Advanced Automation ELEC-485

Course Objectives:

Through reading, team work, group meetings. lab projects and problem solving, students will be able to:

1. Identify and analyze potential automation applications and select the proper pieces of equipment to accomplish the desired operation.
2. Build from scratch an automated closed-loop system and its associated components for selected applications.
3. Program a work cell for a particular operation or set of operations using teach modes, high-level languages and/or machine code.
4. Maintain and up-grade an existing work cell and troubleshoot it effectively.
5. Construct and program robots and their peripherals to automate robotic applications from prescribed labs and from experience.
6. Understand the operation and application of automated work cells as applied to industry and be able to install, maintain and repair automation equipment.

TEACHING PROCEDURES: Lectures, discussion, papers, Lab work, oral presentations. Team activities & collaborative learning.