COMMON COURSE OUTLINE: Course discipline/number/title: CAD 2423: Hydraulic/Pneumatic Drafting

A. CATALOG DESCRIPTION
1. Credits: 2
2. Hours/Week: 1 hour lecture, 2 hours lab
3. Prerequisites (Course discipline/number): CAD 1230, CAD 1234, CAD 1235, and CAD 2339.
4. Co-requisites (Course discipline/number): None
5. MnTC Goals (if any): NA

In this course students will cover the theory of fluid and pneumatic power circuits. They will learn standard symbols and system components. Students will have an opportunity to design and make schematic drawings of basic power circuits. Piping will also be studied.

B. DATE LAST REVISED (Month, year): June, 1997

C. OUTLINE OF MAJOR CONTENT AREAS:
1. Introduction to Hydraulic/Pneumatic
2. Principles of Power Hydraulic/Pneumatic
3. Hydraulic Fluids
4. Piping and Sealing
5. Reservoirs and conditioners
6. Actuators
7. Directional controls
8. Serro valves
9. Pressure and volume controls
10. Pumps
11. Circuits
12. Accessories

D. LEARNING OUTCOMES (GENERAL): The student will be able to:
1. Identify hydraulic/pneumatic components.
2. Create pictorial diagram drawing.
3. Identify symbols.
4. Create diagram layout.
5. Write operation sequence.
6. Develop and analyze design concepts.
7. Plan and give project presentation.

E. LEARNING OUTCOMES (MNTC): NA

F. METHODS FOR EVALUATION OF STUDENT LEARNING:
1. Tests
2. Quizzes
3. Drawings
4. Presentations

G. SPECIAL INFORMATION (if any):
Tuition differential