ELECTRICAL, ELECTRONIC AND AUTOMATION

Course Title: Fuzzy Logic Using PIC Microcontroller for Control System Application

Course Code: EEA 153

Course Background / Summary:

Fuzzy Logic has been widely applied in industry and home appliances for several applications from complex systems such as an aircraft to a washing machine which is a less complex system. The flexibility of fuzzy logic makes it popular to be applied in control engineering. This course will introduce participants to how to make use of Fuzzy Logic control such as speed, position, level, and temperature. PIC microcontroller will be the processing engine for this Fuzzy control algorithm.

Course Objectives:

- Understand and make use of fuzzy logic to control applications such as speed, position, level, and temperature.
- Utilize MATLAB/Simulink as the processor to process fuzzy control algorithm.
- Use PIC Microcontroller as Fuzzy processing engine and interface to pass and receive control variables from and to input sensors and actuators.

Target Audience:

- Electricians, Research assistants, Research officer, Researcher, Academicians
- Technicians & Engineers
- Instructors

Course Duration: 3 Days

Course Contents
1.0 Basic Knowledge PIC Microcontroller
2.0 Theory of Fuzzy Logic Control System
3.0 Theory of Fuzzy Logic Control System
4.0 Control Speed, Position, Level System with Aid of System Identification and SISO tool