



VTU- BOSCH REXROTH CENTER OF COMPETENCE IN AUTOMATION TECHNOLOGIES

Internship Training Programme for UG Students Academic Year- 2023-24

Facilities Available

- Hydraulics
- PLC's (Programmable Logic Controllers)
- Sensorics

HYDRAULICS

Training Contents

- Introduction to Hydraulics
- Hydraulic pumps and motors, control valves, cylinders, Control valves
- Circuit designing and building
- Control methods throttle control and load sensing control
- Study of Proportional Valve
- Hydraulic fluids and filtration

Learning goals

At the end of the workshop, participants will be able to:

- Learn the functioning of hydraulic components, and its physical parameters and symbols, construction of Components.
- Interpret basic hydraulic circuits
- Construct and operate hydraulic assemblies on the training Rig
- Outline the theory, construction, concept and functioning of electro-hydraulic proportional and servo valves
- Design typical circuits with proportional and servo valves

SENSORICS

Training Contents

- Introduction to Sensorics Technology
- Study of various types of sensors
- Functions, Characteristics, Behavior, Operating ranges, Switching frequency, Reduction factors, Response curve of different types of sensors



Learning goals

At the end of the workshop, participants will be able to:

- Recognize Sensorics components
- Design Simple Circuits
- Relate impact of electrical, mechanical and electronics domains to Sensorics

PROGRAMMABLE LOGIC CONTROLLERS

Training Contents

- Introduction to Automation Technology
- Introduction to PLC
- Programming of PLC
- Programming languages Structured Text (ST), Function Block Diagram (FBD), Ladder Diagram (LD), Sequential Function Chart (SFC), Instruction List (IL), Continuous Function Chart (CFC)
- Interfacing PLC to Hydraulics & Pneumatics

Learning goals

At the end of the workshop, participants will be able to:

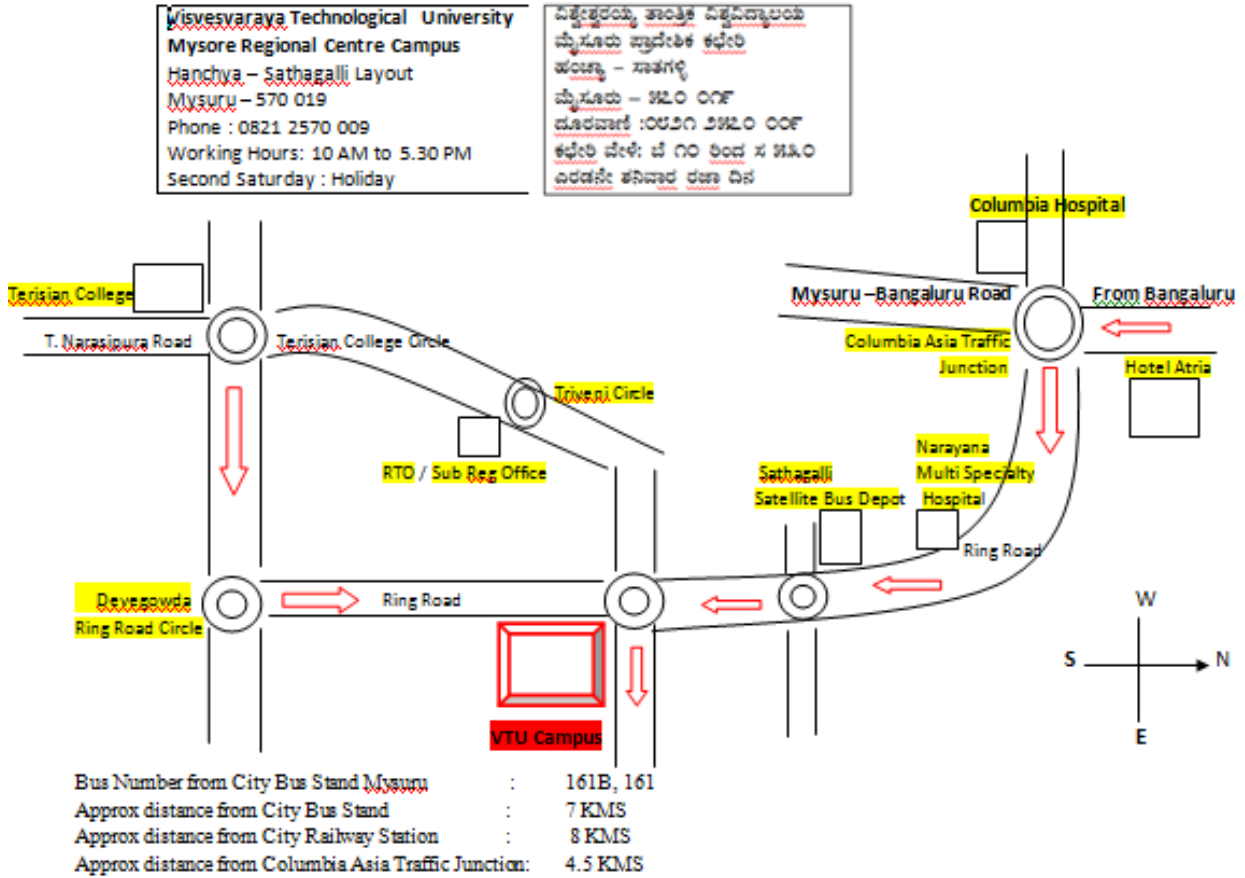
- Comprehend basics of PLC
- Understand basic knowledge of Electric drive and controls
- Design Simple Circuits and programmes
- Learning the basic knowledge of Programmable Logic Controllers
- Participants will be able to write Programmable Logic Controllers logic programmes in different languages namely, LD,ST,FBD,SFC IL CFC

Training Description

- Internship Programme for Four Weeks
- Training timings 10AM to 5PM



Route Map



**VTU-BOSCH CENTRE OF COMPETENCE IN AUTOMATION TECHNOLOGY,
REGIONAL CENTRE, HANCHYA, SATHAGALLI LAYOUT (RING ROAD),
MYSURU-570 029**

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Office hours: 10.00 AM- 5.30 PM

Govt. Holidays, First Saturday's, Third Saturday's & Sundays Closed