Industrial Hydraulic Systems

Spring 2020

Instructor: Dave Mack Course: MT3.836

Office: IA 119A (not really) Credits: 3

Voice: ~~541.917.4635~~ (avoid) Grading: A – F

E-mail: mackd@linnbenton.edu

Scheduled Meetings: Thursdays 4:00 – 7:50

Resources (supplied): *Hydraulics Basic Level Textbook*

*Basic Hydraulics Student Reference*

Lecture slides

Video presentations

Lab Manual: *~~Hydraulics Basic Level Lab book~~*

Course Description: This course is designed to give students a working knowledge of basic hydraulic systems and components. Students will learn to develop and analyze hydraulic schematics, ~~build~~ & troubleshoot common hydraulic circuits, and become familiar with maintenance and repair issues associated with industrial hydraulics systems.

Grading: Quizzes 40%

Develop/analyze hydraulic circuits 25%

Homework 25%

Final Exam 10% Total 100%

Your term grade is calculated as a weighted average based on the percentages shown above. Grades will not be curved but will be assigned according to the standard grading scale:

90 – 100 = A, 80 – 89 = B, 70 – 79 = C, 60 – 69 = D, below 60 = F.

Due dates for homework assignments will be clearly specified. Late assignments are accepted solely at the discretion of the instructor and will earn less credit than those received on time.

It is your responsibility to withdraw from the course if you do not wish to receive a grade. If you do not withdraw from the course by the deadline set by the college, I am obligated to assign a grade based on the quality and quantity of the work you completed.

Students are encouraged to work together when completing. However, the work you submit for grading must be your own. No credit will be given to any student who turns in work that is indistinguishable from another student’s work. You are encouraged to read and understand LBCC’s Academic Rules and Regulations.

Students, who may need accommodations due to documented disabilities, should speak with the instructor during the first week of class. If you have not accessed services and think you may need them, please contact The Center for Accessibility Resources (CFAR), 541-917-4789.

The LBCC community values diversity. Each person makes a unique contribution that helps to enrich the diversity at the college. LBCC prohibits all unlawful discrimination toward any individual, group, or segment of society afforded discriminatory protection under applicable federal, state, or local laws. Everyone has the right to think, learn, and work together in an environment of respect, acceptance, and goodwill.

TOPICS for spring 2020 – ***Tentative*** – Adjustments made as needed

Principles of Hydraulics

Hydraulic Symbols

Hydraulic Schematics

Basic Circuits & Circuit Design

Directional Control Valves

Pressure Control Valves

Pressure Relief Valves

Flow Control Valves

Hydraulic Cylinders

Hydraulic Pumps & Motors

Hydraulic Fluids & Filters

Hydraulic accessories Hydraulic System

Maintenance

General Troubleshooting Procedures