

**COURSE SYLLABUS**

**DIVISION:** Workforce Services

**Revised: January 2015**

**CURRICULUM IN WHICH COURSE IS TAUGHT:** Technical Studies, Integrated Systems Technology

**COURSE NUMBER AND TITLE:** MEC 168 Pump Systems

**CREDIT HOURS:** 2

**HOURS WEEK LECTURER:** 1

**HOURS WEEK LAB:** 2

**LECTURE/LAB COMBINATION:** 3

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.

**I. CATALOG DESCRIPTION**

Introduces the principles and applications of various commercial and industrial pumps and pumping systems with setups to calculate and measure pressure, flow and velocity of fluids within pumping systems.

**II. RELATIONSHIP OF THE COURSE TO CURRICULA OBJECTIVES IN WHICH IT IS TAUGHT.**

To create a working knowledge of mechanical piping systems as related to industrial maintenance.

**III. REQUIRED BACKGROUND**

This course is intended for anyone with an interest in and desire to learn the subject matter. No prior knowledge of the subject matter is required.

**IV. COURSE CONTENT:**

- Pump identification
- Pump operation
- Valves
- Discuss the types of valves.
- Identify the various types of valves.

**V. LEARNER OUTCOMES**

**VI. EVALUATION**

Identify the various pumps used in industry. Information on code requirements for industrial pumps.	Module Quiz Hands-on Lab
Discuss gear, vane, and piston pump principles of operation.	Assignments

Discuss the applications of various pumps used in industry.	Module Quiz
Pump installation, maintenance, and troubleshooting.	Module Quiz
Install, maintain, and troubleshoot an industrial pump.	Hands-on Lab
Operate the pump after installation.	Final Exam Final Hands-on Lab

**The course supports the following objectives:**

DCC Educational Objectives

1. Communication
2. Critical Thinking
3. Information Literacy
4. Understanding Culture and Society