



TERNA ENGINEERING COLLEGE
NERUL, NAVI MUMBAI

AN ISO 9001 : 2000 | NBA ACCREDITATION

DEPARTMENT OF MECHATRONICS ENGINEERING

NI LabVIEW Lab

(Room 425)

LabVIEW is a software platform used in scientific research, engineering, and education to create custom applications that interact with real-world data or signals. One common use of LabVIEW is in data acquisition systems that involve measuring physical signals and processing and analyzing the data in real-time. It provides a set of tools and libraries designed for data acquisition, making it suitable for mechatronic education. LabVIEW's visual programming interface allows users to create programs using graphical representations of code, making it easier to understand the connections between different components of a mechatronic system. Overall, LabVIEW is a powerful tool for developing data acquisition systems in mechatronics education, providing a user-friendly interface, a robust set of libraries, and a flexible programming environment. This Lab has 10 licenses of NI LabVIEW.

NI MyRIO is an embedded hardware platform designed for students and educators to learn and experiment with real-world engineering concepts. It combines an FPGA, a real-time processor, and a suite of I/O peripherals into a single, integrated device that can be programmed using LabVIEW software. MyRIO is small, portable, with built-in Wi-Fi and Ethernet connectivity, making it ideal for a variety of applications, including robotics, control systems, mechatronics, and data acquisition. It provides an intuitive and interactive way to learn about hardware design, programming, and signal processing, and is compatible with various sensors and actuators, making it a versatile tool for prototyping and experimentation. This lab has 2 NI MyRIO devices along with NI Mechatronics kit which has sensors and actuators.

Famic Technologies' Automation Studio is a software suite used for designing, simulating, and testing automation systems. One of the key features of Automation Studio is its ability to integrate different system domains, such as hydraulic, pneumatic, electrical, and control systems, into a single simulation environment. This integration enables users to design and test complex mechatronic systems, such as robotics and automation systems, with greater ease and accuracy.

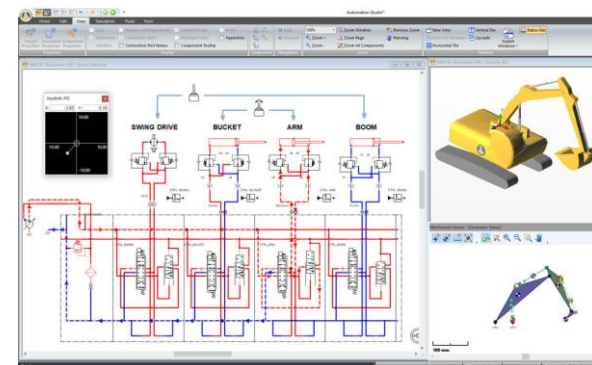
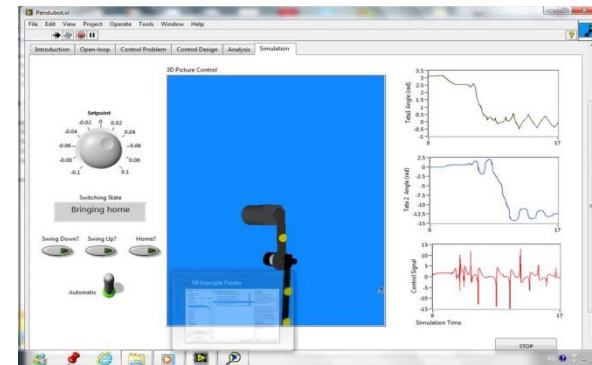
Lab cost-Rs. 31,18,190 /-
Lab Area- 58.96 Sq.m.



Available Resources Hardware & Software:

Lab is equipped with

- 1) 20 HP Pro Tower 400 Desktop core i5 Machines
- 2) Labview Academic Site License
- 3) Communication Teaching bundle
- 4) NI MyRIO
- 5) Mechatronics Kit
- 6) Automation Studio Version 6.2 Educational IFP package
- 7) HMI Module
- 8) Input /Output interface Box
- 9) DC Motor Control kits Developed by IIT Bombay



Laboratory Pics



Car Window Control Setup Developed In-house by Prof. V. S. Vyawahare

