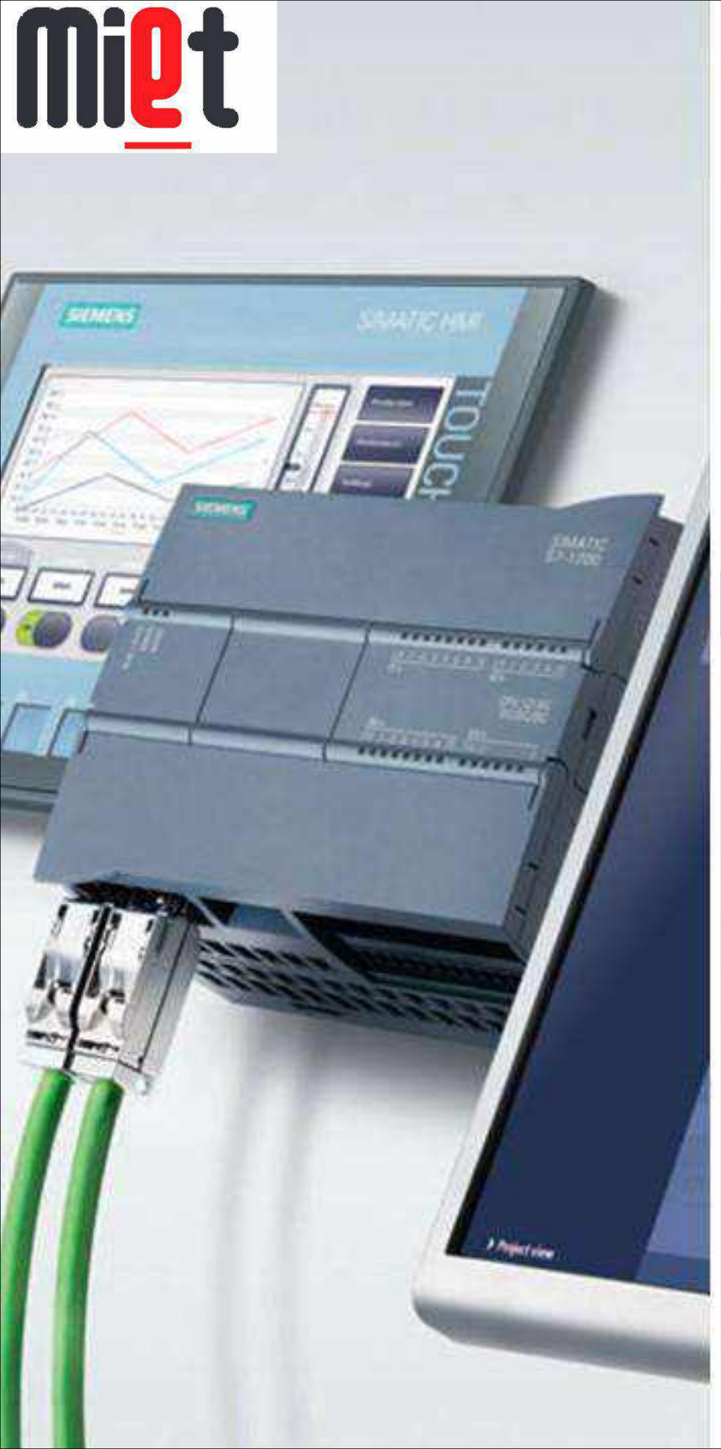
Meerut Institute of Engineering and Technology

Industrial Automation (Siemens) Program

Faculty Incharge
Avinash Kumar
Asst. Professor (EE)



