

# DIESEL TECHNOLOGY, TRANSPORTATION SERVICES (AAS)

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

## About This Major . . .

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:

- a. Apply Mathematical concepts and practices that are required to properly perform diesel vehicle repair competencies to an (ASE) Automotive Service Excellence standard. (Quantitative Fluency)
- b. Evaluate evidence discovered during the diagnosis and troubleshooting of diesel vehicles and apply those finding to strategies to properly repair the vehicle. (Critical Thinking)
- c. Describe the scope and application of principle features of the field of study, including core practices in the vehicle repair industry. (Specialized Knowledge)
- d. 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)
- e. Perform vehicle repair practices that meet or exceed industry standards as defined by (ASE) Automotive Service Excellence. (Applied Learning)
- f. Define the legal and ethical standards required of the vehicle repair industry. (Specialized Knowledge)

## 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:

- 61 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-GTC01  | 3                     |
| Select one of the following courses: |                              | 3                     |
| ENGL 112                             | English Composition II-GTC02 |                       |
| SPCH 101                             | Interpersonal Communication  |                       |

|  |                         |           |
|--|-------------------------|-----------|
| SPCH 102   | Speechmaking            |           |
| <b>Mathematics</b>   |                         |           |
| MATH 107   | Career Math (or higher) | 3         |
| <b>Other Essential Learning Core Courses</b>   |                         |           |
| Select one Social and Behavioral Sciences, History, Natural Sciences, Fine Arts or Humanities course |                         | 3         |
| Select one Social and Behavioral Sciences, History, Natural Sciences, Fine Arts or Humanities course |                         | 3         |
| <b>Total Semester Credit Hours</b>   |                         | <b>15</b> |

## Other Lower Division Requirements

| Code                               | Title               | Semester Credit Hours |
|------------------------------------|---------------------|-----------------------|
| <b>Wellness Requirement</b>        |                     |                       |
| KINE 100                           | Health and Wellness | 1                     |
| Select one Activity course         |                     | 1                     |
| <b>Total Semester Credit Hours</b> |                     | <b>2</b>              |

## Program Specific Degree Requirements

(44 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 |
|------------------------------------|--|-----------------------|
| <b>Required Courses</b>            |  |                       |
| TSTA 245<br>or TSTA 247            | Manual Drive Trains<br>Automatic Drive Train Service | 4                     |
| TSTA 267                           | Body Controls  | 3                     |
| TSTA 287                           | Engine Performance and Emissions                     | 3                     |
| TSTC 100                           | Introduction to Transportation Services              | 2                     |
| TSTC 101                           | Vehicle Service and Inspection                       | 3                     |
| TSTC 130                           | Electrical I   | 2                     |
| TSTC 160                           | Electrical II  | 2                     |
| TSTC 171                           | Brakes I   | 2                     |
| TSTD 177                           | Air Systems Repair and Service                       | 2                     |
| TSTD 265                           | Diesel Engine Controls                               | 3                     |
| TSTD 275                           | Heavy Duty Suspension                                | 2                     |
| TSTG 135                           | Starting and Charging Systems                        | 2                     |
| TSTG 150                           | Introduction to Fluid Power                          | 3                     |
| TSTG 175                           | Brakes II  | 2                     |
| TSTG 195                           | Climate Control                                      | 4                     |
| TSTG 215                           | Engine Reconditioning                                | 5                     |
| <b>Total Semester Credit Hours</b> |  | <b>44</b>             |

## Suggested Course Plan

| First Year   |   | Semester Credit Hours |
|--|---|-----------------------|
| <b>Summer Semester</b>   |   |                       |
| TSTC 100   | Introduction to Transportation Services                 | 2                     |
| TSTC 101   | Vehicle Service and Inspection                          | 3                     |
| ENGL 111   | English Composition I-GTCO1                             | 3                     |
| KINE 100   | Health and Wellness                                     | 1                     |
| MATH 107   | Career Math   | 3                     |
| <b>Semester Credit Hours</b>   |   | <b>12</b>             |
| <b>Fall Semester</b>   |   |                       |
| TSTC 171   | Brakes I (first mod)                                    | 2                     |
| TSTD 177   | Air Systems Repair and Service                          | 2                     |
| TSTG 135   | Starting and Charging Systems                           | 2                     |
| TSTG 175   | Brakes II (second mod)                                  | 2                     |
| TSTA 245<br>or TSTA 247  | Manual Drive Trains<br>or Automatic Drive Train Service | 4                     |
| TSTD 265   | Diesel Engine Controls                                  | 3                     |
| TSTD 275   | Heavy Duty Suspension                                   | 2                     |
| <b>Semester Credit Hours</b>   |   | <b>17</b>             |
| <b>Spring Semester</b>   |   |                       |
| TSTG 195   | Climate Control   | 4                     |
| TSTA 267   | Body Controls   | 3                     |
| TSTA 287   | Engine Performance and Emissions                        | 3                     |
| TSTC 130   | Electrical I (first mod)                                | 2                     |
| TSTC 160   | Electrical II (second mod)                              | 2                     |
| Select one Social and Behavioral Sciences, History, Natural Sciences, Fine Arts or Humanities course |   | 3                     |
| KINA Activity Course   |   | 1                     |
| <b>Semester Credit Hours</b>   |   | <b>18</b>             |
| <b>Second Year</b>   |   |                       |
| <b>Summer Semester</b>   |   |                       |
| TSTG 150   | Introduction to Fluid Power                             | 3                     |
| TSTG 215   | Engine Reconditioning                                   | 5                     |
| Choose one of the following:   |   | 3                     |
| ENGL 112   | English Composition II-GTCO2                            |                       |
| 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                     |
| <b>Semester Credit Hours</b>   |   | <b>14</b>             |
| <b>Total Semester Credit Hours</b>   |   | <b>61</b>             |

## 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:

- 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.