Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

Workshop on
"LabVIEW for Beginners"

13th & 14th September 2024
&
20th & 21st September 2024

Organized by
TIFAC- CORE in AUTOMOTIVE INFOTRONICS
(Sponsored by Department of Science and Technology, Govt. of India)

Co - ordinators
Dr.Elangovan.D, Deputy Director,TIFAC CORE
Mr. R. Silambarasan, Development Engineer, TIFAC CORE

TIFAC-CORE IN AUTOMOTIVE INFOTRONICS @VIT

- The centre is conducting need based training programs on cutting edge technologies for students, faculties and industry participants.
- Offering consultancy services for the industries and carrying out research works through the research grants received from funding agencies.
- The Centre has so far conducted **360** Training programs
- The centre has completed nearly **22** consultancy projects with many leading Automotive, Biomedical, Telecom and Consumer Electronics Industries.
- The centre has filed **55** patents (includes US patents).

Objectives

- The purpose of the proposed program is to gain knowledge and hands-on experience in Model Based Design using LabVIEW focus on Real Time Applications. The training program addresses how the hardware and software modules interface with Sensors to acquire real world signals, to analyze them and present them in an intelligent manner.
- Today, Model Based Design has reached mainstream acceptance and is used in thousands of applications in industries from automotive, to consumer electronics.
- LabVIEW is a powerfulgraphical development environment for signal acquisition, measurement analysis, data logging and data presentation, giving the flexibility in programming. It is an Enabling industry leading software tool

General Requirements

Students pursuing B. E / B. Tech / M. E / M.Tech degree / MS (SE) in any engineering discipline may apply for this "LabVIEW for Beginners" Hands-on Training Program

Registration details

- Students and Research Scholars- Rs.500/- (including GST)
- Faculty- Rs.750/- (including GST)
- Course material includes program contents in soft copy.
- Training Certificate will be issued.

Registration link :

🔗 https://events.vit.ac.in/

The number of participants is limited to 50 based on first come first serve.

Venue

Room No.: 703, Technology Tower
7th Floor, VIT

Date / Time:
Slot 1 – **13th & 14th September 2024**
(registration closed)
Time: 9.30 AM to 5.30 PM
Registration is open for Slot 2
20th &21st September 2024

Target Participants

- Students from any Discipline(if interested)
- Research Scholars / Faculty

Topics Covered

Introduction to Model Based design (NI LabVIEW)

- Introduction to LabVIEW
- Programming fundamentals
- Exploring LabVIEW
- Frontpanel & Block diagram

Modular Programming

- Creating and using Sub VIs
- Debugging VIs

Loops and Structures

- Structural Programming
- Forloop, While loop
- CaseStructures
- Sequence Programming -
- FlatSequence,
- Stacked Sequence
- Formula and Math script Node

Arrays, Graph and Clusters

- Array Types and its Functions
- Cluster and its Functions
- Multiplot Graphs and Charts

Strings, Charts and File I/O

- String and its Functions
- Fileinput and output function
- Datalogging application
- Errorhandling techniques

Creating and distributing application

- Building stand alone executables/ applications

Data acquisition

- Hardware Introduction
- NI cDAQ, C series Modules
- MAX Configuration
- Data Acquisition
- Increasing Measurement quality
- Analog Input /output
- Scanning Multiple Analog Input
- Digital Input and Output
- Signal Express

Digital Image Processing Implementation
Digital Signal Processing Implementation
Introduction to Embeded Systems

Embedded Module for Arduino Microcontroller, Myrio Interface, Sensors Signal Conditioning Relays and Actuators
Types of Motors
DC Motor/ Stepper, Servo Motors

Importance of LabVIEW

LabVIEW is utilized in various industries including electronics, manufacturing, biomedical, academia, aerospace, automotive, energy, telecommunications, and more. It is used for tasks such as testing electronic components, industrial automation, medical device testing, academic research, aerospace testing, automotive quality control, energy monitoring, and telecommunications testing. The software's versatility makes it a valuable tool across a wide range of sectors for tasks like data acquisition, automation, and control system development.

TIFAC CORE Focuses On

- Sustainable Mobility
- Renewable powered EV charging infrastructure.
- Advanced Driver Assistance System.
- AI based Driverless Cars for Indian Roads.
- Sub-system development related to Electric Mobility.

Discussion session

Hands-on Exposure to Labview

Internship Opportunities

Project Guidance

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