

Course Objectives/Course Outline
Spokane Community College

Course Title: Hydraulic Manifold Design

Prefix and Course Number: FLPT 269

Course Learning Outcomes:

By the end of this course, a student should be able to:

- lay out and design a simple manifold
- use available templates or make special valve port and hold down bolt templates for accurate drawing layout
- identify all valve mounting styles, port types, and special components used in manifolds
- size manifold ports to match system flow requirements

Course Outline

- I. Manifold Design
 - A. Advantages of Manifolds
 - B. Basic Hydraulic Knowledge
 - C. Hydraulic Components
 - D. Mechanical Drawings
 - E. Shop Equipment
 - F. Metals
- II. Types of Manifolds
 - A. Subplate-Single Valve
 - B. Standard Valve Manifold
 - C. Custom Designed Manifold
- III. Manifold Specifications
 - A. Hydraulic Schematic
 - B. Location
 - C. Ports
 - D. Valves
- IV. Manifold Designs and Sketches
 - A. Sketching Top Face
 - B. Component Parts
 - C. Common Internal Oil Lines
 - D. Side Views
 - E. Layout of Top Face
 - F. Layout of Side View
 - G. Layout of End View
 - H. Dimension and Callouts

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