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

LabVIEW Core 1

Sl. No	Topics	Theory Hours	Practical Hours	Total Hours
1	**Introduction to LabVIEW** What is LabVIEW, Parts of a VI, Front Panel, Block Diagram, Dataflow, Building a Simple VI.	1	1	2
2	**Troubleshooting and Debugging VIs** Correcting Broken Vis, Debugging Techniques, Error Handling.	1	1	2
3	*Quiz – 1 / Assignment – 1*			2
4	**Loops and Structures** For Loops, While Loops, Structure Tunnels, Shift Registers, Feedback Nodes, Timing a VI, Case Structures, Sequence Structures, Event Structure, Formula Nodes, MathScript.	7	7	14
5	**Modular Programming** Understanding Modularity, Building the Icon and Connector Pane, Using SubVIs.	1	1	2
6	*Quiz – 2 / Assignment – 2*			2
7	**Arrays and Clusters** Arrays, Common Array Functions, Auto – Indexing, Clusters, Cluster Operations, Error Cluster.	2	2	4
8	**Plotting Data** Types of Waveforms, Waveform Graphs, Waveform Charts, XY Graphs, Intensity Graphs and Charts, Customizing Graphs and Charts.	2	2	4
9	**Strings** String Controls and Indicators, String Functions, Formatting Strings.	1	1	2
10	**File I/O** Basics of File input/output, Choosing a File I/O Format.	1	1	2
11	*Quiz – 3 / Assignment – 3*			2
	Lab Test			2

Theory	16 Hours
Practical	16 Hours
Quiz/Assignment	06 Hours
Lab Test	02 Hours
Total	**40** Hours

COURSE: LabVIEW Core – 1

DURATION: 40 Hours

ELIGIBLE BRANCHES:

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

TARGET GROUP

Graduate and Undergraduate Engineering Students

OBJECTIVE

- Understand front panels, block diagrams, icons, and connector panes
- Create user interfaces with charts, graphs and buttons
- Use the programming structures and data types that exist in LabVIEW
- Use various editing and debugging techniques
- Create and save VIs for use as subVIs
- Display and log data

TRAINING METHODOLOGY

Explanation, Demonstration and hands-on practice.

COURSE CONTENTS

- Navigating LabVIEW
- Troubleshooting and Debugging Vis
- Implementing a VI
- Developing Modular Applications
- Arrays and Clusters
- Plotting Data
- Strings, File I/O