Course Title: DIY Digital PID Using Microcontroller & Communication Via MATLAB Simulink or LabVIEW

Course Code: EEA 150

Course Background / Summary:

Digital PID is an important instrument in the control system. Without its precise control of any system would be impossible. This course will introduce participants to how to build/construct digital PID from scratch, by using PIC Microcontroller as a controller. Participants will also learn to write C code PID control algorithm for control purposes.

Course Objectives:

- Construct a Digital PID circuit
- Write C code for the PID control algorithm and test to control the speed system
- Communicate Digital PID with MATLAB/Simulink

Target Audience:

- Electricians, Research assistants, Research officers, Researchers, Academicians
- Technicians and Engineers
- Instructors

Course Duration: 3 Days

Course Contents

1.0 Introduction to PID Control System Theory

2.0 Introduction to PIC Microcontroller

3.0 Construct and Communicate PIC Microcontroller to the Sensor and Actuator

4.0 C Code Programming for the PID Control Algorithm