

Learning Outcomes:

The educational objectives of the course are to educate students to attain the following:

- To aware the students about Lab VIEW environment.
- Students will understand the basics of graphical programming language.
- The course contents will enable the students to learn basic LabVIEW programming for biomedical engineering application.
- LabVIEW for simulation, analysis and design of the system.

SYLLABUS

Unit No.	Topics
	Introduction to the overview and importance of the course.
1	INTRODUCTION TO VIRTUAL INSTRUMENT: Front Panel, Block Diagram, Icon & Connector. VI & SUB VI
2	FUNDAMENTALS OF LABVIEW ENVIRONMENT: Getting Started Window, Controls Palette, Functions Palette, Navigating the Controls and Functions Palettes, Addons, Favorites, Tools Palette, Menus and Toolbars, Keyboard shortcuts, Customizing the control & function pallets.
3	BUILDING THE FRONT PANEL: Configuring the front panel, Front panel Controls & indicators, Labeling, Creating Custom Controls, Indicators, Dragging & Dropping in Lab VIEW.
4	BUILDING THE BLOCK DIAGRAM: Functional overview, Express VI, Using wire to Link Block diagram objects, Polymorphic functions, Numerical data, Block Diagram Data Flow.
5	RUNNING & DEBUGGING VI: Running VI, Correcting Broken VI, Debugging Techniques, Handling Errors.
6	LOOP & STRUCTURES: FOR loop & WHILE loop Structures, Case & Sequence Structure, In Place element Structure, conditional disable & diagram disable structures.
7	Local Variables, Graphs & Charts, Graphics & Sound Vis, File IO, Various Tools of Lab view

Term Work and Practical shall be based on the above syllabus.

Reference Books:

1. LabVIEW Graphical Programming By: Gary W. Johnson, Recharad Jennings
2. Virtual Instrumentation Using LabVIEW By: Sanjay Gupta, Joseph John