DIESEL MECHANICS, TRANSPORTATION SERVICES (TECHNICAL CERTIFICATE)

Award: Technical Certificate
Program of Study: Transportation Services
Specialization: Diesel Mechanics
Program Code: 1347

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 mechanics specialization concentrates on on-road trucks and light duty diesel-powered vehicles. Career options include automotive/diesel technician, parts and service distributor, industrial sales representative, and service manager.

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

All CMU/CMU Tech technical certificate graduates are expected to demonstrate proficiency in specialized knowledge/applied learning, communication fluency, and critical thinking. 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 vehicle repair competencies to an (ASE) Automotive Service Excellence standard. (Quantitative Fluency)
2. 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)
3. Perform diesel vehicle repair practices that meet or exceed industry standards as defined by (ASE) Automotive Service Excellence. (Applied Learning, Critical Thinking)
4. 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 Certificate Requirements

The following institutional requirements apply to all CMU or CMU Tech Technical Certificates. Specific programs may have different requirements that must be met in addition to institutional requirements.

- Consists of 5-59 semester hours.
- Consists of 100-200 level courses.
- At least fifty percent of the credit hours must be taken at CMU/CMU Tech.
- 2.00 cumulative GPA or higher in all courses taken to satisfy certificate requirements.
- A grade lower than “C” will not be counted toward meeting the requirements.
- A course may only be used to fulfill one requirement for each degree/certificate.
- Non-traditional credit, such as advanced placement, credit by examination, credit for prior learning, cooperative education and internships, cannot exceed twenty-five percent of the semester credit hours required for a technical certificate.
- 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 Certificate Requirements.
- The Catalog Year determines which program sheet and certificate 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.

Program Specific Certificate Requirements

(35 semester hours)

- 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 $2,500.00. 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
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 275	Heavy Duty Suspension	2
TSTG 135	Starting and Charging Systems	2
TSTG 175	Brakes II	2
TSTD 177	Air Systems Repair and Service	2
TSTD 265	Diesel Engine Controls	3
TSTD 276	Diesel Aftertreatment and Emission Systems	3

TSTD 280	Hydraulic Systems Service and Repair	3
TSTG 195	Climate Control	4
MATH 107	Career Math	3
Total Semester Credit Hours		**35**

Suggested Course Plan

First Year		
Fall Semester		**Semester Credit Hours**
TSTC 100	Introduction to Transportation Services	2
TSTC 101	Vehicle Service and Inspection	3
TSTC 171	Brakes I (first mod)	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
TSTD 280	Hydraulic Systems Service and Repair	3
	Semester Credit Hours	**18**
Spring Semester		
TSTC 130	Electrical I (first mod)	2
TSTC 160	Electrical II (second mod)	2
TSTG 195	Climate Control	4
TSTD 265	Diesel Engine Controls	3
TSTD 276	Diesel Aftertreatment and Emission Systems	3
MATH 107	Career Math	3
	Semester Credit Hours	**17**
	Total Semester Credit Hours	**35**

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 certificate. 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 discussing the suggested course sequencing. It is ultimately the student's responsibility to understand and fulfill the requirements for their intended certificate.

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 certificate 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 certificate requirements (for one-semester certificates, complete in the first week of class):

- 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.