

Course: DIES226 Hydraulics

Department: Diesel

Course Description:

This course provides the student with an in-depth study of open and closed hydraulic systems. Topics covered include a study of hydraulic fluids, graphic symbols and schematic interpretation. An applied systems approach is used to discuss pumps, control valves, actuators, and other components.

Lecture: 2 hours. Laboratory: 2 hours.

COURSE OUTCOMES	SAMPLE OUTCOMES ACTIVITIES	SAMPLE ASSESSMENT TOOLS
Upon successful completion of this course students should:	To achieve these outcomes students may engage in the following activities:	Student learning may be assessed by:
1. Identify various components used in hydraulic systems (WC, IL and CCT)	<ul style="list-style-type: none">• Textbook readings• On-line demonstration• Video presentations• Classroom discussions	<ul style="list-style-type: none">• Tests, quizzes• Mechanical drawings• Homework assignments
2. Follow safety guidelines specific to hydraulic systems; (CCT)	<ul style="list-style-type: none">• Textbook and on-line readings• Video presentations• Classroom discussions• Laboratory demonstrations	<ul style="list-style-type: none">• Tests & Quizzes• In-class conversations• Laboratory evaluations
3. Perform basic diagnostic tests and interpret results; (WC, CCT, and IL)	<ul style="list-style-type: none">• Textbook and on-line readings• Video presentations• Classroom demonstrations	<ul style="list-style-type: none">• Tests, quizzes• Classroom discussion• Laboratory work

<p>4. Evaluate hydraulic components by inspection and testing (WC and IL)</p>	<ul style="list-style-type: none"> • Textbook readings • Video presentations • Classroom collaborative learning • Classroom discussions 	<ul style="list-style-type: none"> • Test quizzes • Homework assignments
<p>5. Understand hydraulics, theory, circuits, and application; (WC, IL)</p>	<ul style="list-style-type: none"> • Textbook readings • Video presentations • Classroom collaborative learning • Classroom discussions 	<ul style="list-style-type: none"> • Test quizzes • Homework assignments
<p>6. Correctly disassemble, inspect, repair and reassemble components; (CCT, IL)</p>	<ul style="list-style-type: none"> • Textbook and on-line readings • Classroom presentations • Laboratory demonstrations • Class and Laboratory discussions 	<ul style="list-style-type: none"> • Tests, quizzes • Written assignments • Homework assignments • Laboratory assignments

This course includes the following core competencies: Critical and Creative Thinking (CCT), Information Literacy (IL), and Written Communication (WC).