



# POORNIMA

## COLLEGE OF ENGINEERING

Promoted by Shanti Education Society, Affiliated to Rajasthan Technical University & Approved by AICTE

### A REPORT ON FIVE - DAYS NATIONAL WORKSHOP

- **TITLE AND DURATION:** “Hands-on Session on Interfacing of Digital and Analog I/O Devices with Node MCU, Controlling Devices Using Mobile Application “from 18 January to 23 January 2021.
- **SPONSORS & SUPPORTERS:** TEQIP-III, Rajasthan Technical University Kota.
- **ORGANIZERS:** Rajasthan Technical University, Kota, and Department of Electronics & Communication Engineering, Poornima College of Engineering, Jaipur.
- **FLYER / POSTER:**

#### PCE ACADEMIC COMMITTEE

|                        |                          |
|------------------------|--------------------------|
| Mr. Pankaj Dhemla      | Vice-Principal, PCE      |
| Dr. Rekha Nair         | Dean, I Year, PCE        |
| Mr. Devendra Somvanshi | Registrar, PCE           |
| Dr. Payal Bansal       | Assistant Professor/ECE  |
| Mr. Tarun Mishra       | Assistant Professor/ECE  |
| Mr. Durgesh Kumar      | Assistant Professor/ECE  |
| Mr. Manish Sharma      | Assistant Professor, ECE |
| Ms. Manisha Kumawat    | Assistant Professor/ECE  |
| Mr. Amit Kumar Jain    | Assistant Professor/ECE  |

#### RESOURCE PERSONS

|                          |  |
|--------------------------|--|
| Dr. Vimal Bhatia         | Professor, IIT Indore  |
| Dr. Jawar Singh          | Associate Professor, IIT Patna                                   |
| Dr. M. Arun              | Associate Professor (Sr.), VIT, India                            |
| Dr. Salvir Singh         | Associate Professor, IKG Punjab Technical University, Kapurthala |
| Kamlesh Ku. Samota       | Scientist-B, NIELIT, Govt. of India                              |
| Dr. Sumit Kalra          | Assistant Professor, IIT Jodhpur                                 |
| Dr. Amit Mahesh Joshi    | Assistant Professor, MNIT, Jaipur                                |
| Dr. Rajender Kumar       | Assistant Professor, NIT Kurukshetra                             |
| Dr. Bikas Chandra Sahana | Assistant Professor & HOD, NIT Patna                             |
| Dr. Soumya J             | Assistant Professor, BITS-Pilani, Hyderabad Campus, India        |
| Dr. Kusum Lata Jain      | Assistant Professor, Manipal University, Jaipur                  |
| Ajay Godara              | Director, Enovation Lab LLP, Chandigarh                          |
| Naman Garg               | Assistant Professor, IET, Agra                                   |
| Javad Baig D             | Application Engineer, EdGate Technologies Pvt Ltd. Bangalore     |
| T Krishna Chaitanya      | Application Engineer, EdGate Technologies Pvt. Ltd. Bangalore    |

#### ELIGIBILITY

This course is open to all Faculty Members of AICTE Approved Institutions, Research Scholars, and Persons working in R&D organizations or Industry. Number of participants for Workshop are limited. All the sessions will be conducted online only. Participant with minimum 80% attendance with feedback form are eligible for certificate.

#### REGISTRATION AND FEE PARTICULARS

- There is no registration fee for faculty from AICTE approved Institutions, Participants from Industry, and Research Scholars.
- Registration for the program may be done by filling the Registration Form online, Reg. Link: <https://tinyurl.com/y3gtyxj>
- Once you registered, you can add yourself in what's up group for updates with Link: <https://tinyurl.com/yxaohm7k>

#### IMPORTANT DATES

Last date of online registration: January 16, 2021  
Intimation of selection by mail: January 17, 2021  
Workshop duration: January 18-22, 2021

#### CORRESPONDENCE

**Dr. Anila Dhingra**  
Associate Professor  
Department of Electronics and Communication Engineering, PCE, Jaipur  
✉ [anila.dhingra@poornima.org](mailto:anila.dhingra@poornima.org) • ☎ +91-9829016670

**Dr. Garima Mathur**  
Professor and Head of Department  
Department of Electronics and Communication Engineering, PCE, Jaipur  
✉ [dr.gmathur@poornima.org](mailto:dr.gmathur@poornima.org) • ☎ +91-9829393517

**Venue**  
Department of Electronics & Comm. Engineering  
**POORNIMA**  
COLLEGE OF ENGINEERING  
ISI-6, RIICO Institutional Area, Sitapura, Jaipur, Rajasthan 302022  
[www.pce.poornima.org](http://www.pce.poornima.org)

RTU (ATU) TEQIP-III SPONSORED  
One Week Workshop  
on  
**Hands on Session on Interfacing of Digital and Analog I/O Devices with Nodemcu, Controlling Devices using Mobile Application**  
**January 18-22, 2021**

**Organized by**  
Rajasthan Technical University, Kota  
&  
Department of Electronics & Communication Engineering  
**POORNIMA**  
COLLEGE OF ENGINEERING  
Affiliated to RTU, Kota • Approved by AICTE & UGC under 2f • Accredited by NBA

*Dr. Mahesh Bunde*  
B.E., M.E., Ph.D.  
Director  
Poornima College of Engineering  
ISI-6, RIICO Institutional Area  
Sitapura, JAIPUR

### ABOUT TEQIP-III

The Project, third phase of Technical Education Quality Improvement Programme (referred to as TEQIP-III) is fully integrated with the Twelfth Five-year Plan objectives for Technical Education as a key component for improving the quality of Engineering Education in existing institutions with a special consideration for Low Income States and Special Category States and support to strengthen few affiliated technical universities to improve their policy, academic and management practices.

### RAJASTHAN TECHNICAL UNIVERSITY

Rajasthan Technical University (RTU) is located in Kota in the state of Rajasthan. It was established in 2006 by the Government of Rajasthan. The University currently affiliates about 129 Engineering Colleges, 4 B.Arch., 41 MCA Colleges, 95 MBA Colleges, 44 M.Tech. Colleges and 3 Hotel Management and Catering Institutes. The University aims to provide quality technical education which may help Rajasthan in its technical development and will boost technical environment in the country.

### POORNIMA COLLEGE OF ENGINEERING

Poornima College of Engineering (PCE), established as a brand of technical education in the year 2000, has its own glorious legacy of leading the young engineers to the mammoth sky of success. Its accomplishments forecast its journey through the hardships and its triumph over them one after another. PCE left no stone unturned since its establishment in turning the glorious vision into unbelievable reality providing the platform for knowledge and research and their practical implementations in different engineering professional prospects. Glorious glimpses of PCE:

- Highly recognized and renowned affiliated technical institution all over Rajasthan with built up area more than 3.5 lacs square feet
- Affiliated to RTU, Kota & approved by AICTE, New Delhi
- The most preferred NBA Accredited Engineering College with running of six specializations of Engineering at UG Level (CSE, ECE, EE, ME, IT, CIV) and two at PG level (CS & VLSI)
- The only institution permitted by RTU to admit FN/PIO/Gulf students & designated as centre of excellence by IBM

### DEPT. OF ELECTRONICS & COMM. ENGINEERING

The Department of Electronics and Communication Engineering (ECE) was established in year 2003. National Board of Accreditation (NBA) accredited the ECE department in the year 2009 & 2016 for subsequent three years. It has intake capacity of 180. It also offers M. Tech in VLSI Design with intake capacity of 18 students. The department has highly qualified committed and research oriented faculty members. The department has laboratories as per Rajasthan Technical University

Syllabus with State-of-the-Art facilities in diversified fields such as Electronic Circuits, VLSI Design, DSP (Digital signal processing), Embedded Systems, Advanced Wireless Communication and Microwave etc. Research is being carried out in the areas of Antenna Design and Wireless Communication, and VLSI design. The department also has to his credit three labs, (i) Microwave Engineering lab & (ii) Advance Antenna & Wireless Communication lab (iii) Advancement of Wireless and Optical Fiber Lab supported by MODROBS Grants of AICTE, New Delhi.

