

**Course Title: Practical on Data Acquisition
Using NI-DAQ and LabVIEW****Course Code: EEA 210****Course Background / Summary:**

You will learn the principles of data acquisition using sensors, NI data acquisition hardware, and LabVIEW in the course Data Acquisition Using NI-DAQ and LabVIEW. The cornerstone of sensor connectivity, including grounding and wiring configurations, as well as the fundamentals of hardware selection, including resolution and sample rate, are covered in the first section of this course. The NI-DAQ driver is used to measure, create, and synchronize data acquisition operations in the second part of this course. Along with scripting finite and continuous acquisitions, you'll learn about timing, triggering, and logging best practices for hardware and software. You will gain practical experience with NI-DAQ and LabVIEW to configure and programme NI data acquisition hardware in this course.

Course Objectives:

- Develop integrated, high-performance data acquisition systems that produce accurate measurements.
- Acquire data from sensors, such as thermocouples, using NI data acquisition hardware.
- Apply advanced understanding of LabVIEW and the NI-DAQ to create applications.
- Eliminate measurement errors due to aliasing and incorrect signal grounding.
- Initiate measurements using hardware and software triggering.
- Acquire and generate single-point and buffered analogue waveforms.
- Acquire and generate digital signals.

Target Audience:

- Educators, Engineers, Graduates, Industrial Workers

Course Duration: 2 Days**Course Contents****1.0 LabVIEW****2.0 Temperature measurement using LabView****3.0 DC motor control system**