



COURSE SYLLABUS

DIVISION: Workforce Services

Revised: January 2015

CURRICULA IN WHICH COURSE IS TAUGHT: Integrated Systems Technology

COURSE NUMBER AND TITLE: ETR 286 – Principles and Applications of Robotics

CREDITS HOURS: 3

HOURS PER WEEK LECTURE: 3

HOURS PER WEEK LAB: 0

LECTURE/LAB COMBINATION: 3 (0)

I. CATALOG DESCRIPTION: Provides an overview of terminology, principles, practices, and applications of robotics. Studies development, programming, hydraulic, pneumatic, electronic controls, sensors, and system troubleshooting.

II. RELATIONSHIP OF THE COURSE TO CURRICULA OBJECTIVES IN WHICH IT IS TAUGHT: Prepares the student to develop strategies to control various industrial (robotic) equipment and processes.

III. REQUIRED BACKGROUND: Instructor’s permission.

IV. COURSE CONTENT:

- Safety
• Development
• Programming
• Hydraulic
• Pneumatic
• Electronic Controls
• Sensors
• System Troubleshooting
• The student will write, troubleshoot and debug a Robot program.
• Each student will write and commission a Fanuc robot project

V. LEARNER OUTCOMES

VI. EVALUATION

Table with 2 columns: Learner Outcomes and Evaluation. Row 1: The student will be able to troubleshoot programs and controls. Row 2: The student will be able write programs. Row 3: The student will be able to demonstrate skills to locate and utilize problems, analyze alternate solutions, and make decisions.

The course supports the following objectives:

1. Communication
2. Critical Thinking
3. Computational and Computer Skills