IETE Student Forum (IFS) of the Department has been recognized as Most Active ISF for session 2016-17 by IETE Rajasthan Center, Jaipur. The department also has state of the art lab facility for the value added IBM Career Education Programs for faculty members and students on emerging technologies such as IBM BlueMix for Cloud, IBM Cognos for Business Intelligence and IoT Application Development & Deployment using IBM BlueMix.

### COURSE CONTENTS

Internet of Things (IoT) is presently a hot technology worldwide. Government, academia, and industry are involved in different aspects of research, implementation, and business with IoT. IoT cuts across different application domain verticals ranging from civilian to defence sectors. These domains include agriculture, space, healthcare, manufacturing, construction, water, and mining, which are presently transitioning their legacy infrastructure to support IoT. Today it is possible to envision pervasive connectivity, storage, and computation, which, in turn, gives rise to building different IoT solutions. IoT based applications such as innovative shopping system, infrastructure management in both urban and rural areas, remote health monitoring and emergency notification systems, and transportation systems, are gradually relying on IoT based systems. Therefore, it is very important to learn the fundamentals of this emerging technology

### TOPICS TO BE COVERED

- Introduction to IoT, NOMA
- Analog and Digital Sensor Interfacing with ARM Cortex M4F Microcontroller
- Satellite IoT Connectivity for LoRa Technology
- IoT and its Real Time Application
- Wireless Sensor Nodes: Development and Deployment for Health and Environmental Monitoring Applications
- Interfacing the ARM Cortex M4F Microcontroller with Cloud and Controlling the device using Mobile App
- Working with NodeMCU and ESP32.

### OBJECTIVES OF THE WORKSHOP

Internet of Things (IoT) is a new revolution of the Internet. It is a network of physical devices, vehicles, home appliances, and other items

embedded with electronics, software, sensors, actuators and network connectivity which are linked to create smart environments. It allows objects to be sensed and controlled remotely across existing network infrastructure. Also, it is creating opportunities for more direct integration of the physical world into computer-based systems, which results in improved efficiency and accuracy.

The objective is to impart working knowledge in Internet of Things to all our students and to train them at par with the requirement of the nation to become technocrats as well as entrepreneurs in IoT technology. Students are motivated to implement their innovative ideas into a prototype using embedded development boards and process the data collected from various sensors in the cloud for automation. Periodically, renowned experts from industry and academia will be invited to present on emerging trends in IoT.

## WORKSHOP COMMITTEE

### CHIEF PATRON

Prof. (Dr.) R. A. Gupta  
Honble Vice Chancellor, RTU Kota

### PATRON

Prof. (Dr.) Dharendra Mathur  
RTU (ATU) TEQIP-III Coordinator

Dr. Mahesh M. Bundeale  
Principal & Director, PCE, Jaipur

### RTU EVENT COORDINATOR

Dr. Janki Ballabh Sharma  
Associate Professor, RTU, Kota

Dr. M. L. Meena  
Assistant Professor, RTU, Kota

### RTU (ATU) TEQIP-III COMMITTEE

Dr. Harish Sharma  
Nodal officer Academic

Prof. D. K. Sambariya  
Nodal Officer Procurement

Dr. S. D. Purohit  
Nodal Officer Finance

Sr. Irum Alvi  
Conference

Mr. Santosh Sharma  
Expert Lecture

Mr. Anshul Bansal  
GATE & Induction

Mr. Dinesh Kumar  
Workshop

### HOST INSTITUTE COORDINATOR

Dr. Garima Mathur  
Professor and Head, Dept. of Elect. and Comm. Engg., PCE, Jaipur

### HOST INSTITUTE CO-COORDINATOR

Dr. Anila Dhingra  
Associate Professor, Dept. of Elect. and Comm. Engg., PCE, Jaipur

## ◆ LEARNING OUTCOMES / COURSE OUTCOMES:

- To program Arduino to control lights, motors, and other devices.
- To learn Arduino's architecture, including inputs and connectors for add-on devices.
- To add third-party components such as LCDs, accelerometers, gyroscopes, and GPS trackers to extend Arduino's functionality.
- To understand various options in programming languages, from C to drag-and-drop languages.
- To test, debug, and deploy the Arduino to solve real world problems. To make the participants aware of Software Defined Networks, Network Function Virtualization concepts and their implementation aspects.



♦ MAPPINGS WITH PO AND PSO:

| LO   | PO 1 | PO 2 | PO 3 | PO 4 | PO 5 | PO 6 | PO 7 | PO 8 | PO 9 | PO 10 | PO 11 | PO 12 | PSO 1 | PSO 2 | PSO 3 |
|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|
| LO-1 |      |      |      |      |      | 3    | 2    | 2    | 3    | 3     |       | 1     | 2     |       | 3     |
| LO-2 |      |      |      |      |      | 3    | 2    | 2    | 3    | 3     |       | 1     | 2     |       | 3     |
| LO-3 |      |      |      |      |      | 3    | 2    | 2    | 3    | 3     |       | 1     | 2     |       | 3     |
| LO-4 |      |      |      |      |      | 3    | 2    | 2    | 3    | 3     |       | 1     | 2     |       | 3     |
| LO-5 |      |      |      |      |      | 3    | 2    | 2    | 3    | 3     |       | 1     | 2     |       | 3     |

INAUGURAL SESSION:



RAJASTHAN TECHNICAL UNIVERSITY, KOTA

Poornima College of Engineering

TEQIP-III RTU (ATU) Sponsored

Workshop

on

Hands-on-Session on Interfacing of Digital and Analog I/O Devices with NodeMCU,

Controlling Devices Using Mobile Application

(January 18-22, 2021)



Date: January 18, 2021

Time: 9:30-10:05 AM

Venue: Online (<https://meet.google.com/fzg-iuhc-ygt>)