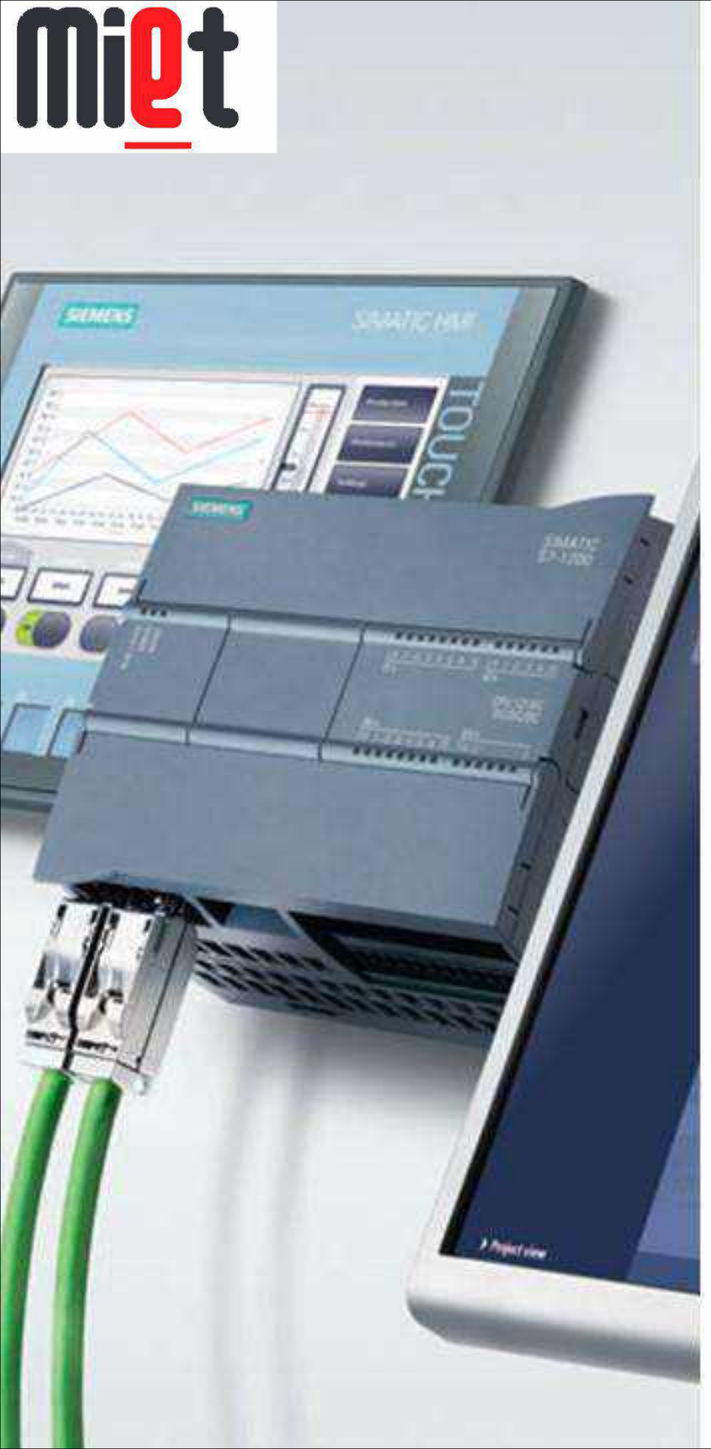
Objectives and Introduction

1 Objective

To provide an industry-oriented platform in the college imparting technical education on automation and producing self-reliant, self-sufficient automation engineers, capable of meeting new industrial challenges.

2 Introduction

Our program looks at Automation systems engineering as a synergistic function between hardware and software. Students learn the essential concepts of Automation systems development through a practical, hands-on approach utilizing relevant software with advanced lab.



