



MASTER COURSE OUTLINE

COURSE TITLE: Diesel II

Dept.: Agricultural Mechanics

CIP Code: 01.0205

CREDITS: 6

Total Contact Hrs Per Qtr.: 99

Distribution Design:

Course Num: 261

Intent Code:

Lecture Hrs: 33

DATE: 4/29/20

(Formerly:)

Program Code: 123

Lab Hrs: 66

Other Hrs:

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COURSE DESCRIPTION (as it will appear in the catalog)

A continuation of Diesel I, this course is a deep dive into electronic diesel engines. Course topics include testing and diagnosing engine sensors and switches, engine performance, electronically controlled diesel injection systems, and industry standard safety protocols. Students will also gain hands-on experience following troubleshooting manuals to test components and repair engine faults.

PREREQUISITES: AGM 161 Diesel I (required).

TEXTBOOK GUIDELINES: Textbook determined by Agriculture Mechanics Faculty.

STUDENT LEARNING OUTCOMES: *Upon successful completion of the course, students should be able to demonstrate the following knowledge or skills.*

1. Identify various mechanical and electrical performance issues.
2. Describe the purpose and location of various engine sensors.
3. Fix engine performance issues by monitoring and testing sensor values.
4. Describe the function of common rail fuel systems.
5. Utilize troubleshooting and diagnostic manuals to solve problems.
6. Demonstrate safe practices while performing tasks associated with electronic diesel engines.

INSTITUTIONAL OUTCOMES

3. Students will be able to demonstrate teamwork, ethics, safety awareness, and/or workplace specific skills related to agricultural mechanics.

COURSE CONTENT OUTLINE

1. Electronic Diesel Engine Safety
2. Engine Sensors
 - Sensor types
 - Sensor function and location
3. Electronic Diesel Injection
 - Overview of systems
 - Common rail injection operation and safety
 - Common rail testing and repairs
4. Electronic Diesel Engine Testing and Diagnoses
 - Monitoring systems
 - System testing and diagnoses

DEPARTMENTAL GUIDELINES (optional)

DIVISION CHAIR APPROVAL

DATE