

## COURSE OUTLINE

### APPRENTICESHIP PROGRAM / ADVANCED TECHNOLOGY DIVISION

COURSE TITLE	INDUSTRIAL INSTRUMENTATION TECHNICIAN GROUNDING INSTALLATION AND BENDING OF CONDUIT	COURSE HOURS PER WEEK: 4
COURSE NUMBER:	APR 254I	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:

<b>Upon completion of this course, the successful student will be able to:</b>	<b>These outcomes will be verified by one or more of the following assessments:</b>
Discuss the methods used to eliminate or reduce electrical shock hazards.	Weekly assignments, Mid-term and Final Examinations.
Demonstrate knowledge of piping and tubing layout procedures.	Weekly assignments, Mid-term and Final Examinations.
Explain the steps in creating a hand-sketched isometric drawing.	Weekly assignments, Mid-term and Final Examinations.
Understand methods and procedures used to measure, cut, bend, and support piping and tubing.	Weekly assignments, Mid-term and Final Examinations.
Perform bends in conduit up to six inches.	Weekly assignments, Mid-term and Final Examinations.
Demonstrate knowledge of mechanical, hydraulic, and electrical benders.	Weekly assignments, Mid-term and Final Examinations.

#### COURSE OUTLINE BY MAJOR TOPIC:

Temporary Grounding

Layout and Installation of Tubing and Piping Systems

Machine Bending of Conduit