Name of the Centre

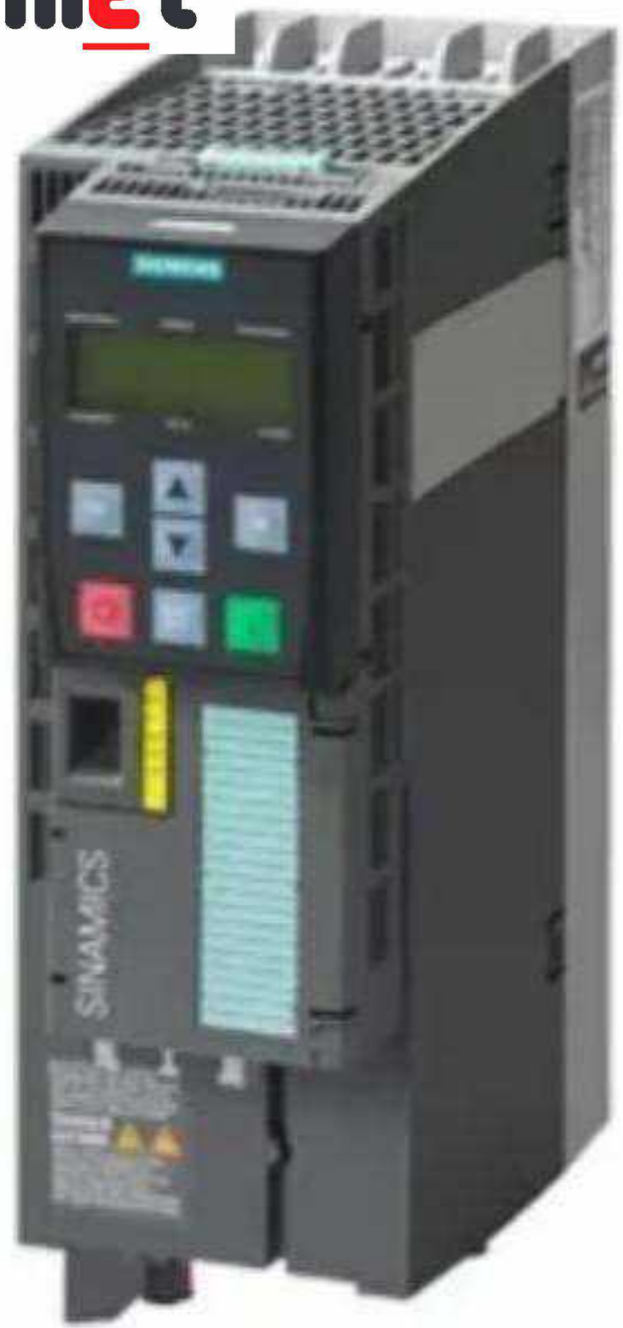
Industrial Automation Lab (Siemens PLC/ Drives)

Established in Association with: IATC, Chandigarh

SPoC: Avinash Kumar
(Asstt. Professor, Department of Electrical Engg.)