Q-Sheet- Inaugural Session

| S. No | Activity  | Duration | Time                |
|-------|---|----------|---------------------|
| 1.    | <p>Welcome of Dignitaries and Introduction of Workshop by <b>Dr. Anila Dhingra</b> (Associate Prof.), Coordinator, PCE</p> <ul style="list-style-type: none"> <li>• <b>Prof. (Dr.) R.A. Gupta</b>, Hon'ble Vice Chancellor, RTU Kota (Chief Guest)</li> <li>• <b>Prof. (Dr.) Dharendra Mathur</b>, RTU (ATU) TEQIP- III Coordinator (Guest of Honour)</li> <li>• <b>Dr. Vimal Bhatia</b>, Professor, IIT, Indore (Guest of Honour)</li> <li>• <b>Dr. Janki Ballabh Sharma</b>, Associate Professor, RTU Event Coordinator, RTU Kota</li> <li>• <b>Dr. M. L. Meena</b>, Assistant Professor, RTU Event Coordinator, RTU Kota</li> <li>• <b>Ar. Rahul Singhi</b>, Director, Poomima Group, Jaipur</li> <li>• <b>Dr. Mahesh Bundeale</b>, Director &amp; Principal, Poomima College of Engineering, Jaipur</li> <li>• <b>Mr. Pankaj Dhema</b>, Vice-Principal, Poornima College of Engineering, Jaipur</li> <li>• <b>Dr. Garima Mathur</b>, HOD, ECE, Poornima College of Engineering</li> </ul> | 05 Min   | 9:30 AM -9:35 AM    |
| 2.    | Welcome Address by <b>Dr. Mahesh Bundeale</b> , Director & Principal, Poornima College of Engineering, Jaipur   | 05 Min   | 9:35 AM -9:40 AM    |
| 3.    | Address by <b>Ar. Rahul Singhi</b> , Director, Poornima Group, Jaipur   | 05 Min   | 9:40 AM -9:45 AM    |
| 4.    | <p>Introduction of Guest of Honour &amp; Address by Guest of Honour <b>Prof (Dr.) Dharendra Mathur</b>, RTU (ATU) TEQIP-III Coordinator</p> <p><b>Dr.Vimal Bhatia</b>, Professor, IIT, Indore</p>   | 05 Min   | 9:45 AM - 9:50AM    |
| 5.    | Introduction of Chief Guest & Inaugural Address by the Chief Guest <b>Prof. (Dr.) R.A. Gupta</b> , Hon'ble Vice Chancellor, RTU Kota  | 10 Min   | 9:50 AM -10:00 AM   |
| 6.    | Vote of Thanks by <b>Dr. Garima Mathur</b> , HOD, ECE, PCE  | 05 Min   | 10:00 AM - 10:05 AM |

  
**Dr. Mahesh Bundeale**  
 B.E., M.E., Ph.D.  
 Director  
 Poornima College of Engineering  
 ISI-0, FIICO Institutional Area  
 Stapura, JAIPUR

## **CONTENTS:**

Internet of things (IOT) is presently a hot technology worldwide. Government, academia, and industry are involved in different aspects of research, implementation, and business with IOT. IOT cuts across different application domain verticals ranging from civilian to defense sectors. These domains include agriculture, space, healthcare, manufacturing, construction, water, and mining, which are presently transitioning their legacy infrastructure to support IOT. Today it is possible to envision pervasive connectivity, storage, and computation, which, in turn, gives rise to building different iot solutions. IOT based applications such as innovative shopping system, infrastructure management in both urban and rural areas, remote health monitoring and emergency notification systems, and transportation systems, are gradually relying on IOT based systems. Therefore, it is very important to learn the fundamentals of this emerging technology.

- Introduction to IOT, NOMA
- Analog and digital sensor interfacing with arm cortex m4f microcontroller
- Satellite IOT connectivity for LoRa technology
- IOT and it's real time application
- Wireless sensor nodes: development and deployment for health and environmental monitoring applications
- Interfacing the arm cortex m4f microcontroller with cloud and controlling the device using mobile app
- Working with nodeMCU and ESP32.

## **♦ ASSESSMENT TOOLS: NIL**

♦ PROGRAM SCHEDULE:



**TEQIP-III SPONSORED**

**5-Day Workshop**

**on**

**“Hands on Session on Interfacing of Digital and Analog I/O Devices with NodeMCU, Controlling Devices Using Mobile Application”  
(January 18-22, 2021)**



**Organized by:**

**Rajasthan Technical University, Kota**

**&**

**Department of Electronics and Communication Engineering  
Poornima College of Engineering, Jaipur**

**PROGRAM SCHEDULE**

| <b>Monday - Day 1 – 18<sup>th</sup> January, 2021</b>  |   |
|--|---|
| <b>Program Outline</b>                                 |   |
| 09:30 AM - 10:00 AM                                    | <b>Inaugural Ceremony</b><br>Prof. (Dr.) R. A. Gupta, Hon'ble Vice Chancellor, RTU Kota (Chief Guest)<br>Prof. (Dr.) Dharendra Mathur, RTU (ATU) TEQIP-III Coordinator, (Guest of Honour)<br>Dr. Vimal Bhatia, Professor, IIT, Indore (Guest of Honour)<br>Dr. Janki Ballabh Sharma, Associate Professor, RTU Event Coordinator<br>Dr. M.L. Meena, Assistant Professor, RTU Event Coordinator<br>Ar. Rahul Singhi, Director, Poornima Group, Jaipur<br>Dr. Mahesh M. Bunde, Director-Principal, Poornima College of Engineering<br>Er. Pankaj Dhemla, Vice-Principal, Poornima College of Engineering, Jaipur<br>Dr. Garima Mathur, Workshop Coordinator – Host Institute<br>Dr. Anila Dhimra, Workshop Co-Coordinator – Host Institute |
|  | <b>Session-I</b><br>Topic: Introduction to IoT, NOMA<br>Resource Person: Dr. Vimal Bhatia, Professor, IIT Indore  |
| 10:00 AM - 11:30 AM                                    | <b>Session-II</b><br>Topic: Connecting IoT Sensors to Android Device Without Writing Android Code<br>Resource Person: Dr. Sumit Kalra, Assistant Professor, IIT Jodhpur   |
| 11:45 AM - 01:45 PM                                    | <b>Session-III</b><br>Topic: Analog and Digital Sensor Interfacing with ARM Cortex M4F Microcontroller<br>Resource Person: Javad Baig D, Application Engineer, EdGate Technologies Pvt. Ltd. Bangalore  |
| 02:00 PM - 04:00 PM                                    | <b>Session-IV</b><br>Topic: Interfacing for IOT enabled devices<br>Resource Person: Dr. Rajender Kumar, Assistant Professor, Electronics and Communication Engineering, NIT Kurukshetra   |
| <b>Tuesday - Day 2 – 19<sup>th</sup> January, 2021</b> |   |
| 09:30 AM – 11:30 AM                                    | <b>Session-V</b><br>Topic: Satellite IoT Connectivity for LoRa Technology<br>Resource Person: Dr. M. Arun, Associate Professor, Vellore Institute of Technology (VIT), Vellore  |
| 11:45 AM – 01:45 PM                                    | <b>Session-VI</b><br>Topic: IoT and its Real Time Application<br>Resource Person: Kamlesh Ku. Samota, Scientist-B, NIELIT Govt. of India  |
| 02:00 PM - 04:00 PM                                    |   |

**Dr. Mahesh Bunde**  
B.E., M.E., Ph.D.  
Director  
Poornima College of Engineering  
ISI-0, PUICO Institutional Area  
Shalpur, JAIPUR

