A. COURSE DESCRIPTION

Credits: 2
Lecture Hours/Week: 2
Lab Hours/Week: 0
OJT Hours/Week: *
Prerequisites: None
Corequisites: None
MnTC Goals: None

This course provides the students with an understanding of the function, operation, and application of pneumatic circuits and robotic end effectors. It provides students with an understanding of how pneumatic components and accessories are placed together to support automated machines. The course allows students to create schematics and understand the design and installation of Mechatronic circuits.

B. COURSE EFFECTIVE DATES: 08/08/2022 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Create robot sequence
2. Design pneumatics circuits
3. Apply troubleshooting techniques
4. Apply robot safety rules
5. Interpret robot programs

D. LEARNING OUTCOMES (General)

1. The student will gain an understanding of, and be able to identify, to describe the application of the components in a pneumatic circuit or system.
2. The student will learn to apply the knowledge of pneumatic components to create pneumatic circuits that will support Robotic Machines.
3. The student will also learn to design, size, draw, and program basic robotic circuits.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted