

COURSE OUTLINE

APPRENTICESHIP PROGRAM / ADVANCED TECHNOLOGY DIVISION

COURSE TITLE	INDUSTRIAL INSTRUMENTATION TECHNICIAN DISTRIBUTION, TRANSFORMERS AND CONDUCTOR SELECTION	COURSE HOURS PER WEEK: 4
COURSE NUMBER:	APR 245I	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:
Explain distribution equipment including grounding, switchboard and ground fault maintenance and transformers.	Weekly assignments, Mid-term and Final Examinations.
Identify electrical drawing symbols.	Weekly assignments, Mid-term and Final Examinations.
Discuss transformer types, construction, connections, protection, and grounding.	Weekly assignments, Mid-term and Final Examinations.
Understand how capacitors and rectifiers are used in transformer application.	Weekly assignments, Mid-term and Final Examinations.
Describe the types of conductors used in wiring systems.	Weekly assignments, Mid-term and Final Examinations.
Explain the relationship between insulation, current-carrying capacity, and temperature ratings.	Weekly assignments, Mid-term and Final Examinations.

COURSE OUTLINE BY MAJOR TOPIC:

Distribution Equipment
Transformer Applications
Conductor Selection and Calculations