COURSE TITLE & NUMBER: DSL 1530: Heavy Equipment Hydraulics 1
CREDITS: 2 (Lec 1/Lab 1)
PREREQUISITES: None

CATALOG DESCRIPTION:
Hydraulics 1 covers the fundamentals of hydraulics including the application of Pascal’s
Law and the operation, construction, troubleshooting, and repair of various system
components.

OUTLINE OF MAJOR CONTENT AREAS:
1. Theory of hydraulics
2. Pascal’s Law and applications
3. Hydraulic pumps
4. Hydraulic valves
5. Hydraulic cylinders
6. Hydraulic accumulators
7. Hydraulic oil and filters
8. Hydraulic lines and hoses
9. General maintenance
10. Diagnosis and testing of hydraulic systems
11. Hydraulic symbols

COURSE GOALS/OBJECTIVES/OUTCOMES:
1. Students will explain open and closed center systems.
2. Students will explain hydraulic principles.
3. Students will identify gear, piston and vane type pumps.
4. Students will identify various control valves.
5. Students will diagnose faulty hydraulic system.
6. Students will complete assigned tasks on hydraulic trainer.

HCC COMPETENCIES MET:
Working Productively & Cooperatively
Communicating Clearly & Effectively
Thinking Creatively & Critically
Social Responsibility

STUDENT CONTRIBUTIONS:
The student is expected to
1. attend all lectures and working sessions.
2. participate in class activities.
3. participate in class discussions.
4. hand in outside assignments when due.
5. ask questions if he/she does not understand any part of the instructions or procedures.

METHODS FOR EVALUATING STUDENT LEARNING:
Student learning is evaluated through exams, lab work, assignments, class participation, projects, lab reports and logs.

ADDITIONAL INFORMATION:
John Deere Fundamental of Service (FOS) Hydraulics Manual, Lecture handouts and notes, Mid-States Hydraulics manuals and references with trainer.

Curriculum Committee Approval Date: March 5, 2019
AASC APPROVAL DATE: March 20, 2019
REVIEW DATE: March 2024