Course Title: DIY Data Acquisition (DAQ) using PIC Microcontroller and Communicate to MATLAB or LabVIEW   **Course Code: EEA 148**

Course Background / Summary:

DAQ is an important device/equipment in research and development. It is used to acquire data from any studied system for further analysis. This course will introduce participants on how to build Data Acquisition Card (DAQ) using PIC Microcontroller from scratch. Upon completion a C code for communicating the DAQ with MATLAB/ Simulink will be covered and implemented.

Course Objectives:

- Construct DAQ circuit
- Write C code for data transfer and software communication.
- Communicate DAQ with MATLAB/Simulink or Labview.
- Testing in reading data from sensors and actuators and read it from MATLAB/Simulink or Labview.

Target Audience:

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

Course Duration: 3 Days

Course Contents

1.0 Introduction to PIC Microcontroller and DAQ

2.0 MATLAB/ Simulink for Communication

3.0 Labview for Data Transfer and Communication

4.0 C Code Programming for Data Communication

ELECTRICAL, ELECTRONIC AND AUTOMATION