Alexandria Technical and Community College

MFGT 1560: Mechatronics I

A. COURSE DESCRIPTION
   Credits: 3
   Lecture Hours/Week: 2
   Lab Hours/Week: 1
   OJT Hours/Week: *.*
   Prerequisites: None
   Corequisites: None
   MnTC Goals: None
   This course introduces learners to various concepts of basic electricity, electrical principles, and various types of electricity. The learner explores areas such as Ohm's Law, the use of electrical meters and instruments, AC and DC electricity, circuit construction, and troubleshooting techniques. These principles are used to construct series, parallel, and series-parallel circuits that are utilized in low voltage power supplies, resistors, solenoids, and industrial components.

B. COURSE EFFECTIVE DATES: 08/25/2003 - Present

C. OUTLINE OF MAJOR CONTENT AREAS
   1. Apply OHMs law to design circuits.
   3. Determine performance specifications of components.
   5. Calculate power of a circuit.
   6. Describe operation of electromechanical components.
   7. Design electrical circuits using software.
   8. Troubleshoot electrical circuits.

D. LEARNING OUTCOMES (General)
   1. The learner will gain an understanding of various basic AC and DC principles and components.
   2. The learner will demonstrate an understanding of various advanced AC principles and components.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies
   None

F. LEARNER OUTCOMES ASSESSMENT
   As noted on course syllabus

G. SPECIAL INFORMATION
   None noted