

Course Description:

MFG-060 - Introduction to Automation Technology Units: 5

This course introduces students to the basics of automation used at home, in building management and in industry. The X10 standard for home automation is discussed. The course covers components of an automation system and component operation such as sensors and servo systems. Automation applied to the semiconductor industry and building management is emphasized. The theory-lecture is re-enforced with hands on lab that provide application of the principles of operation and sensors and motion systems as well as simple control systems. Up-to-date technologies and possible future technologies are discussed. Students also participate in research and oral presentations involving automation.

Lecture Hours: 4 Lab Hours: 6 Repeatable: No Grading: L

Prerequisite: ELECT 062

Corequisite: Or concurrent enrollment in ELECT 062

Recommended: CT 077

CAN: None

Advisory Level: Read: 2 Write: 2 Math: None

Transfer Status: CSU Degree Applicable: AA/AS

CSU GE: None District GE: None IGETC: None

Learning Outcomes:

- 1) Compare and contrast the role of automation in industry, home, and building management.
- 2) Successfully complete experiments in lab demonstrating simple automation projects.
- 3) Describe the operation of motion systems and sensors.
- 4) Describe the operation of systems used for automation in industry, building management and home.
- 5) Identify and describe the required parts of an automation system.
- 6) Describe the use of control system in automation.
- 7) Identify and troubleshoot simple automation problems.