



DMT 1109

Division: Career and Technical Education

Department: Automotive Technology

Course: DMT 1109

Title: Introduction to Diesel Technology

Catalog Description:

This course is designed as a survey of diesel technology for beginning students and as a refresher course for more experienced students. Safety, engines, fuel systems, engine testing, and the overall care and maintenance of diesel powered equipment are discussed and demonstrated. Student projects will be an essential part of this course. All projects must be approved by instructor before being brought into the shop to ensure a match between student expertise and required procedures. This course is repeatable for credit.

General Education Requirements: N/A

Semesters Offered: TBA

Credit/Time Requirement: Credit: 2; Lecture: 1; Lab: 2

Clock/Hour Requirements: 45

Offered for Non-Credit: Yes

Credit/Clock Comments: Repeatable for credit.

Prerequisites: N/A

Corequisites: N/A

Justification:

This class is designed for beginning or experienced students to learn or refresh skills related to diesel and heavy duty mechanics. Completion of this course will prepare students to enter the Diesel and Heavy Duty Mechanics program with an overview of skills to be learned. This program will also serve as a lab for experienced diesel technicians to identify new technologies and other areas needing additional attention.

Student Learning Outcomes:

Upon successful completion, students should be able to:

- understand the machine concepts, components, and systems
- understand and use machine system tests and maintenance procedures
- understand and use the diesel shop.

Content:

Course objectives will be achieved by providing students with instructional and extensive hands-on experiences

in the following areas:

- proper safety procedures
- maintenance and care of tools
- equipment usage
- basic diesel engine performance
- engine maintenance and care
- fuel systems
- engine performance testing.

General Education Outcomes:

Applied Education Outcomes:

1) Students will acquire entry-level skills specific to and appropriate for employment in their chosen field of study.

Under the supervision of and with feedback from the instructor, students will be able to perform maintenance tasks on a machine and test the condition of a machine.

3) Students will demonstrate safe practices and awareness of potential hazards in their field of expertise.

With instructor supervision and feedback, students will use the hoist and perform maintenance tasks safely.

Key Performance Indicators:

Student progress will be evaluated using the following: pretest and post test (55%), completion of agreed upon projects with satisfactory results (35%) and student effort to remain on task (10%). Percentages are approximate.

Representative Text and/or Supplies:

- Subject related computer programs
- Bennett, Sean, *Medium/Heavy Duty Truck Engines, Fuel and Computerized Management Systems*, current edition, Thomson/Delmar Learning.
- Magazine, *Diesel Progress*.

Optimum Class Size: 15

Maximum Class Size: 15

Signatures:

I hereby submit this course syllabus:

Dale Jensen, ,

I hereby find this course consistent with the goals and resources of the Automotive Technology Department:

Brent Reese, BS, Associate Professor, Chair

I hereby find this course consistent with the goals and resources of the Career and Technical Education Division:

Michael P. Medley, MBA, Assistant Professor, Dean

I have discussed the need for library resources related to this class with the person submitting the syllabus:

Lynn Anderson, MLIS, Technical Services Librarian (Main Campus)

Michelle Olsen, MLS, Campus Librarian (Richfield Campus)