Danville Community College

Workforce Services
Danville Community College

COURSE SYLLABUS

DIVISION: Workforce Services **Revised: January 2015**

CURRICULUM IN WHICH COURSE IS TAUGHT: Integrated Systems Technology

COURSE NUMBER AND TITLE: MEC 268, Fluid Power - Hydraulic Systems

CREDIT HOURS: 2-3 **HOURS/WEEK LECTURE: 1-2**

HOURS/WEEK LAB: 2 **LECTURE/LAB COMBINATION: 3-4**

The OEE classes are self-paced study classes in which a student has 16 weeks to complete once enrolled. Students will complete all lab and bookwork before doing the end of chapter tests. All end of chapter tests and final exams are closed book. Upon completion of the lab, all tools, components, and supplies shall be returned to their proper location.

I. CATALOG DESCRIPTION: Studies hydraulic components and their integration into complex systems including system analysis and troubleshooting. Introduces design considerations necessary for repair and modification. Covers closed loop control and proportional valves with electronic control.

II. RELATIONSHIP OF THE COURSE TO CURRICULUM OBJECTIVES IN WHICH IT IS TAUGHT:
This course offers the basic fundamentals of programmable logic controllers and is necessary for today's industrial maintenance technicians.

III. REQUIRED BACKGROUND: This course is intended for those individuals that have taken MEC-162 or equivalent.

IV. COURSE CONTENT

Hydraulic component troubleshooting
Troubleshooting hydraulic actuators
Troubleshooting hydraulic directional control valves
Troubleshooting hydraulic flow control valves
Troubleshooting hydraulic check valves
Troubleshooting hydraulic pressure control valves
Troubleshooting hydraulic unloader and counterbalance valves
Troubleshooting hydraulic systems

V. Learner Outcomes	VI. Evaluation
Understand the operation of a fluid power system with emphasis on the design and engineering of the system components	Class participation, homework, quizzes, and final exam
Understand the basic components and functions of troubleshooting hydraulic systems	Class participation, homework, quizzes, and final exam
Understand the standard symbols, pumps, control vales, control assemblies and actuators	Class participation, homework, quizzes, and final exam

VII. The course supports the following general education goals/objectives:

DCC Educational Objectives

- Communication
- Critical Thinking
- Information Literacy
- Quantitative Reasoning