A. Course Description
   - Credits: 3.00
   - Lecture Hours/Week: 1.00
   - Lab Hours/Week: 2.00
   - OJT Hours/Week: 0
   - Prerequisites: None
   - Corequisites: None
   - MnTC Goals: None
   This course is designed for students with knowledge of hydraulic flow and pressure. Students learn National Standard Institute symbols used in fluid power diagrams. A technical study provides students with operational knowledge of computer-controlled multiple hydraulic systems. Students troubleshoot and diagnose hydraulic system malfunctions. Prerequisites: HCEM1101, HCEM1130, and HCEM2135, or instructor's approval

B. Course Effective Dates: 3/21/98 – Present

C. Outline of Major Content Areas
   - As noted on course syllabus

D. Learning Outcomes
   1. analyze test results
   2. calculate hydraulic force
   3. calculate hydraulic pressure
   4. demonstrate shop safety
   5. display clean work habits
   6. explain fundamental hydraulic circuit
   7. identify A.N.S.I. hydraulic symbols
   8. test and adjust main relief valve setting
   9. test and repair hydraulic cylinder
   10. test fundamental hydraulic circuit
   11. test hydraulic flow rate

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies
F. Learner Outcomes Assessment
   As noted on course syllabus

G. Special Information
   None noted