| Wednesday - Day 3 – 20 <sup>th</sup> January, 2021 |  |
|--|--|
| 09:30 AM - 11:30 AM                                | <b>Session-VII</b><br><b>Topic:</b> Wireless Sensor Nodes: Development and Deployment for Health and Environmental Monitoring Applications<br><b>Resource Person:</b> Naman Garg, Assistant Professor, IET, Agra   |
| 11:45 AM - 01:45 PM                                | <b>Session-VIII</b><br><b>Topic:</b> Challenges and Opportunities: On-chip Networks in Multiprocessor Environment<br><b>Resource Person:</b> Dr. Soumya J, Assistant Professor BITS-Pilani, Hyderabad Campus, India                                      |
| 02:00 PM - 04:00 PM                                | <b>Session-IX</b><br><b>Topic:</b> Semiconductor Industry from Academic Perspectives: Key Trends, Drivers and Opportunities<br><b>Resource Person:</b> Dr. Jawar Singh, Associate Professor, IIT Patna   |
| Thursday - Day 4 – 21 <sup>st</sup> January, 2021  |  |
| 09:30 AM - 11:30 AM                                | <b>Session-X</b><br><b>Topic:</b> Is India Ready For Technological Change : Sensor Devices in Agriculture<br><b>Resource person:</b> Dr. Kusum Lata Jain, Assistant Professor, Manipal University, Jaipur  |
| 11:45 AM - 01:45 PM                                | <b>Session-XI</b><br><b>Topic:</b> Working with NodeMCU and ESP32<br><b>Resource person:</b> Dr. Satvir Singh, Associate Professor, IKG Punjab Technical University, Kapurthala  |
| 02:00 PM - 04:00 PM                                | <b>Session-XII</b><br><b>Topic:</b> Interfacing the ARM Cortex M4F Microcontroller with Cloud and Controlling the device using Mobile App<br><b>Resource Person:</b> T Krishna Chaithanya, Application Engineer, EdGate Technologies Pvt Ltd. Bangalore. |
| Friday - Day 5 – 22 <sup>nd</sup> January, 2021    |  |
| 09:30 AM - 11:30 AM                                | <b>Session-XIII</b><br><b>Topic:</b> Interfacing the ARM Cortex M4F Microcontroller with Cloud and Controlling the device using Mobile App<br><b>Resource person:</b> Dr. Bikas Chandra Sahana, Assistant Professor & HOD, NIT Patna.                    |
| 11:45 AM - 01:45 PM                                | <b>Session-XIV</b><br><b>Topic:</b> Analog and Digital Sensor Interfacing with Arduino Using Simulation Tool<br><b>Resource person:</b> Ajay Godara, Director, Enovation Lab LLP, Chandigarh   |
| 02:00 PM - 04:00 PM                                | <b>Session-XV</b><br><b>Topic:</b> Role of Internet of Things for Smart Healthcare<br><b>Resource person:</b> Dr. Amit Mahesh Joshi, Assistant Professor, MNIT, Jaipur   |
| 04:00 PM - 04:30 PM                                | <b>Discussion, Valedictory Ceremony and Feedback</b>   |

♦ **DETAILS OF RESOURCE PERSON(S):**

|                          |   |
|--------------------------|---|
| Dr. Vimal Bhatia         | Professor, IIT Indore                                 |
| Dr. Jawar Singh          | Associate Professor, IIT Patna                        |
| Dr. M. Arun              | Associate Professor (Sr.), VIT, India                 |
| Dr. Satvir Singh         | Associate Professor, IKG Punjab Technical University, |
| Kamlesh Ku. Samota       | Scientist-B, NIELIT, Govt. of India                   |
| Dr. Sumit Kalra          | Assistant Professor, IIT Jodhpur                      |
| Dr. Amit Mahesh Joshi    | Assistant Professor, MNIT, Jaipur                     |
| Dr. Rajender Kumar       | Assistant Professor, NIT Kurukshetra                  |
| Dr. Bikas Chandra Sahana | Assistant Professor & HOD, NIT Patna                  |

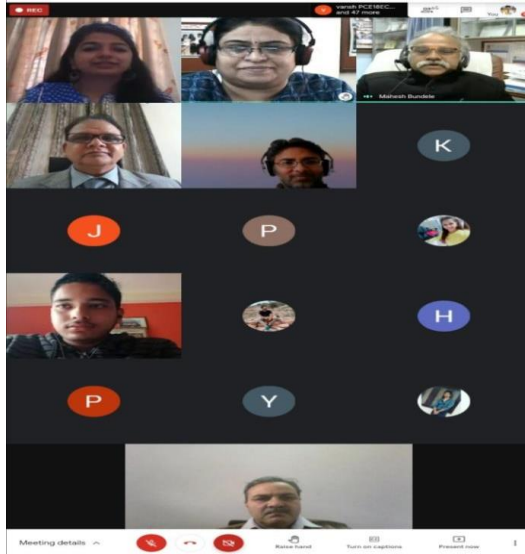


|                      |   |
|----------------------|---|
| Dr. Soumya J         | Assistant Professor, BITS-Pilani, Hyderabad Campus, India     |
| Dr. Kusum Lata Jain  | Assistant Professor, Manipal University, Jaipur               |
| Ajay Godara          | Director, Enovation Lab LLP, Chandigarh                       |
| Naman Garg           | Assistant Professor, IET, Agra                                |
| Javad Baig D         | Application Engineer, EdGate Technologies Pvt Ltd. Bangalore  |
| T Krishna Chaithanya | Application Engineer, EdGate Technologies Pvt. Ltd. Bangalore |

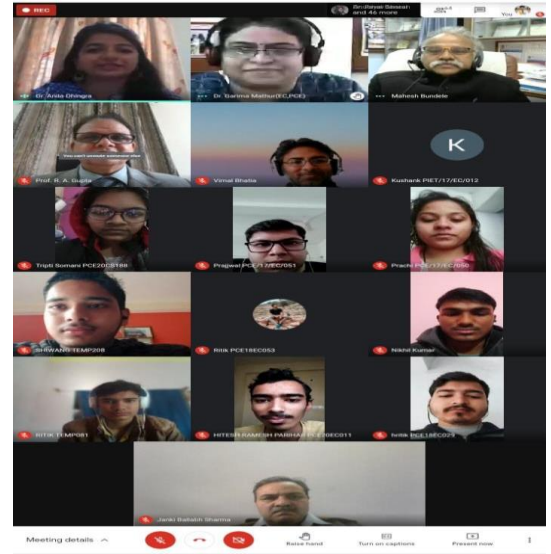
**♦ GLIMPSES OF CONTENT DELIVERY (THEORY / PRACTICAL SESSIONS):**

Rajasthan Technical University, Kota, and the Department of Electronics and Communication Engineering, Poornima College of Engineering, Jaipur jointly organized a 5-day Workshop on “Hands on session on Interfacing of Digital and analog I/O Devices with Nodemcu, Controlling Devices using mobile applications” under TEQIP-III from January 18-22, 2021. This workshop aims to impart working knowledge of the Internet of Things to all our students and to train them at par with th nation's requirement to become technocrats and as entrepreneurs in IoT technology. On 18th January Workshop was inaugurated by Prof. R.A. Gupta, Hon’ble Vice Chancellor, Rajasthan Technical University, Kota, Prof. Dharendra Mathur, RTU (ATU) TEQIP-III Coordinator, Dr. Jaanki Ballabh Sharma, RTU Event Coordinator, and Architect. Rahul singhi, Director. Poornima Group and Dr. Mahesh M. Bundeale , Director, Poornima College of Engineering, Dr. Garima Mathur, HOD, ECE and Dr. Anila Dhingra, Associate Professor. More than 120 students are attending this Workshop. Renowned experts from industry and academia are giving their knowledge on the upcoming topics like Analog and Digital Sensor Interfacing with ARM Cortex M4F Microcontroller, Satellite IoT Connectivity for LoRa Technology, and Interfacing for IOT enabled devices, Wireless Sensor Nodes etc.

