



MECH 5836 - Fluid Power and Control

Fall 2026 Syllabus, Section 01, CRN 41562,

Credit hours: 3

Instructor

Eric Haake

Email: emhaake@ysu.edu

Public Instructor Information

Instructor Title: Mr. Eric Haake

Instructor Professional Qualifications: M.S, Mechanical Engineering, Youngstown State University, 2020

Instructor Office Location: Moser 2525

Instructor Office Phone: 330-941-1742

Course Description

5836. Fluid Power and Control. Theory of prime movers, turbomachinery, and control systems. Modeling of hydraulic and pneumatic systems and components. Hydraulic fluids, pumps, cylinders, valves, motors, compressors, and actuators. Hydraulic and pneumatic circuit applications and control. Prereq.: MECH 3725. 3 s.h.

Course Readings

Group	Title	Author	ISBN
Optional	Fluid Power with Applications	Esposito	9780135136904

The course readings are subject to change in the event of extenuating circumstances, research developments, current events, and/or to ensure better learning.

Schedule of Topics and Assignments

Week of	Proposed Topic	Due/To Prepare for Class
8/24	Review Pneumatics Intro	
8/31	Pneumatic Components	
9/7	Pneumatic Circuits	HW1
9/14	Pneumatic Circuits	
9/21	Pneumatic Circuits	HW2
9/28	Hydraulic Components	Test 1
10/5	Hydraulic Circuits	HW3
10/12	Hydraulic Circuits	
10/19	Hydraulic Circuits	HW4 Test 2
10/26	Controls	
11/2	Controls	HW 5
11/9	Electro Pneumatic	
11/16	Electro Hydraulic	HW6
11/23	Project	
11/30	Project	
12/7	Final	

The course schedule, policies, procedures, and assignments in this course are subject to change in the event of extenuating circumstances, by mutual agreement, and/or to ensure better learning.