

6/21/2023 DATE

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 REQUIRED COURSE
 ELECTIVE COURSE

Agriculture DIVISION

☐ NEW COURSE
☐ REVISION

Lake Land College

Course Information Form

COURSE NUMBER:	JDA-091	TITLE: (30 Characters Max)	John Deere Hydraulics I					
SEM CR HRS:	3	Lecture:	2	Lab:	2	ECH:	4	
Course Level:	<input type="checkbox"/> Gen Ed / IAI <input type="checkbox"/> Baccalaureate /Non-IAI		<input checked="" type="checkbox"/> Career/Technical <input type="checkbox"/> Dev Ed/ Not in Degree Audit		Clinical Practicum:	0	Work-based Learning 0	WBL ECH: 0
COURSE PCS #	12 -01. 0201		IAI Code			Contact Hours (Minutes Per Week)		
Repeatable (Y/N):	N	Pass/Fail (Y/N):	N	Variable Credit (Y/N):	N	Min:	Max:	16 Wks 200 8 Wks 400
Prerequisites:	Enrolled in John Deere Tech Program							
Catalog Description: (40 Word Limit)	Covers principles and application of theory, construction, fluid flow and testing of components used on John Deere tractors, combines, and Turf equipment.							

List the Major Course Segments (Units)		Contact Lecture Hours	Contact Lab Hours	Clinical Practicum	Work-based Learning
1	Principles of Hydraulics	6	2		
2	Hydraulic Pumps	6	9		
3	Hydraulic Valves	6	5		
4	Hydraulic Actuators	1	4		
5	Hydraulic Seals	1	1		
6	Hydraulic Fluids	1	1		
7	Hydraulic Schematics	6			
8	Hydraulic System Testing	3	8		
TOTAL		30	30	0	0

EVALUATION			
QUIZZES <input checked="" type="checkbox"/>	EXAMS <input type="checkbox"/>	ORAL PRES <input type="checkbox"/>	PAPERS <input type="checkbox"/>
LAB WORK <input checked="" type="checkbox"/>	PROJECTS <input type="checkbox"/>	COMP FINAL <input checked="" type="checkbox"/>	OTHER <input checked="" type="checkbox"/> Workbook

COURSE MATERIALS	
TITLE:	John Deere FOS – Hydraulics
AUTHOR:	John Deere
PUBLISHER:	John Deere Publishing
VOLUME/EDITION/URL:	8th
COPYRIGHT DATE:	2012

MAJOR COURSE SEGMENT	HOURS	LEARNING OUTCOMES
		<i>The student will be able to:</i>
Principles of Hydraulics	8	Cite the eight principles of liquids and explain how these principles affect components of hydraulic systems.
Hydraulic Pumps	15	Identify the components and explain the operation of gear, vane, and piston pumps.
Hydraulic Valves	11	Explain the operation of pressure, flow, and directional hydraulic valves. Identify where valves are used on John Deere equipment.
Hydraulic Actuators	5	Identify different types of actuators and explain their operation.
Hydraulic Seals	2	Identify different types of hydraulic seals. Demonstrate use of special tools required for proper installation.
Hydraulic Fluids	2	Explain the functions that hydraulic fluids must accomplish in hydraulic systems.
Hydraulic Schematics	6	Identify all hydraulic symbols and explain their use within hydraulic schematics.

Hydraulic System Testing	11	Perform hydraulic system tests using proper test equipment on all John Deere Ag equipment.
Insert New Line Above this Line		
	60	

COURSE OUTCOMES*	At the successful completion of this course, students will be able to:
	Demonstrate and understanding of the basic principles of hydraulics.
	Demonstrate and understanding of hydraulic pumps and motors.
	Demonstrate and understanding of hydraulic symbols.
	Demonstrate and understanding of hydraulic cylinders, accumulators, reservoirs, and oil coolers.

* Course Outcomes will be used in the Assessment Software for Outcomes Assessment. Limit to 3 - 5.