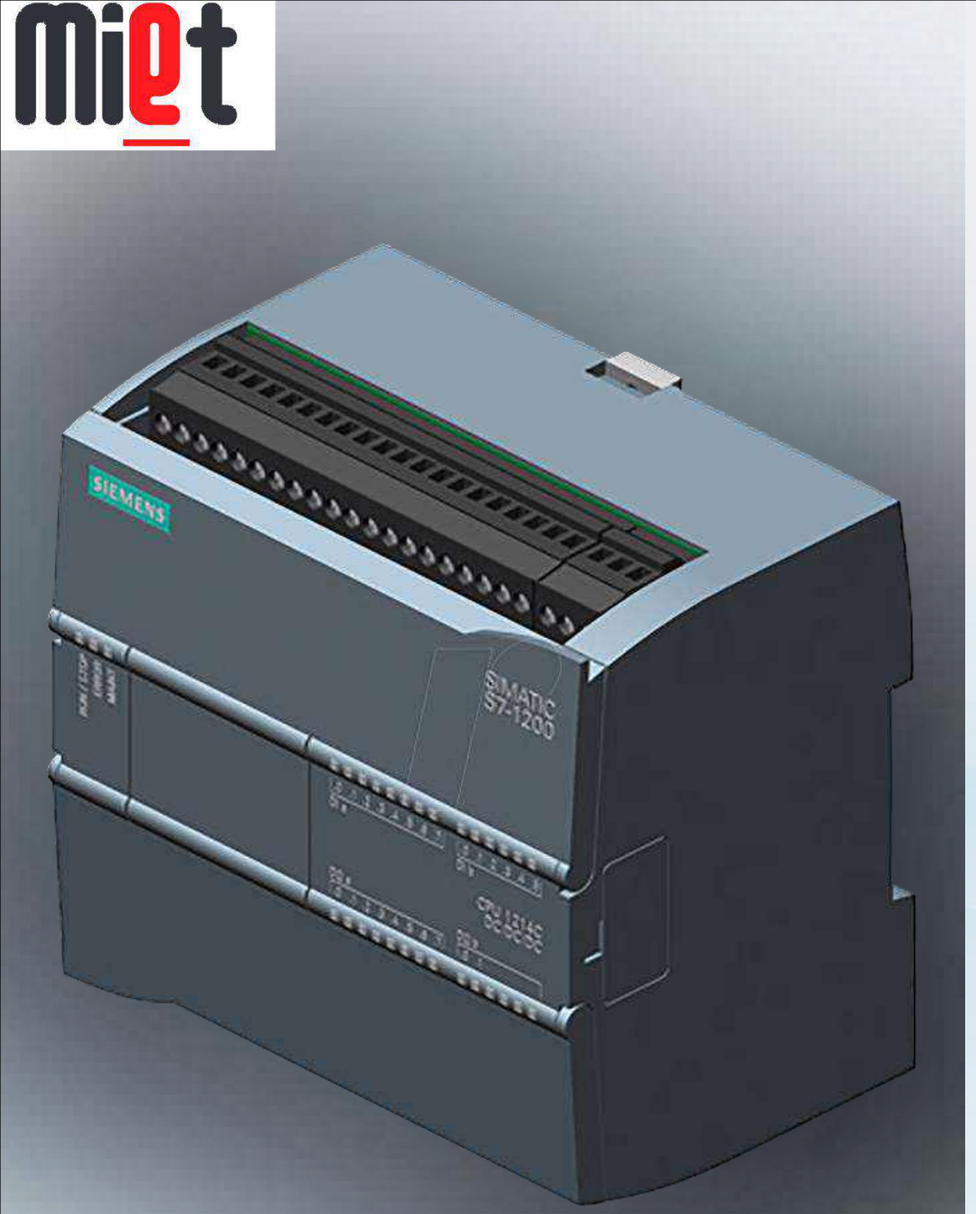
Faculty members involved in the centre activity.

- Mr. Avinash Kumar (EE)
- Mr. Satish Kumar (EE)
- Ms. Abhilasha Jain (EC)



List of Equipment
Lab No. Q-202

S.No.	Item Name	Quantity
1	PLC Siemens S7-1200 Kit (With KTP700 Basic Kit and RTU)	10
2	Siemens G 120 AC drive	10
3	Siemens 6RA80 DC drive	01
4	Switchgear Kit	05
5	Working Project	01
6	Computer Set	21



Curriculum and Modules

1

Module 1

Basic Industrial Automation with PLC (S7-1200)

2

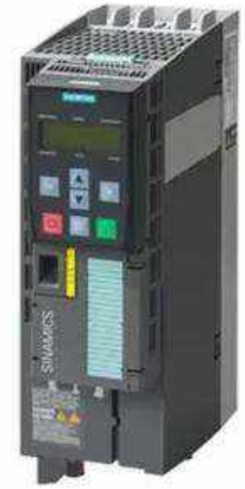
Module 2

Basic Industrial Automation with HMI & SCADA

3

Module 3

Basic Industrial Automation with Switch Gears & Drives (G 120, 6RA80)



Road Map (2023-24) (Methodology and Pedagogy)

Stage 1

Fourth Semester

Module 1 (Basic Industrial Automation with PLC) in fourth Sem.

Stage 2

Fifth Semester

Module 2 (Siemens HMI and SCADA) in Fifth Sem.

Stage 3

Sixth Semester

Module 3 (Siemens Drives and Switchgears) in Sixth Sem.

Course Outcomes

After CM-1

Understand the requirement, configuration and hardware connection and working of automation components.

Understand the basic tools of Ladder Programming for Automation Problems.

Identify, formulate and solve the complex automation problems.

After CM-2

Understand the analog tools & calculations in Ladder Programming for Automation Problems.

