COURSE SYLLABUS

COURSE: ATR 211 **ROBOT PROGRAMMING**

HOURS: Lecture: **2** Lab/Shop: **3** Work Exp/Clinical: **0** Credits: **3**

COURSE DESCRIPTION:

This course provides the operational characteristics of robots and programming in their respective languages. Topics include robot programming, teach pendants, PLC integration, operator interfaces, the interaction of external sensors, machine vision, network systems, and other related devices. Upon completion, students should be able to program and demonstrate the operation of various robots.

PREREQUISITE(S): ELN 260

COREQUISITE(S): None

TEXTBOOK(S) & OTHER SPECIAL REQUIREMENTS:

To be determined.

STUDENT LEARNING OUTCOMES:

Upon successful completion of this course, the student will be able to:

1. Demonstrate an understanding of industrial robot fundamentals.
2. Demonstrate how to program an industrial robot.
3. Integrate robots and PLCs.
4. Describe how a variable frequency drive (VFD) controls the speed of a motor and how VFDs are interfaced with PLCs.
5. Demonstrate an understanding of motion control fundamentals and how a servo drive can be integrated into a PLC system.

***Please refer to the online version of the Richmond Community College Program & Course Catalog and the Student Handbook for current academic and general policies.**