DMT 1109

Division: Career and Technical Education
Department: Transportation 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 o f diesel powered equipment are discussed and demonstrated. Student projects will be an essential part of this co urse. All projects must be approved by instructor before being brought into the shop to ensure a match between s tudent 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 p rogram with an overview of skills to be learned. This program will also serve as a lab for experienced diesel t echnicans 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 Learning Outcomes will be assessed by two or more of the following Key Performance Indicators:

- pretest vs. post test
- completion projects
- student effort.

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:

Robert Boyer, BS, Instructor

I hereby find this course consistent with the goals and resources of the Transportation 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)