

COURSE OUTLINE

APPRENTICESHIP PROGRAM / ADVANCED TECHNOLOGY DIVISION

COURSE TITLE	INDUSTRIAL INSTRUMENTATION TECHNICIAN FLUID CONTROLS AND MOTOR OPERATED VALVES	COURSE HOURS PER WEEK: 4
COURSE NUMBER:	APR 255I	Lecture: 4
COURSE CREDITS:	4	Lec/Lab:
COURSE PREREQUISITES:	Indentured apprentice	Lab:

COURSE DESCRIPTION:

Designed for Oregon state-recognized apprentices employed in a trade or industry-related occupation. This course explores control elements, transducers, and transmitters commonly used in process control. Students will learn a knowledge base consisting of the basic theory, vocabulary, and safety practices commonly used in process-control systems.

GENERAL COURSE OUTCOMES:

Upon completion of this course, the successful student will be able to:	These outcomes will be verified by one or more of the following assessments:
Discuss the principals of hydraulic devices and controls.	Weekly assignments, Mid-term and Final Examinations.
Safely troubleshoot a hydraulic system.	Weekly assignments, Mid-term and Final Examinations.
Understand the principles of atmospheric and compressed air gases.	Weekly assignments, Mid-term and Final Examinations.
Address the functions and control of pneumatic system components and provide guidelines for troubleshooting.	Weekly assignments, Mid-term and Final Examinations.
Troubleshoot motor-driven valves.	Weekly assignments, Mid-term and Final Examinations.
Explain the operation of servo-mechanical actuators	Weekly assignments, Mid-term and Final Examinations.

COURSE OUTLINE BY MAJOR TOPIC:

Hydraulic Controls

Pneumatic Controls

Motor-Operated Valves