



2017-2018 PROGRAM REQUIREMENTS
Degree: Technical Certificate
Program of Study: Transportation Services
Specialization: Diesel Mechanics

About This Major . . .

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, go to <http://www.coloradomesa.edu/wccc/programs.html>

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

1. Apply principles of grammar and vocabulary in the documentation required to perform the duties of a repair technician to properly repair vehicles. (Communication Fluency)
2. Apply Mathematical concepts and practices that are required to properly perform vehicle repair competencies to an (ASE) Automotive Service Excellence standard. (Quantitative Fluency)
3. Evaluate evidence discovered during the diagnosis and troubleshooting of vehicles and apply those findings to strategies to properly repair the vehicle. (Critical Thinking)
4. Describe the scope and application of principle features of the field of study, including core practices in the vehicle repair industry. (Specialized Knowledge)
5. 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 repair technician. (Specialized Knowledge)
6. Perform vehicle repair practices that meet or exceed industry standards as defined by (ASE) Automotive Service Excellence. (Applied Learning)
7. Demonstrate personal and professional ethical behavior as applied to the industry. (Applied Learning)
8. Define the legal and ethical standards required of the vehicle repair industry. (Specialized Knowledge)

Advising Process and DegreeWorks

This document 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 her/his 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 at <http://www.coloradomesa.edu/registrar/graduation.html>.

If a student's petition for graduation is denied, it will be her/his responsibility to consult the Registrar's Office regarding next steps.

INSTITUTIONAL CERTIFICATE REQUIREMENTS

The following institutional requirements apply to all CMU technical certificates. Specific programs may have different requirements that must be met in addition to institutional requirements.

- Consists of 5-59 semester hours.
- Primarily 100-200 level courses.
- At least fifty percent of the credit hours must be taken at CMU.
- 2.00 cumulative GPA or higher in all CMU coursework.
- 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

- 32 semester hours for the Technical Certificate in Transportation Services – Diesel Mechanics.
- 2.00 cumulative GPA or higher in all CMU coursework and a "C" or better must be achieved in coursework toward major content area.
- 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.

TECHNICAL CERTIFICATE: DIESEL MECHANICS REQUIREMENTS (32 semester hours)

- TSTC 100 - Intro to Transportation Services (2)
- TSTC 101 - Vehicle Service & Inspection (3)
- TSTC 130 - Electrical I (2)
- TSTC 160 - Electrical II (2)
- TSTC 170 - Chassis Fundamentals (2)
- TSTC 171 - Brakes I (2)
- TSTG 175 - Brakes II (2)
- TSTG 195 - Climate Control Service (4)
- MATH 107 - Career Mathematics (3)
- TSTG 120 - Industry Safety Practices (2)
- TSTG 150 - Fluid Power (3)

Choose 5 semester hours of Restricted Electives from the list below:

- TSTA 265 - Engine Control Services (2)
- TSTA 267 - Body and Chassis Controls (2)
- TSTD 177 - Air Systems Repair and Service (2)
- TSTD 215 - Diesel Engine Reconditioning (5)
- TSTD 265 - Diesel Engine Controls (3)
- TSTD 275 - Heavy Duty Suspension (2)
- TSTG 240 - Job Shop (4)
- TSTG 135 - Charging and Starting Systems (2)
- TSTG 270 - Practical Applications (4)
- TSTG 220 - Workplace Skills (3)
- WELD 151 - Introduction to Welding (3)

- _____
- _____
- _____

SUGGESTED COURSE SEQUENCING

Freshman Year, Fall Semester: 16 credits

- TSTC 100 - Introduction to Transportation Services (2)
- TSTC 170 - Chassis Fundamentals (2)
- TSTC 171 - Brakes I (2)
- TSTG 175 - Brakes II (2)
- TSTG 120 - Industry Safety Practices (2)
- TSTA/G/D - Restricted Electives (3)
- MATH 107 - Career Mathematics (3)

Freshman Year, Spring Semester: 16 credits

- TSTC 101 - Vehicle Service and Inspection (3)
 - TSTC 130 - Electrical Fundamentals (2)
 - TSTC 160 - Electronic Control Fundamentals (2)
 - TSTG 150 - Fluid Power (3)
 - TSTG 195 - Climate Control Service (4)
 - TSTA/G/D - Restricted Electives (2)
-