Identify, formulate and solve the basic automation problems with HMI interface.

Identify, formulate and solve the basic automation problems with SCADA interface.

After CM-3

Understand the basic concepts, working & wiring of switch gears & drives.

Commission the drive using different tools like BOP, STARTER, TIA.

Implement the different controls as per the applications.

Benefits of Industrial Automation Programs

1

Understand Machines

Understand the purpose and functioning of the machines being manufactured, and program them to function as required.

2

Work with System Integrators

Work with System Integrators who help the OEMs choose controllers based on their requirement and aid them in programming the functions.

3

Work with Automation Providers

Work with Automation Solution providers who design complete solutions for the User Industry to integrate all the individual machines, which will help in gaining Industry Domain knowledge.

Achievements

Faculty Development Program

We regularly run faculty development programs for the faculties of Electronics & Communication, Mechanical Engineering & Electrical Engineering.

Advance Summer/Winter Training

We also run 10 days advance training program during Summer/Winter Vacation.

Industrial Visits

We have organized 3 industrial visits.

Guest Lectures

We have organized 3 guest lectures by industry experts.

Siemens Automation Centre

Sstudents Trained through Siemens Automation Centre in last 5 years

S. N.	Technology Type	No of Students Trained (Approx)	Branch Benefitted
1	Automation Using PLC S71200 (CM-1)	989	EE,EC,ME,CH
	Automation Using AC/DC Drive(CM-3)	1085	EE,EC,ME,CH
	Automation using HMI & SCADA (CM-2)	337	EE,EC,ME,CH

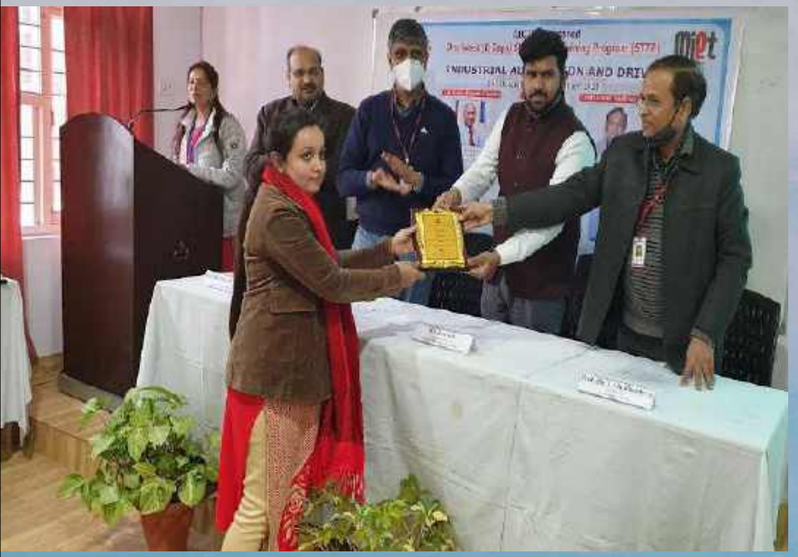
Events Organized by Siemens Automation Centre

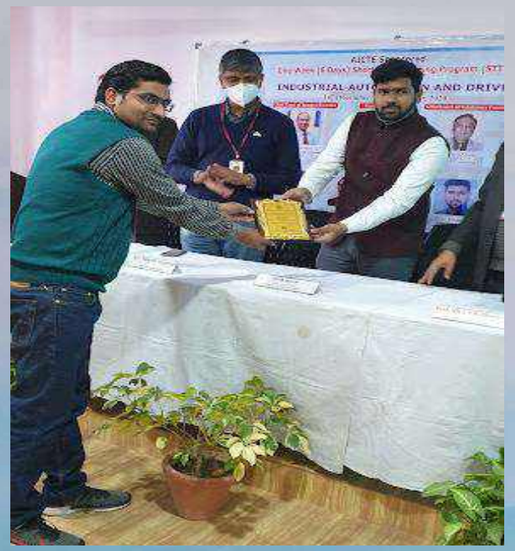
1	Training Organized for Teaching Staff	6
2	Guest Lectures Organized	3
3	Industrial Visits Organized	3