♦ INAUGURAL SESSION:



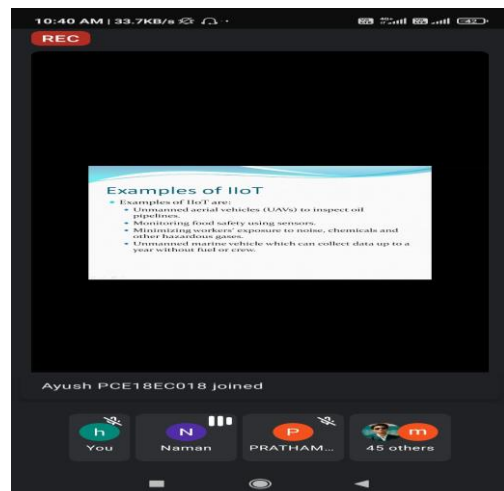
Session I (9:30 am– 11:30 am)



Session II (11:45 am– 1:45 pm)



Session III (2:00 pm– 4:00 pm)

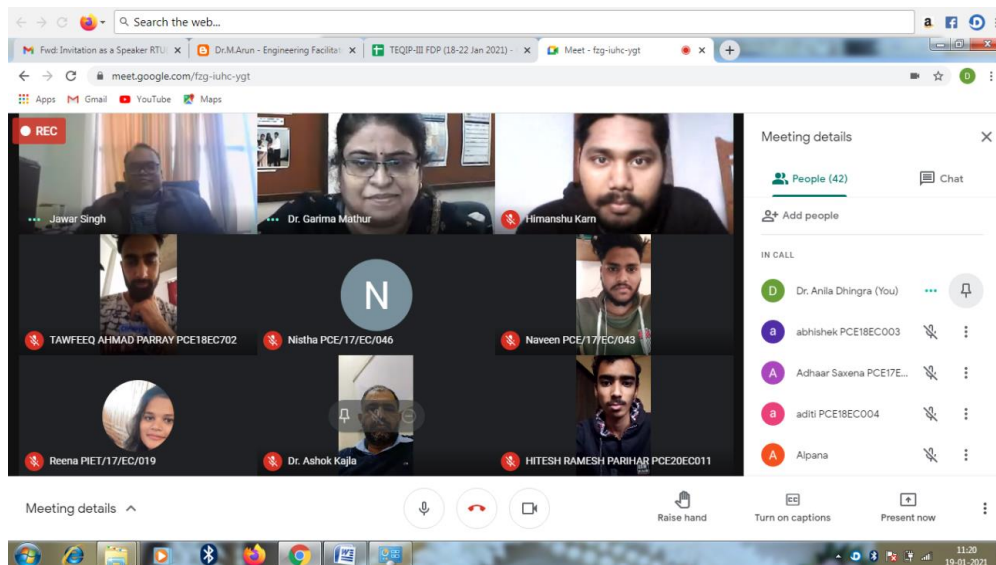


Session IV (9:30 am– 11:30 am)

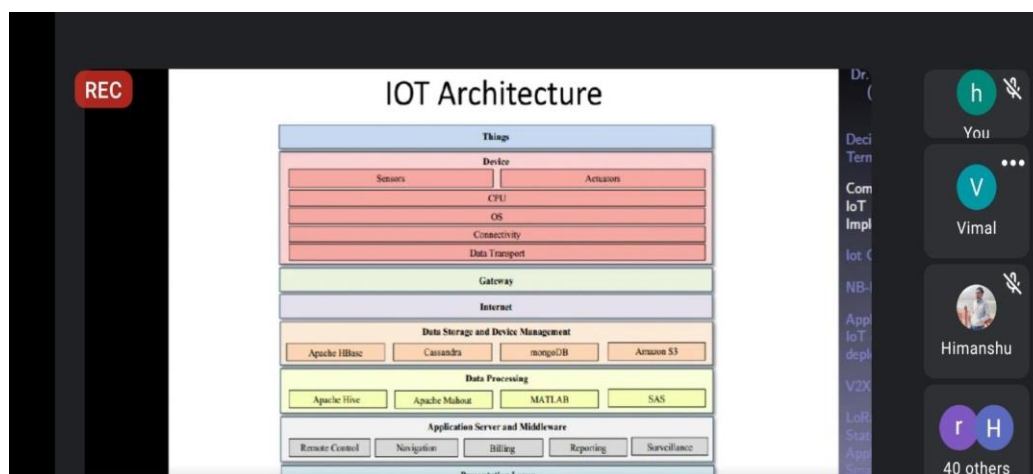




## Poornima College of Engineering - Activity Report - 2020-21



Session V (11:45 am– 1:45 pm)



Session VI (2:00 pm– 4:00 pm)

A screenshot of a presentation slide titled 'Sensors'. The slide content includes:
 

- The selection of sensors greatly impacted by many factors, including:**
  - Purpose (Temperature, Motion, Bio... etc.)
  - Accuracy
  - Reliability
  - Range
  - Resolution
  - Level of Intelligence (dealing with noise and interference)
- The driving forces for using sensors in IoT today are new trends in technology that made sensors cheaper, smarter and smaller.**

 The slide is shown in a video player interface with a 'REC' button and a list of participants on the right.

Session VI (2:00 pm– 4:00 pm)

**Direct Topology: Torus**

Alpana joined

### Session VII (9:30 am– 11:30 am)

**Extension to Fault-tolerance**

According to the statistics\* from 2003 – 2020, the number of published articles on Fault-tolerant Network-on-Chip considering faults in different components of NoC.

35% 9% 56%

Core faults Router faults Link faults

Mapping Routing

Mesh Mesh-of-Tree Butterfly-Fat-Tree Torus Algorithm Regular topology Irregular topology

Soumya joined

### Session VII (9:30 am– 11:30 am)

**IoT:**

- Internet Technology connecting devices, machines and tools to the internet by means of wireless technologies.
- Over 9 billion 'things' connected over internet as of now.
- 'Things' connected to internet are projected to cross 20 billion in the near future.
- Unification of technologies such as low-power embedded systems, cloud computing, big-data, machine learning and networking.

Meeting details

People (27)

IN CALL

- Dr. Anila Dhingra (You)
- Alpana
- Amarjeet Kumar Patel
- Aniket PCE18EC008
- Anurag PCE/17/EC/017
- Dr. Ashok Kajla
- Dr. Garima Mathur

### Session VIII (11:45 am– 1:45 pm)

REC N Naman Garg is presenting

### Origin of Terminology

- In the 2000s, we are heading into a new era of ubiquity, where the 'users' of the internet will be counted in billion and where humans may become the minority as generators and receivers of traffic.
- Instead, most of the traffic will flow between devices and all kind of 'things', thereby creating a much wider and more complex Internet of Things.

("The Internet of Things" ITU Internet Report 2005)

Meeting details

People (30) Chat

Add people

IN CALL

- Dr. Anila Dhingra (You)
- Adhaar Saxena PCE17E...
- Alpana
- Amarjeet Kumar Patel
- Aniket PCE18EC008
- Anurag PCE17/EC/017
- chitrika PCE18EC021

Dr. Garima M... Naman Garg mohit PCE18... Alpana Kusum Jain Tarun PIET/1... chitrika PCE1...

Meeting details

Naman\_bio (1).docx Naman\_bio.docx

Show all

## Session VIII (11:45 am– 1:45 pm)

REC S Soumya J is presenting

### Challenges and Opportunities: On-chip Networks in Multiprocessor Environment

as part of  
TEQIP-III Sponsored one-week Faculty Development Program on "Hands on session on Interfacing of Digital and Analog I/O Devices with Node MCU, Controlling Devices using Mobile Application"

by  
Dr. Soumya J

Email: soumyaj@hyderabad.bits-pilani.ac.in

Meeting details

People (9) Chat

Add people

IN CALL

- Dr. Anila Dhingra (You)
- Dr. Ashok Kajla
- Dr. Garima Mathur
- Dr. Payal Bansal
- harsh PCE18EC027
- Soumya J
- Soumya J Presentation

S Soumya J Dr. Garima M... SOURABH G... Dr. Ashok Kaj... Tarun Mishra harsh PCE18... Dr. Payal Ban...

