LabVIEW CENTRE OF EXCELLENCE
C.V. Raman Global University, Bhubaneswar

LabVIEW: DAQ and ARM Microcontroller

Sl. No	Topics	No. of Hours
1	Introduction to NI Hardware – DAQ Signal Accessory, NI USB – 6009	1
2	Measurement of Room Temperature using DAQ Signal Accessory /NI USB - 6009	1
3	Introduction to SCB–68, Measurement of Room Temperature using SCB – 68	2
4	Control of DC Motor using NI USB - 6009	2
5	Introduction to LabVIEW for ARM Microcontroller – ARM7	1
6	Creating a LabVIEW Project to display "LabVIEW Academy" on the LCD Screen of MCB2300 Kit	1
7	Creating a LabVIEW Project to make LED ON and OFF of MCB2300	1
8	Creating a LabVIEW Project that lights a LED on the MCB2300 when the input exceeds the threshold.	1
9	Creating a LabVIEW Project to scroll a text on the LCD of MCB2300	2
10	Introduction to LabVIEW for ARM Microcontroller – CortexM3	1
11	Creating a LabVIEW Project to demonstrate how to blink the status LED on EK-LM3S8962 Evaluation Board.	1
12	Creating a LabVIEW Project for Etch – A – Sketch using the EK-LM3S8962.	2
13	Creating a LabVIEW Project to demonstrate how to use Elemental I/O on the Luminary Micro EK-LM3S8962 to perform Digital I/O.	2
14	***Lab Test***	2
	Total No. of Hours	**20**

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COURSE: LabVIEW: DAQ and ARM Microcontroller

DURATION: 20 Hours

ELIGIBLE BRANCHES:

Electrical Engineering / Electronics and Communication Engineering / Mechanical Engineering / Computer Science and Engineering

TARGET GROUP

Graduate and Undergraduate Engineering Students with knowledge of LabVIEW Core – 1

OBJECTIVE

- **Design to enabled educators to easily teach microcontroller programming concepts**
- **Learn graphical programming, in conjunction with traditional embedded system concepts like interrupts handling, on-chip I/O and software optimization**
- **To design, implement, document, and test LabVIEW applications**
- **To reduce development time and improve application stability.**

TRAINING METHODOLOGY

Explanation, Demonstration and hands-on practice.

COURSE CONTENTS

- **Introduction to NI USB – 6009, DAQ Signal Accessory, SCB – 68**
- **Introduction to LabVIEW Embedded Module for ARM Microcontrollers.**
- **Getting Started with Cortex – M3**
- **Programming Using Cortex – M3**
- **Getting Started with ARM 7**
- **Programming Using ARM7**