalog Year determines which program sheet and degree requirements a student must fulfill in order to graduate. Visit with your advisor or academic department to determine which catalog year and program requirements you should follow.
- See "Requirements for Undergraduate Degrees and Certificates" in the catalog for a complete list of graduation requirements.

Specific to this program:

- 63 semester hours total for the AAS, Transportation Services - Diesel Technology.

Essential Learning Requirements

(15 semester hours)

See the current catalog for a list of courses that fulfill the requirements below. If a course is an Essential Learning option and a requirement for your major, you must use it to fulfill the major requirement and make a different selection for the Essential Learning requirement.

Code	Title	Semester Credit Hours
Communication		
ENGL 111	English Composition I-GTCO1	3
Select one of the following courses:		3
ENGL 112	English Composition II-GTCO2	
SPCH 101	Interpersonal Communication	
SPCH 102	Speechmaking	

Mathematics

MATH 107	Career Math (or higher)	3
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Other Essential Learning Core Courses

Select one Social and Behavioral Sciences, History, Natural Sciences, Fine Arts or Humanities course	3
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Select one Social and Behavioral Sciences, History, Natural Sciences, Fine Arts or Humanities course	3
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Total Semester Credit Hours	15
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Other Lower Division Requirements

Code	Title	Semester Credit Hours
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Wellness Requirement

KINE 100	Health and Wellness	1
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Select one Activity course	1
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Total Semester Credit Hours	2
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Program Specific Degree Requirements

(46 semester hours, must earn a "C" or better in each course.)

- Additional expenses - Students entering the program may be required to purchase or have hand tools and appropriate clothing and safety gear with a total cost of approximately \$2500.00. This does not include cost of required textbooks. These costs may vary with student need and brand or quality of tools or equipment purchased. All safety glasses must meet the minimum industry safety standard of Z-87 with side shields.

Code	Title	Semester Credit Hours
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Required Courses

TSTC 100	Introduction to Transportation Services	2
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TSTC 101	Vehicle Service and Inspection	3
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TSTC 130	Electrical I	2
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TSTC 160	Electrical II	2
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TSTC 171	Brakes I	2
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TSTG 120	Industrial Safety Practices	2
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TSTG 135	Starting and Charging Systems	2
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TSTG 175	Brakes II	2
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TSTG 195	Climate Control	4
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TSTG 220	Workplace Skills	3
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TSTD 177	Air Systems Repair and Service	2
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TSTD 265	Diesel Engine Controls	3
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TSTD 275	Heavy Duty Suspension	2
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TSTD 276	Diesel Aftertreatment and Emission Systems	3
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TSTD 280	Hydraulic Systems Service and Repair	3
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TSTD 215	Diesel Engine Reconditioning	5
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Restricted Electives

Select 4 semester hours of the following:	4
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TSTA 245	Manual Drive Trains ¹	
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TSTA 247	Automatic Drive Train Service	
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TSTA 265	Engine Control Services	
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TSTA 267	Body Controls	
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TSTA 286	Hybrid and Alternative Fueled Vehicles	
TSTG 240	Job Shop	
TSTG 270	Practical Applications	

Total Semester Credit Hours	46
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¹ Suggested for one year AAS.

**Suggested Course Plan
Suggested Two-Year Diesel AAS**

First Year		Semester Credit Hours
Fall Semester		
TSTC 100	Introduction to Transportation Services	2
TSTC 101	Vehicle Service and Inspection	3
TSTC 171	Brakes I (first mod)	2
TSTG 120	Industrial Safety Practices	2
TSTG 175	Brakes II (second mod)	2
TSTG 220	Workplace Skills	3
MATH 107	Career Math	3
Semester Credit Hours		17

Spring Semester		Semester Credit Hours
TSTC 130	Electrical I (first mod)	2
TSTC 160	Electrical II (second mod)	2
KINE 100	Health and Wellness	1
TSTD 280	Hydraulic Systems Service and Repair	3
KINA 1XX		1
Social and Behavioral Sciences, History, Natural Sciences, Fine Arts or Humanities course		3
ENGL 111	English Composition I-GTC01	3
Semester Credit Hours		15