Meeting details

Naman\_bio (1).docx Naman\_bio.docx

Show all

## Session IX (2:00 pm– 4:00 pm)

REC S Soumya J is presenting

### A Decade ago....

Custom 1990 Shared bus 1995 Hierarchical bus 2000 Bus matrix 2005 Networks on chips? 2010

Time

https://www.ee.ryerson.ca/~courses/coe838/lectures/NoC-SoC-Interconnections.pdf

Meeting details

People (10) Chat

Add people

IN CALL

- sushant PCE18EC5...
- Marish Sharma
- Marisha Kumawat
- SOURABH GUPTA
- apoorva PCE18EC0...
- harsh PCE18EC028
- riya PCE18EC054
- HITESH RAMESH P...

Dr. Garima Math... and 10 more

11:56 AM

S Soumya J M Marish Sharma M Marisha Kumawat S SOURABH GUPTA a apoorva PCE18EC0...

Meeting details

Brief\_CV\_AMJ\_wit...pdf Naman\_bio (1).docx Naman\_bio.docx

Show all

## Session IX (2:00 pm– 4:00 pm)



REC Amit Joshi is presenting 2:51 PM

### Invasive vs Non-invasive

Meeting details

Brief\_CV\_AMJ\_wit...pdf Naman\_bio (1).docx Naman\_bio.docx

## Session X (9:30 am– 11:30 am)

REC Amit Joshi is presenting 2:52 PM

### Self Glucose Measurement

- ❖ The continuous monitoring and telemedicine for the control
- ❖ The people needs to put conscious efforts using various self-care device to control them in daily life
- ❖ Non-invasive approach is useful to eliminate the process of pricking in the body which helps for continuous health monitoring
- ❖ In order to mitigate the issues, we present a non-invasive iGLU device with Internet of Medical Things (IoMT) framework to provide the state of art solution for smart healthcare.

Meeting details

Brief\_CV\_AMJ\_wit...pdf Naman\_bio (1).docx Naman\_bio.docx

## Session X (9:30 am– 11:30 am)

REC Kusum Jain is presenting

### Current use of technology in agriculture in India

- Andhra Pradesh government launched aerial seeding program in August 2015, in association of Indian Navy helicopters[42]. Contemporary Chief Minister Chandrababu Naidu also announced a massive scale aerial seeding with Civil Aviation Ministry in June 2016.
- Vikas Education Trust, Karnataka in June 2016 started a program of tree-planting drive drop 1 lakh saplings, in Western Ghats to increase the trees in forest. June 5, 2017 on World Environment Day.
- Scientist from IISc professor KPJ Reddy with Dr H N Science Centre, and the Department of Forest, also done a trial for drone-seeding banks of river Phakini in the Gaubidanur area in Karnataka's Kolar district
- One more example for the specific use - AgriDrones was in Maharashtra where plant health was diagnosed by using drone for sugarcane farmer Babasaheb Towde's using AgriDrones which captured data with Normalised Difference Vegetation Index and RGB sensors from 3Thi Robotics from Bengaluru.
- Syngenta-Skyrak an AgriDrones provider works from 2017 on a project to count the number of germinated seedlings and plants across corn farms, using Syngenta, with an intent to see how to increase productivity. Skyrak Drone also provide drone for Physical Dimension of fields.
- Some of private market players like Pigeon Innovative, Mumbai which was working for design and manufacture of drones for photography started working on AgriDrones and already running a few pilot projects.
- SkyMap Global, Jaipur Rajasthan an organization working for Earth observation and analytics providing the services to use drone with imaging for farmer of Maharashtra, Gujarat and Telangana with very nominal charges as Rs400-600 per acre.

Meeting details

People (32) Chat

Add people

IN CALL

Dr. Anila Dhirga (You) aayushi PCE18EC001 aditi PCE18EC004 Amarjeet Kumar Patel ananya PCE18EC007 Ayush PCE17/EC/021 Dhruv PCE17/EC/025 Dr. Ashok Kaja

## Session X (9:30 am– 11:30 am)

REC K Kusum Jain is presenting

### Challenges in India

- Shortage of Skilled persons
- Land farm size
- Affordability
- Funding
- Government Policies
- Infrastructure
- Lack of awareness
- Farmers Believe and social environment

Meeting details

People (32)

Add people

IN CALL

- Dr. Anila Dhangra (You)
- aayushi PCE18EC001
- abhishek PCE18EC003
- aditi PCE18EC004
- Amarjeet Kumar Patel
- ananya PCE18EC007
- Ayush PCE/17/EC/021
- Dhruv PCE/17/EC/025

Meeting details

Raise hand

Turn on captions

Kusum Jain is presenting

## Session XI (11:45 am– 1:45 pm)

REC Dr. Satvir Singh is presenting

### Unicode Characters (6)

| Characters | Unicode                               | Name |
|------------|---------------------------------------|------|
| U+0200     | Modifier Letter Triangular Colon      |      |
| U+0201     | Modifier Letter Half Triangular Colon |      |
| U+2023     | Triangular Bullets                    |      |
| U+1093F    | Lydian Triangular Mark                |      |
| U+1F4D0    | Triangular Ruler                      |      |
| U+1F6A9    | Triangular Flag On Post               |      |

Meeting details

Raise hand

Turn on captions

Dr. Satvir Singh is presenting

## Session XI (11:45 am– 1:45 pm)

REC Dr. Satvir Singh is presenting

### HTML UTF-8

| Character | Unicode | Name                                       |
|-----------|---------|--|
| 9932      | 25A0    | BLACK SQUARE                               |
| 9933      | 25A1    | WHITE SQUARE                               |
| 9934      | 25A2    | WHITE SQUARE WITH ROUNDED CORNERS          |
| 9935      | 25A3    | WHITE SQUARE CONTAINING BLACK SMALL SQUARE |
| 9936      | 25A4    | SQUARE WITH HORIZONTAL FILL                |
| 9937      | 25A5    | SQUARE WITH VERTICAL FILL                  |
| 9938      | 25A6    | SQUARE WITH ORTHOGONAL CROSSHATCH FILL     |
| 9939      | 25A7    | SQUARE WITH UPPER LEFT TO LOWER RIGHT FILL |
| 9940      | 25A8    | SQUARE WITH UPPER RIGHT TO LOWER LEFT FILL |
| 9941      | 25A9    | SQUARE WITH DIAGONAL CROSSHATCH FILL       |
| 9942      | 25AA    | BLACK SMALL SQUARE                         |
| 9943      | 25AB    | WHITE SMALL SQUARE                         |
| 9944      | 25AC    | BLACK RECTANGLE                            |
| 9945      | 25AD    | WHITE RECTANGLE                            |
| 9946      | 25AE    | BLACK VERTICAL RECTANGLE                   |
| 9947      | 25AF    | WHITE VERTICAL RECTANGLE                   |
| 9948      | 25B0    | BLACK PARALLELOGRAM                        |
| 9949      | 25B1    | WHITE PARALLELOGRAM                        |

Meeting details

Raise hand

Turn on captions

Dr. Satvir Singh is presenting

## Session XII (2:00 pm– 4:00 pm)

## Session XII (2:00 pm– 4:00 pm)

## Session XIII (9:30 am– 11:30 am)

## Session XIII (9:30 am– 11:30 am)



The screenshot shows a Zoom meeting interface. The main window displays a presentation slide titled "IOT health care services & Applications". The slide content is as follows:

```

graph TD
    IOT[IOT in Healthcare] --> Services[Services]
    IOT --> Applications[Applications]
    
    subgraph Services
        A[Ambient assisted living]
        B[Internet of m-health]
        C[Adverse drug reactions]
        D[Community healthcare]
        E[Children health information]
        F[Wearable medical sensors]
        G[Semantic medical access]
        H[Indirect emergency healthcare]
        I[Embedded gateway configuration]
        J[Embedded context prediction]
    end
    
    subgraph Applications
        subgraph Single-condition
            K[Glucose level sensing]
            L[EKG monitoring]
            M[Blood pressure monitoring]
            N[Body temperature monitoring]
            O[Oxygen saturation monitoring]
        end
        subgraph Clustered-condition
            P[Rehabilitation systems]
            Q[Adaptation management]
            R[Wheelchair management]
            S[Investment healthcare]
            T[Smartphone healthcare solutions]
        end
    end
    
```

The meeting details panel on the right shows 28 people in the call, including Dr. Anila Dhingra (You), aarushi PCE18CS005, abhishek PCE18EC003, Adhaar Saxena PCE17..., aditi PCE18EC004, Amarjeet Kumar Patel, ananya PCE18EC007, and Aniket PCE18EC008.

