

Course Code: CNH 155

Course Title: Introduction to CNH Hydraulic Systems

Department: Agricultural Technologies

Effective Date: Summer 2026

PCS Code: 1.2 - Occupational/Technical Instruction

CIP Code: 47.0605

Repeatability: 0

Credit Hours

Catalog Notation: 2-2-3

Credit Hour Distribution:

Lecture: 2

Lab: 2

Clinical: 0

Total: 3

General Course Information

Catalog Description

Introduction to Case New Holland (CNH) hydraulics systems, open center, closed center, and pressure and flow compensating type systems.

General Course Objectives

To understand basic mobile CNH hydraulics, open center, closed center, pressure and flow compensating systems, covering pumps, cylinders, hydraulic motors, and valves.

Minimum Placement Levels

English	Reading	Math
None	Placement into CCS 098	None

Prerequisites

None

Methods of Evaluation

Students will be given 12 objective exams, 8 lab practicals, and 12 performance exams.

Instructional Materials and Additional Supplies

Hydraulic Systems for Mobile Equipment, 978-1-63776-126-7

Students will need the required tool sets for the CNH Service 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
Hydraulic Theory	1. Describe and demonstrate the fundamentals of basic hydraulic theory as applied to CNH machines.	4	4	0
Hydraulic Fluids	1. Identify and demonstrate the function of hydraulic fluid as applied to hydraulic systems.	2	2	0
Fixed Displacement Pumps	1. Describe and demonstrate the function of fixed displacement pumps.	4	4	0
Variable Displacement Pumps	1. Describe and demonstrate the function of variable displacement pumps.	4	4	0
Directional Control Valves	1. Describe and demonstrate the function of directional control valves.	4	4	0
Linear Actuators	1. Describe and demonstrate the function and repair of linear actuators.	4	4	0
Auxiliary Valves	1. Describe and demonstrate the function and repair of auxiliary valves.	4	4	0
Fluid Conductors	1. Describe and identify the types of fluid conductors used.	2	2	0
Rotary Actuators	1. Describe and demonstrate the function and repair of rotary actuators.	2	2	0

Total Contact Hours

Lecture Hours	Lab Hours	Clinical Hours
30	30	0