

Course Objectives/Course Outline
Spokane Community College

Course Title: Applied Hydraulics/Pneumatics

Prefix and Course Number: FLPT 136

Course Learning Outcomes:

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

- Introduction to the basics of fluid power and its application to various programs.

Course Outline

- I. Introduction to Pneumatics
 - A. History
 - B. Uses of Compressed Air
 - C. Pneumatics in Industry
 - D. Practical Applications/Tours
- II. Compressed Air
 - A. Sources of Compressed Air
 - B. Energy Conversions (Mechanical IHP to SCFM air)
 - C. Schematic Symbols
 - D. Steam vs. Compressed Air
- III. Levers
 - A. Simple Levers
 - B. Computer Programs-Lever Types and Interactive Calculation of Forces
 - C. Drawing Schematic Symbols
 - D. Practical Applications/Industry Tours
- IV. Pneumatics Applications
 - A. Relationship Between Actuator Speed/Force and Mechanical Advantage
 - B. Air To Stroke Calculations (compression ratios, piston area, and stroke)
 - C. Practical Applications (Lego Products)
 - D. Practical Applications (Industry Tours)