### Session XIV (11:45 am– 1:45 pm)

The screenshot shows a Zoom meeting interface. The main window displays a presentation slide showing a circuit diagram with a red LED, a green wire, and a black wire connected to a breadboard. The meeting details panel on the right shows 25 people in the call, including Dr. Anila Dhingra (You), Adhaar Saxena PCE17..., AJAY GODARA, AJAY GODARA Presentation, Amarjeet Kumar Patel, Amit PCE17/EC/012, Ayush PCE17/EC/021, and Deepak.

### Session XIV (11:45 am– 1:45 pm)

The screenshot shows a Zoom meeting interface. The main window displays a presentation slide showing an Arduino Uno board with various components connected to it. The meeting details panel on the right shows 28 people in the call, including Hitesh Ramesh Parihar PCE20EC011, Amarjeet Kumar Patel, Hitesh Ramesh Parihar PCE20EC011, Himanshu Karn, Amarjeet Kumar Patel, and AJAY GODARA. A link is provided for a Tinkercad project: <https://www.tinkercad.com/things/5gPw313vD5-jed-testing/edit?sharecode=Hf6nyW0xckl09mMcNfL>.

### Session XV (2:00 pm– 4:00 pm)

The screenshot shows a Zoom meeting interface. The main window displays a presentation slide titled "Types of Sensors" with a list of classification aspects: Application Based (Industrial, Automotive), Output Based (Resistive, Differential, Voltage), and Parameter Sensing Based (Light, Temperature). The slide is attributed to "By Rajender" and dated "1/22/2021". The top status bar indicates "Bikash Chandra Sahana is presenting" and "rkumar is presenting". The right sidebar shows a grid of participants including Himanshu Kam, Tarun Mishra, Ananya PCE18EC007, Amarjeet Kumar Pa..., Manish Sharma, Dr. Garima Mathur, Ishita PCE17EC032, and Aniket PCE18EC008.

**Types of Sensors**

- A sensor is classified based on various aspects such as
  - Application Based: Industrial Sensor, Automotive Sensor etc
  - Output Based : Resistive output, Differential Output, Differential output, voltage output etc
  - Parameter Sensing Based: Light, Temperature etc

Interfacing with RPi  
By Rajender  
1/22/2021

Session XV (2:00 pm– 4:00 pm)

This screenshot shows the same Zoom meeting from a different perspective. The main window displays a slide titled "RPi3 – An IoT Module" featuring an image of a Raspberry Pi 3 board. The slide footer includes "Interfacing with RPi", "By Rajender", and "1/22/2021". The top status bar remains the same. The right sidebar now shows a "Meeting details" panel with a list of 18 people in the call, including Dr. Anila Dhingra (You), Aarushi PCE18CS005, AKASH KUMAR PCE19E..., Amarjeet Kumar Patel, Aniket PCE18EC008, Dr. Garima Mathur, Dr. Payal Bansal, and Durgesh Kumar (EC,PCE).

**RPi3 – An IoT Module**

Interfacing with RPi  
By Rajender  
1/22/2021

Session XV (2:00 pm– 4:00 pm)

♦ VALEDICTORY SESSION:



RAJASTHAN TECHNICAL UNIVERSITY, KOTA

Poornima College of Engineering

TEQIP-III RTU (ATU) SPONSORED

Workshop

on

Hands on session on Interfacing of Digital and analog I/O Devices with Nodemcu,

Controlling Devices using mobile application

(January 18-22, 2021)



Date: January 22, 2021

Time: 4:00 PM

Venue: Online <https://meet.google.com/fzg-iuhc-ygt>

Q-Sheet- Valedictory Session

| S. No | Activity  | Duration | Time              |
|-------|---|----------|-------------------|
| 1.    | Welcome of Dignitaries by Dr. Anila Dhingra (Associate Prof.), PCE <ul style="list-style-type: none"> <li>Dr. Rajender Kumar, Assistant Professor, NIT, Kurukshetra (Chief Guest)</li> <li>Dr. Janki Ballabh Sharma, Associate Professor, RTU Event Coordinator</li> <li>Dr. Mahesh Bunde, Director &amp; Principal, Poornima College of Engineering, Jaipur</li> <li>Er. Pankaj Dhemla, Vice-Principal, Poornima College of Engineering, Jaipur</li> <li>Dr. Garima Mathur, HOD, ECE, Poornima College of Engineering</li> </ul> | 05 Min   | 04:00 PM-04:05 PM |
| 2.    | Feedback by Participants  | 05 Min   | 04:05 PM-04:10 PM |
| 3.    | Report on Workshop by Dr. Garima Mathur, HOD, ECE, PCE  | 05 Min   | 04:10 PM-04:15 PM |
| 4.    | Words of Wisdom by Dr. Mahesh Bunde, Director & Principal, Poornima College of Engineering, Jaipur  | 05 Min   | 04:15 PM-04:20 PM |
| 5.    | Address by Chief Guest Dr. Rajender Kumar, Assistant Professor, NIT Kurukshetra   | 05 Min   | 04:20 PM-04:25 PM |
| 6.    | Vote of Thanks by Dr. Anila Dhingra, Associate Prof., ECE, PCE  | 05 Min   | 04:25 PM-04:30 PM |



*Dr. Mahesh Bunde*  
B.E., M.E., Ph.D.  
Director  
Poornima College of Engineering  
ISI-0, FIICO Institutional Area  
Jaipur, JAIPUR

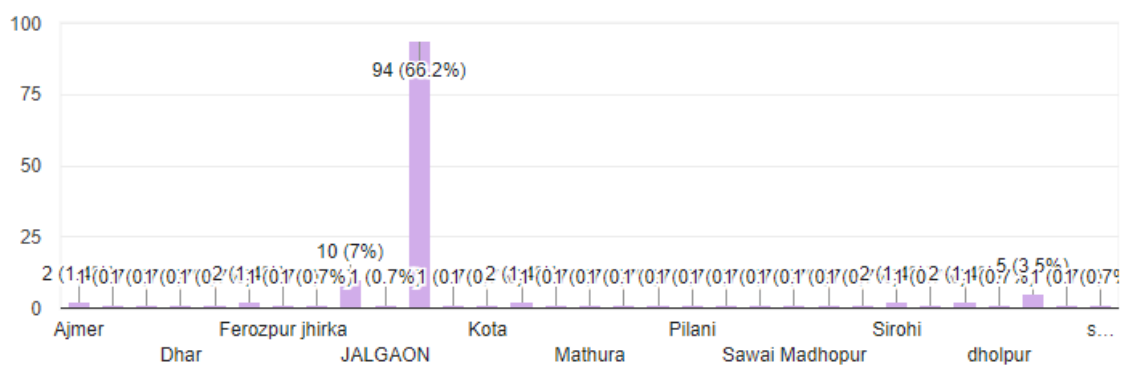


♦ LIST OF THE PARTICIPANTS:

