

**Course Code:** AGC 212

**Course Title:** AGCO Power Generation II

**Department:** Agricultural Technologies

**Effective Date:** Summer 2026

**PCS Code:** 1.2 - Occupational/Technical Instruction

**CIP Code:** 47.0605

**Repeatability:** 0

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## Credit Hours

**Catalog Notation:** 2-3-3

**Credit Hour Distribution:**

Lecture: 2

Lab: 3

Clinical: 0

**Total: 3**

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## General Course Information

### Catalog Description

Fuel systems for diesel engines; principles of operation for pump-style systems; timing of pumps; hands-on laboratory practice including diagnosis, troubleshooting, adjustment, and repair of fuel system components; use of diagnostic equipment.

### General Course Objectives

- Identify the major diesel fuel systems and describe their principles of operation.
- Learn the operation of fuel injection nozzles and how to test and repair them.
- Learn how to remove injection pumps and how to time them correctly for proper installation.
- Use computers to diagnose problems in diesel fuel systems.
- Learn the relationship between torque and horsepower.

### Minimum Placement Levels

English	Reading	Math
Placement into ENG 098	Placement into CCS 098	Placement into MAT 060

### Prerequisites

Credit in AGC 112

### Methods of Evaluation

Students will be given a minimum of 6 chapter quizzes, 2 unit exams, and 12 lab practicals.

### Instructional Materials and Additional Supplies

Students will need the required tool sets for the AGCO Technician program.

## Course Content

### General Learning Outcomes (GLOs)

- **Critical Thinking and Information Literacy:** Students will demonstrate the ability to evaluate perspectives, evidence, and implications, and to locate, assess, and use information effectively.
- **Reasoning and Inquiry:** Students will demonstrate the ability to solve problems using deductive reasoning and logic, quantitative reasoning, or the scientific method.
- **Technology:** Students will demonstrate the ability to evaluate, select, and appropriately use current and emerging tools.

### Course Segments and Student Learning Outcomes

Course Segment	Learning Outcomes	Lecture Hours	Lab Hours	Clinical Hours
Traction Clutches	1. Describe and demonstrate operating principles of all types of traction clutches. 2. Follow power flow through clutch and torque amplifier.	7	6	0
Power Flow: Gear Transmissions	1. Describe and demonstrate theory and power flow of gear transmissions. 2. Identify how a gear reduction is done, what gear ratios are, and what counter shafts are used for. 3. Identify how reverse is achieved in a transmission. 4. Disassemble and reassemble a gear transmission complete.	6	11	0
Power Flow: Power Shift Transmission	1. Describe and demonstrate theory and power flow of a power shift transmission, a planetary gear set work, clutch pack, and oil flow in a power shift transmission. 2. Disassemble and reassemble a power shift transmission.	6	7	0
Power Flow: Differentials	1. Describe and demonstrate theory of differentials, ring and pinion gear ratios, gear backlash, and gear tooth patterns. 2. Disassemble and reassemble a differential complete.	6	3	0
Power Flow: Mechanical Front Drive Front Axles	1. Describe and demonstrate theory and power flow through a mechanical front-wheel drive (MFD) front axle. 2. Identify differential ratio from outboard final drive ratio. 3. Disassemble and reassemble complete.	5	3	0

#### Total Contact Hours

Lecture Hours	Lab Hours	Clinical Hours
30	45	0