Second Year		Semester Credit Hours
Fall Semester		
TSTD 275	Heavy Duty Suspension	2
Select one of the following:		3
ENGL 112	English Composition II-GTC02	
SPCH 101	Interpersonal Communication	
SPCH 102	Speechmaking	
TSTG 135	Starting and Charging Systems	2
TSTA/G - Restrictive Electives (4)		4
Social and Behavioral Sciences, History, Natural Sciences, Fine Arts or Humanities course		3
TSTD 177	Air Systems Repair and Service	2
Semester Credit Hours		16

Spring Semester		Semester Credit Hours
TSTG 195	Climate Control	4
TSTD 265	Diesel Engine Controls	3
TSTD 276	Diesel Aftertreatment and Emission Systems	3
TSTD 215	Diesel Engine Reconditioning	5
Semester Credit Hours		15
Total Semester Credit Hours		63

Suggested One-Year Diesel AAS

First Year		Semester Credit Hours
Summer Semester		
TSTC 100	Introduction to Transportation Services	2
TSTC 101	Vehicle Service and Inspection	3
ENGL 111	English Composition I-GTC01	3

MATH 107	Career Math	3
Select one Social and Behavioral Sciences, History, Natural Sciences, Fine Arts or Humanities course		3
KINE 100	Health and Wellness	1
Semester Credit Hours		15
Fall Semester		
TSTC 171	Brakes I (first mod)	2
TSTG 120	Industrial Safety Practices	2
TSTG 135	Starting and Charging Systems	2
TSTG 175	Brakes II (second mod)	2
TSTD 177	Air Systems Repair and Service	2
TSTD 275	Heavy Duty Suspension	2
TSTA/G - Restrictive Electives		3
TSTD 280	Hydraulic Systems Service and Repair	3
Semester Credit Hours		18
Spring Semester		
TSTG 195	Climate Control	4
TSTC 130	Electrical I (first mod)	2
TSTC 160	Electrical II (second mod)	2
TSTD 265	Diesel Engine Controls	3
TSTD 276	Diesel Aftertreatment and Emission Systems	3
TSTG 220	Workplace Skills	3
TSTA/G - Restrictive Electives		1
Semester Credit Hours		18
Second Year		
Summer Semester		
Choose one of the following:		3
ENGL 112	English Composition II-GTC02	
SPCH 101	Interpersonal Communication	
SPCH 102	Speechmaking (Choose one of the following:)	
Select one Social and Behavioral Sciences, History, Natural Sciences, Fine Arts or Humanities Course		3
TSTG 215	Engine Reconditioning (TSTD 215)	5
KINA 1XX		1
Semester Credit Hours		12
Total Semester Credit Hours		63

- Review their DegreeWorks audit and create a plan that outlines how unmet requirements will be met in the final semester.
- Meet with their advisor and modify their plan as needed. The advisor must approve the final plan.
- Submit the "Intent to Graduate" form to the Registrar's Office to officially declare the intended graduation date and commencement ceremony plans.
- Register for all needed courses and complete all requirements for each degree sought.

Submission deadlines and commencement details can be found on the [Graduation](#) web page.

If a student's petition for graduation is denied, it will be their responsibility to apply for graduation in a subsequent semester. A student's "Intent to Graduate" does not automatically move to a later graduation date.

Advising and Graduation

Advising Process and DegreeWorks

Documentation on the pages related to this program is intended for informational purposes to help determine what courses and associated requirements are needed to earn a degree. The suggested course sequencing outlines how students could finish degree requirements. Some courses are critical to complete in specific semesters, while others may be moved around. Meeting with an academic advisor is essential in planning courses and altering the suggested course sequencing. It is ultimately the student's responsibility to understand and fulfill the requirements for their intended degree(s).

DegreeWorks is an online degree audit tool available in MAVzone. It is the official record used by the Registrar's Office to evaluate progress towards a degree and determine eligibility for graduation. Students are responsible for reviewing their DegreeWorks audit on a regular basis and should discuss questions or concerns with their advisor or academic department head. Discrepancies in requirements should be reported to the Registrar's Office.

Graduation Process

Students must complete the following in the first two months of the semester prior to completing their degree requirements: