

**Fond du Lac Tribal and Community College  
COURSE OUTLINE FORM**

**01/21/16**

Please return this form to the college vice president of academic affairs and the chairperson of the Academic Affairs and Standards Council (AASC)

**1. Prepared by:** \_\_\_\_\_

**2. Date submitted:** \_\_\_\_\_

3. Date approved: 4/6/17 Date revised \_\_\_\_\_

**4. Department/discipline:** Electric Utility Technology

**5. Department(s) endorsement(s):** \_\_\_\_\_  
**(Signatures of the person(s) providing the endorsement are required.)**

6. Course Title: Fluid Power Systems

Abbreviated course title (25 characters or less): \_\_\_\_\_

7. Course Designator: EUT 8. Course Level: 1110

9. Number of Credits: Lecture 1 Lab 2

10. Control Number (on site) 28 Lecture/14 Lab Control Number (online) \_\_\_\_\_

11. Catalog/Course description:

This course covers the general fundamentals of machine control utilizing pneumatics and electro pneumatics components. Concentrates on pneumatic systems, control devices and actuators related to machine control and interfacing of air and electrical circuits.

12. Course prerequisite(s) or co-requisite(s): Accuplacer scores/ Other courses

Prerequisite(s):

Co-requisite:

13. **Course Materials** (Recommended course materials and resources. List all that apply, e.g. textbooks, workbooks, study guides, lab manuals, videos, guest lecturers).

Pneumatic trainers, Programmable Logic Controllers and computers, texts to be determined annually and listed in syllabus.

14. **Course Content** (Provide an outline of major topics covered in course)

Topics include:

Proper safety procedures,  
Basic laws of fluid mechanics,  
Standard symbols, pumps,  
Control valves,  
Control assemblies,  
Actuators,  
Maintenance procedures,  
Switching and control devices.

**15. Learning Goals, Outcomes, and Assessment**

At FDLTCC we have 4 Competencies Across the Curriculum (CAC) areas. They are as follows:

- A. Information Literacy (the ability to use print and/or non-print tools effectively for the discovery, acquisition, and evaluation of information)
- B. Ability to Communicate (the ability to listen, read, comprehend, and/or deliver information in a variety of formats.)
- C. Problem Solving (the ability to conceptualize, apply, analyze, synthesize, and/or evaluate information to formulate and solve problems.)
- D. Culture (knowledge of Anishinaabe traditions and culture, knowledge of one’s own traditions and culture, knowledge of others’ traditions and cultures, culture of work, culture of academic disciplines and/or respect for global diversity.)

Course Learning Outcomes will fulfill the identified competencies.

Course Learning Outcomes.

Upon completion of this course the student will be able to:

- 1.) Work safely with pneumatic fluid power systems. A, D
- 2.) Identify the basic schematic symbols related to pneumatic devices. A,
- 3.) Utilize logic systems to recognize a problem, develop and implement solution. A, B, C
- 4.) Identify and use pumps and compressors A,
- 5.) Identify and use directional control valves and pneumatic actuators. A,
- 6.) Verbally presentation of lab results. B, C

**16. Minnesota Transfer Curriculum (MnTC):** If this course fulfills an MnTC goal area, state the goal area and list the goals and outcomes below:

See [www.mntransfer.org](http://www.mntransfer.org)

Goal Area(s): \_\_\_\_\_

Does this course require additional material for specific program requirements?  
If yes, please provide.

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