



# ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ

ವಿಟಿಯು ಅಧಿನಿಯಮ ೧೯೯೪ ರ ಅಡಿಯಲ್ಲಿ ಕರ್ನಾಟಕ ಸರ್ಕಾರದಿಂದ ಸ್ಥಾಪಿತವಾದ ರಾಜ್ಯ ವಿಶ್ವವಿದ್ಯಾಲಯ.

## VISVESVARAYA TECHNOLOGICAL UNIVERSITY

State University of Government of Karnataka Established as per the VTU Act, 1994 "JnanaSangama" Belagavi-590018, Karnataka, India

Prof. B. E. Rangaswamy, Ph.D

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REGISTRAR

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REF: VTU/MYS/BR CoC/2023-24/ 2610/2340

Date: 01.08.2023

3 AUG 2023

### CIRCULAR

**Sub: Internship Programme at VTU Bosch Rexroth Centre of Competence, Mysuru-reg.**

VTU Bosch Rexroth Centre of Competence, Mysuru is one among the three international training centres on Automation Technologies in the Asia - Pacific Region. The VTU Bosch Rexroth Centre is a joint collaboration with Bosch Rexroth, Germany.

Since its inception in the year 2007, the centre has been organising students training programme to bridge the gap between industry and academia. Centre has conducted students training programme to affiliated engineering colleges and Train the Trainer programme (TTT) for faculty members of various universities and industry experts.

In view of the above, VTU Bosch Rexroth CoC is offering Internship training programme to the students of B.E. (Bachelor of Engineering) in Mechanical Engineering, Electrical Engineering, Electronics & Communication Engineering and Computer Science Engineering of various domains in Programmable Logic Controllers, Sensorics and Hydraulics.

Hence, request hereby made to bring this information to the notice of faculty and students to get benefitted by sending the students of your institution to the internship programme. Please find the enclosed training details for your kind reference. Further, for any information, please contact Smt. Deborah Stanley, Assistant Technician, VTU BR-CoC @ 9986958889 or vtubosch@vtu.ac.in.

Enclosure: VTU Bosch Rexroth Centre of Competence Training Details.

Yours faithfully,

*Ra. Rangaswamy*  
REGISTRAR

*Smt. D. Stanley*

#### Copy to:

1. The Hon'ble Vice Chancellor through Secretary to VC, VTU, Belagavi for kind information.
2. The Registrar through the PS to Registrar, VTU, Belagavi for information.
3. The Finance Officer, VTU, Belagavi for kind information.
4. The Coordinator, VTU Bosch Rexroth Centre, Mysuru for information
5. Office file.



## ***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

### **Batch Size**

- Internship Training on Hydraulics PLC, & Sensorics minimum 20 participants
- Practical Handouts will be provided during the Internship Training
- Facility to stay on campus available on request with nominal charges as applicable.
- Participation Certificate after clearing the post-training test.

### **Training Description**

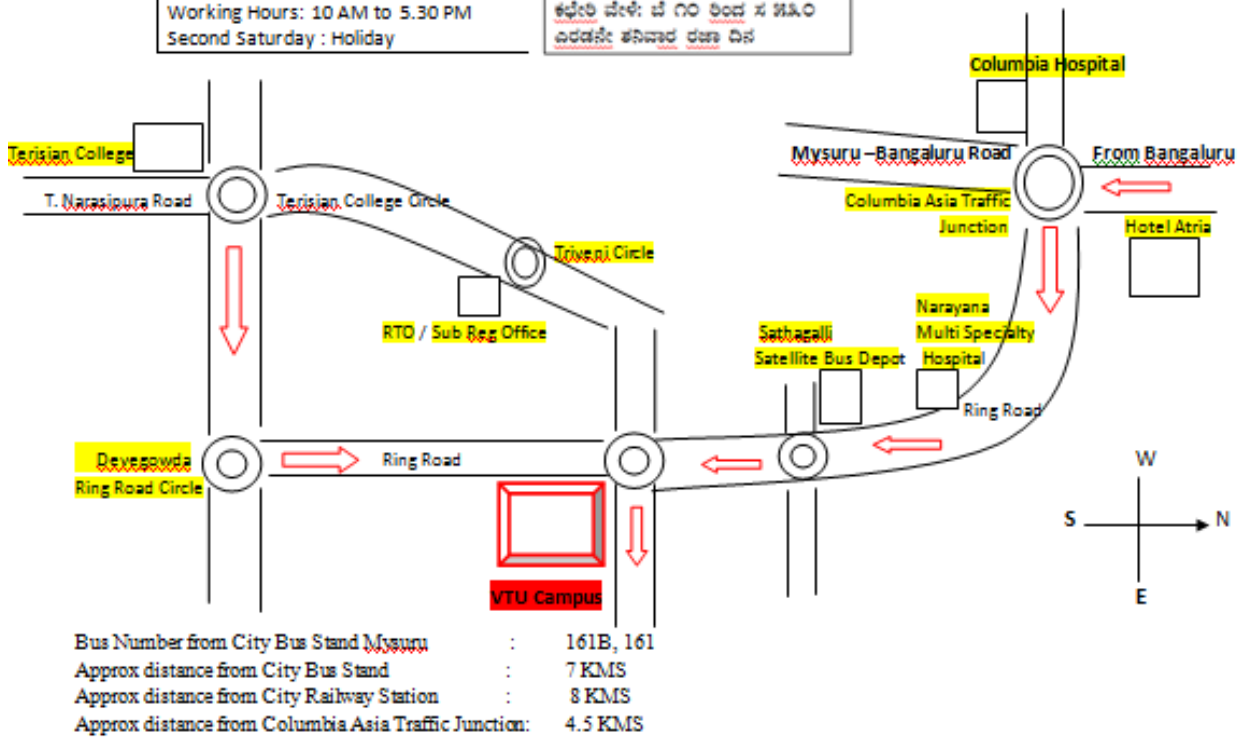
- Internship programme for one month duration
- Internship programme for fifteen days duration
- Internship programme for one week duration



# Route Map

**Vishvesvaraya Technological University**  
**Mysore Regional Centre Campus**  
 Hanchya – Sathagalli Layout  
 Mysuru – 570 019  
 Phone : 0821 2570 009  
 Working Hours: 10 AM to 5.30 PM  
 Second Saturday : Holiday

ವಿಶ್ವವಿದ್ಯಾನಿಲಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ  
 ಮೈಸೂರು ಪ್ರಾದೇಶಿಕ ಕಛೇರಿ  
 ಹಂಚ್ಯಾ - ಸಾಥಗಲ್ಲು  
 ಮೈಸೂರು - ೫೭೦ ೦೧೯  
 ದೂರವಾರ್ತೆ : ೦೮೨೧ ೨೫೭೦ ೦೦೯  
 ಕಛೇರಿ ವೇಳೆ: ೧೦ ರಿಂದ ೫ ರವರೆಗೆ  
 ಎರಡನೇ ಶನಿವಾರ ರಜಾ ದಿನ



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

**Mobile No: 9986958889 e-mail:vtubosch@vtu.ac.in**

**Office hours: 10.00 AM- 5.30 PM**

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