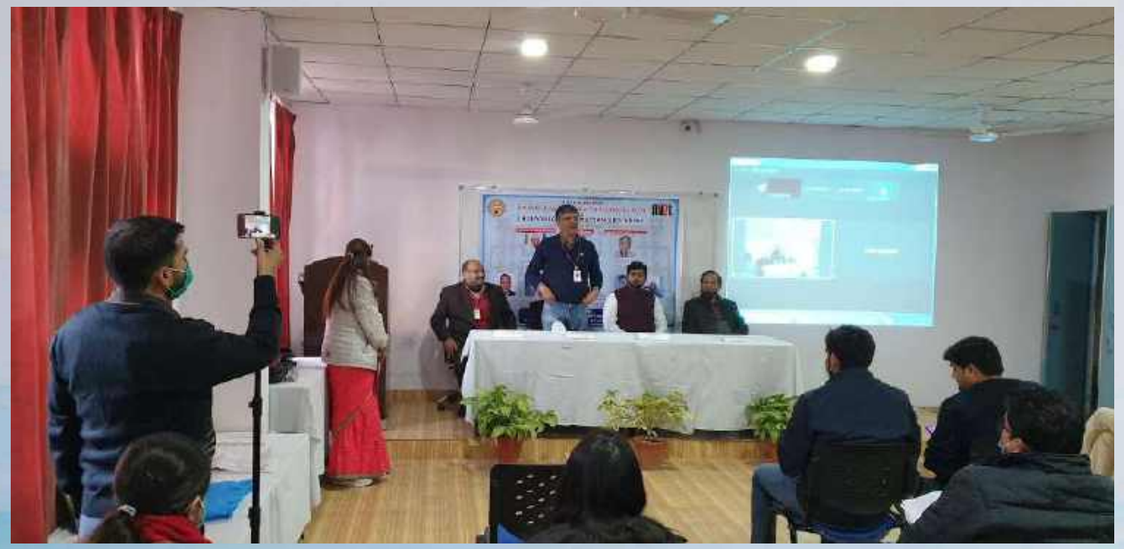
Events Organized by Siemens Automation Centre for outside candidates

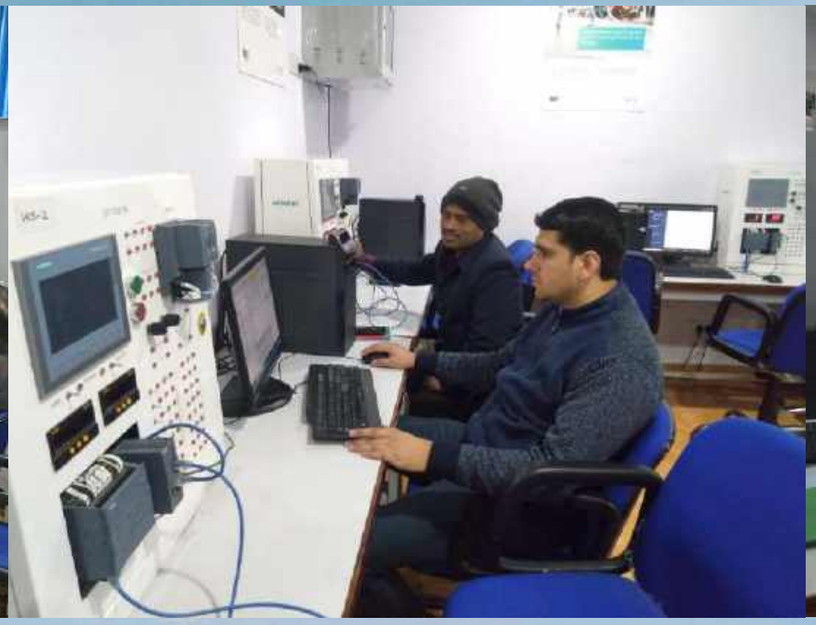
1	AICTE Sponsored STTP on Industrial Automation & Drives	1
2	Webinar on Industrial Automation using PLC	1

