KCT Virtual Instrumentation Academy

- Main Objectives of Siemens PLC Automation Lab are
- To provide simulation based and remote access to Labs in various disciplines
- To arouse curiosity in students and help them learn basic and advanced concepts through remote experimentation
- To motivate students for conducting experiments on their own interest.
- To provide a complete 'Learning Management System' (LMS) around the Virtual labs –
    - access to web-resources, videos, animated demonstrations and self-evaluation

Students and Scholars can

- Learn and use VTU and V-Lab facility available at College of Engineering, Pune
- Design and automate industrial process applications
- Do Minor and Capstone Projects
- Do research work
- Learn in-depth, the programming skills in LabVIEW, COMSOL and MATLAB/SIMULINK
- Build Virtual Instrumentation applications
- Design and Test Sensors and Micro sensors
- Do Mini and Capstone Projects

Faculty Members can

- Do consultancy work for industries
- Do research work

Conduct hands on training Programs for students of neighboring institutions and also industry personnel


PLC operation sequence

Major Equipments / Software

- NI ELVIS II+ Board – 3 Nos.
- cDAQ-9178, Compact DAQ Chassis (8 slot USB) – 10 Nos.
- Smart Camera Evaluation Kit
- Crio-9074 Compact RIO Controller and Chassis Integrated System 400 MHz PowerPC controller 2M Gate FPGA (8 slots)
- LabVIEW Robotics sbRIO Starter Kit
- NI PCI-6221 16-Bit 250 kS/s 16 Analog Inputs
- Quanser QNET DC Motor Control Board for NI ELVIS LabVIEW Control Design & Simulation Module & PID Tool Kit
- Quanser QNET Rotary Inverted Pendulum Board for NI ELVIS LabVIEW Control Design & Simulation Module & PID Tool Kit
- LabVIEW - Circuit Design Suite
- Scientech 2311 Sensors Lab Kit
- COMSOL 5.4
- MATLAB/SIMULINK

Utilization

- Value added Programs for students and industry personnel
- Integrated with curriculum
- Project and Product development by students
- Faculty development Programs

Even Semester

- U15EIP602- Data Acquisition Lab
- U17EII4203- Modelling and Analysis of Dynamic Systems Lab