COURSE OUTLINE

APPRENTICESHIP PROGRAM / ADVANCED TECHNOLOGY DIVISION

COURSE TITLE	INDUSTRIAL INSTRUMENTATION TECHNICIAN PROCESS CONTROLS	COURSE HOURS PER WEEK: 4
COURSE NUMBER:	APR 264I	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 the installation, utilization, and maintenance requirements for standby and emergency electrical systems.	Weekly assignments, Mid-term and Final Examinations.
Discuss sensing and transmitting devices used in an instrumentation loop.	Weekly assignments, Mid-term and Final Examinations.
Effectively use technical manuals, and specification sheets.	Weekly assignments, Mid-term and Final Examinations.
Understand how the three- and five-point methods are used in instrumentation calibration.	Weekly assignments, Mid-term and Final Examinations.
Draw basic control loop diagrams that include a measuring element, a transducer, and a transmitter.	Weekly assignments, Mid-term and Final Examinations.
Identify components that require calibration in pneumatic, analog, and smart loops, and describe methods used to calibrate these components.	Weekly assignments, Mid-term and Final Examinations.

.

COURSE OUTLINE BY MAJOR TOPIC:
Standby and Emergency Systems
Basic Process, Control Elements, Transducers, and Transmitters
Instrumentation Calibration and Configuration