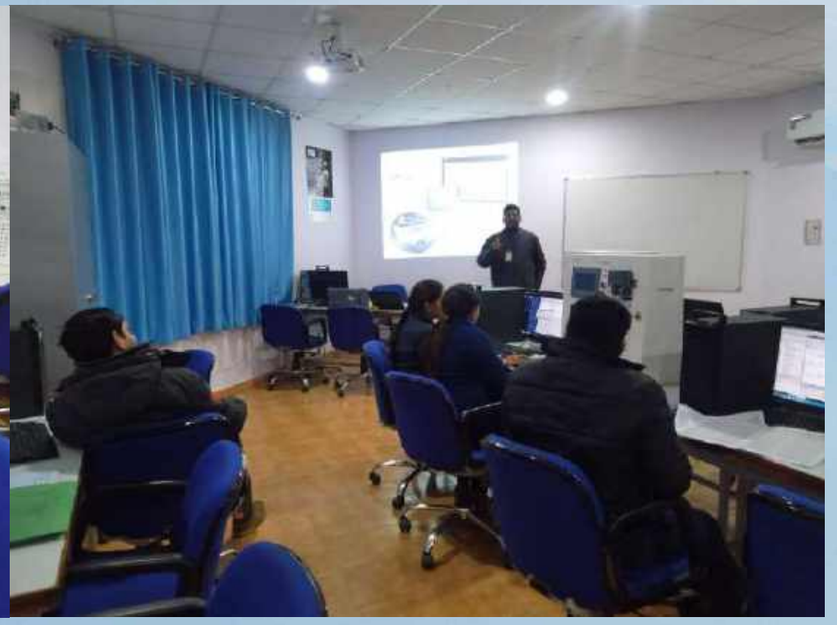
Workshop/STTP Organized





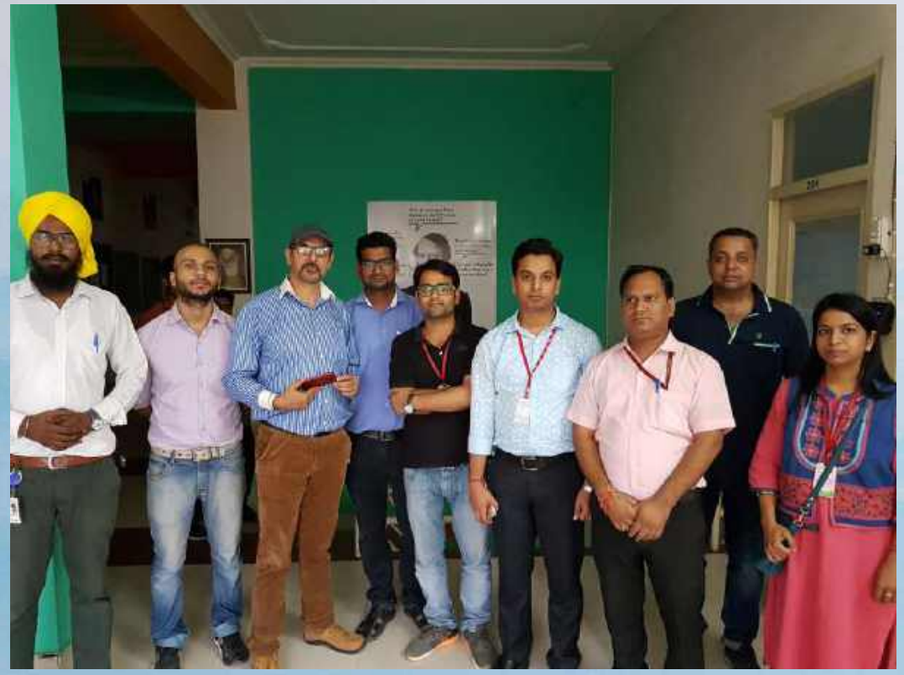






AICTE Sponsored STTP on Industrial Automation

Industrial Visit Organised



Industrial Visit @ B.N. High-tech

Thank You