DEPT. Fluid Power Technology                        COURSE NO. FLPW2180

NUMBER OF CREDITS:  (1 C/ 1 lect/pres, 0 lab, 0 other)

COURSE TITLE  Hydraulic Certification Review

CATALOG DESCRIPTION:
Students review all parts of hydraulics to help them prepare for the HYDRAULIC SPECIALIST certification test. (Prerequisites: Enrolled in Fluid power or a past graduate of Fluid Power or working in the field of Fluid Power). (1 C/ 1 lect/pres, 0 lab, 0 other)

AUDIENCE

FULFILLS MN TRANSFER CURRICULUM AREA(S) (*Leave blank if not applicable*)

PREREQUISITES OR NECESSARY ENTRY SKILLS/KNOWLEDGE:

LENGTH OF COURSE  1 credit

THIS COURSE IS USUALLY OFFERED:
Every other year ☐ fall ☐ spring x ☐ summer ☐ undetermined ☐

Four goals are emphasized in course at Minnesota West Community & Technical College:

1) ACADEMIC CONTENT:
2) THINKING SKILLS:
3) COMMUNICATIONS SKILLS:
4) HUMAN DIVERSITY:

TOPICS TO BE COVERED:
1. review basic hydraulic fundamentals
2. review pressure control circuits
3. review flow control circuits
4. review pump controls
5. review various hydraulic circuits
6. review hydraulic cylinder sizing
7. review pump sizing
8. review hydraulic motor sizing
9. review basic electrical circuits
10. review electronic circuits
11. review basic electrical calculations
12. review servo/proportional systems
13. review mechanical linkages
14. review mechanical calculations
15. calculate incline forces
16. review metric conversions
17. review all related formulas

LIST OF EXPECTED COURSE OUTCOMES:
Learn the basics of hydraulic components and principles.

LEARNING/TEACHING TECHNIQUES used in the course are:
- x Collaborative Learning
- □ Student Presentations
- □ Creative Projects
- x Lecture
- x Demonstrations
- □ Lab

ASSIGNMENTS AND ASSESSMENTS FOR THIS CLASS INCLUDE:
- x Reading
- □ Oral Presentations
- □ Textbook Problems
- □ Group Problems
- □ Other (describe below)

- □ Tests
- □ Individual Projects
- □ Collaborative Projects
- □ Portfolio
- □ Papers
- □ Term Paper
- □ Other (describe below)

EXPECTED STUDENT LEARNING OUTCOMES:

The information in this course outline is subject to revision

Veteran Services: Minnesota West is dedicated to assisting veterans and eligible family members in achieving their educational goals efficiently. Active duty and reserve/guard military members should advise their instructor of all regularly scheduled military appointments and duties that conflict with scheduled course requirements. Instructors will make every effort to work with the student to identify adjusted timelines. If you are a veteran, please contact the Minnesota West Veterans Service Office.

To receive reasonable accommodations for a documented disability, please contact the campus Student Services Advisor or campus Disability Coordinator as arrangements must be made in advance. In addition, students are encouraged to notify their instructor.

This document is available in alternative formats to individuals with disabilities by contacting the Student Services Advisor or by calling 800-658-2330 or Minnesota Relay Service at 800-627-3529 or by using your preferred relay service.

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