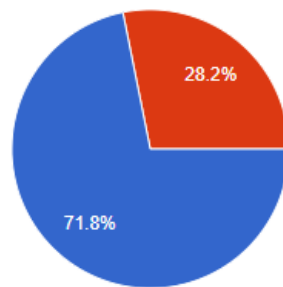
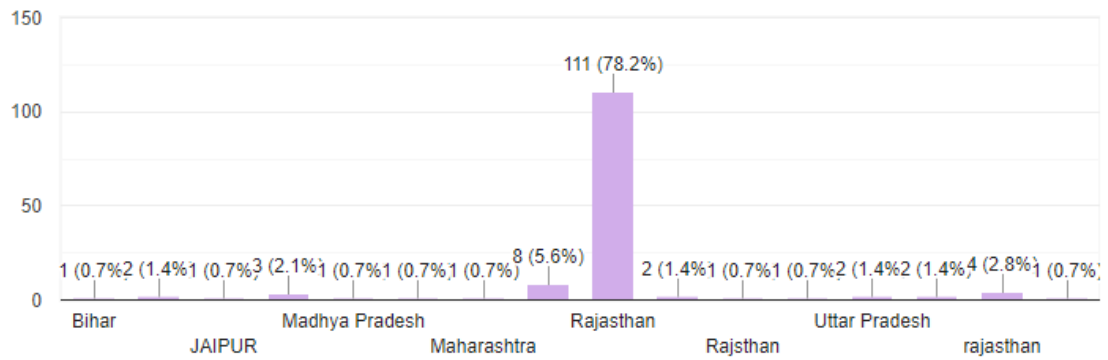
| S. No. | Name                 | Email Id                                | Address |
|--------|----------------------|---|---------|
| 1      | ANMOL PANWAR         | 2019pcemeanmol12@poornima.org           | PCE     |
| 2      | VANSH GUPTA          | 2018pceecvansh66@poornima.org           | PCE     |
| 3      | VIVEK KUMAR          | 2020pceitvivek49@poornima.org           | PCE     |
| 4      | PRADEEP SAJNANI      | 2018csccloudpradeep6941@poornima.edu.in | PCE     |
| 5      | SHREYANSH MEENA      | 2019pceceshreyansh44@poornima.org       | PCE     |
| 6      | RIYA BHARGAVA        | 2019pcecsriya141@poornima.org           | PCE     |
| 7      | TARUN JANGIR         | 2017pietctarun022@poornima.org          | PIET    |
| 8      | MANISH KUMAR SAINI   | 2017memanish5785@poornima.edu.in        | PU      |
| 9      | FARHAN KHAN          | 2020bcamaisfarhan8653@poornima.edu.in   | PU      |
| 10     | SACHIN SAURABH       | 2017pietcssachin091@poornima.org        | PIET    |
| 11     | KRATIKA JANGID       | 2020pcecskratika111@poornima.org        | PCE     |
| 12     | SHIWANG GUPTA        | shiwangtemp208@poornima.org             | PCE     |
| 13     | HARSH MALI           | 2020bcamaisharsh8471@poornima.edu.in    | PU      |
| 14     | RAHUL PUROHIT        | 2020pceitpurohit36@poornima.org         | PCE     |
| 15     | DHANISHA SHARMA      | 2018eedhanisha6671@poornima.edu.in      | PU      |
| 16     | VINOD SINGH          | 2018pceeevinod509@poornima.org          | PCE     |
| 17     | YUVRAJ SOOD          | 2020bcaaiyuvraj8676@poornima.edu.in     | PU      |
| 18     | DEV KUMAR MOT        | 2020bcamaisdev8602@poornima.edu.in      | PU      |
| 19     | MAHESH SHARMA        | 2020bcamaismahesh8559@poornima.edu.in   | PU      |
| 20     | CHAHAT JAIN          | 2020bcaitmschahat8504@poornima.edu.in   | PU      |
| 21     | ASTITVA RASTOGI      | 2020bcadsastitva8697@poornima.edu.in    | PU      |
| 22     | ADITYA SINGH RAJAWAT | 2017pcemeaditya003@poornima.org         | PCE     |
| 23     | MOHIT SONI           | 2018pceecmohit41@poornima.org           | PCE     |
| 24     | KESHAV GUPTA         | 2020bcakeshav8607@poornima.edu.in       | PU      |
| 25     | AADITYA JANGIR       | 2020pceceaaditya01@poornima.org         | PGI     |
| 26     | AADITYA JANGIR       | 2020pceceaaditya01@poornima.org         | PCE     |
| 27     | AKANSHA GUPTA        | 2019csakansha8920@poornima.edu.in       | PU      |
| 28     | NAWAF KHOKAR         | 2019ecnawaf7264@poornima.edu.in         | PU      |
| 29     | KRUNALI SHIMPI       | 2020bcomshimpi8783@poornima.edu.in      | PU      |
| 30     | HIMANSHU SHARMA      | 2020pcecehimanshu14@poornima.org        | PCE     |
| 31     | HIMANSHU SHARMA      | 2020pcecehimanshu14@poornima.org        | PCE     |
| 32     | GUNANK BANSAL        | 2020pcecsgunank67@poornima.org          | PCE     |
| 33     | PRANAV PRATAP        | 2017pceeepranav057@poornima.org         | PCE     |
| 34     | HARISH KUMAR         | 2018pietceharish10@poornima.org         | PIET    |
| 35     | AMIT KUMAR           | 2019eeamit7105@poornima.edu.in          | PU      |
| 36     | GAUTAM JESWANI       | 2019pceecgautam24@poornima.org          | PCE     |
| 37     | ANSHITA GOYAL        | 2018csccloudanshita6738@poornima.edu.in | PU      |
| 38     | KULDEEP SINGH        | 2020bcakuldeep8407@poornima.edu.in      | PU      |
| 39     | HARSHITA SHARMA      | 2019pcecsarshita705@poornima.org        | PCE     |
| 40     | AMIT KAMAR           | 2019eeamit7105@poornima.edu.in          | PU      |
| 41     | AMIT KUMAR           | 2019eeamit7105@poornima.edu.in          | PU      |
| 42     | VIKASH KUMAR         | 2018pceecvikash69@poornima.org          | PCE     |
| 43     | KHUSHI SINGHAL       | 2020bcakhushi8461@poornima.edu.in       | PU      |
| 44     | MS. SNEHA PAREEK     | 2018bcasneha6479@poornima.edu.in        | PU      |
| 45     | AMAN MUDGAL          | 2019pceecaman06@poornima.org            | PCE     |
| 46     | ARCHNA OJHA          | 2020bcaaiarchna9137@poornima.edu.in     | PU      |
| 47     | ARCHNA OJHA          | 2020bcaaiarchna9137@poornima.edu.in     | PU      |
| 48     | ABHINAV SHARMA       | 2020pceceabhinav02@poornima.org         | PCE     |
| 49     | NITU PANDEL          | 2020pcecsnitu137@poornima.org           | PCE     |
| 50     | SURAJ VISHWAKARMA    | 2018civsuraj6776@poornima.edu.in        | PU      |
| 51     | SHRISHTI JAIN        | 2020bcashrishti8732@poornima.edu.in     | PU      |

|    |                      |  |      |
|----|----------------------|--|------|
| 52 | HARSH AGRAWAL        | 2020pcecsarsh68@poornima.org           | PCE  |
| 53 | JASWANT SINGH CHANDA | 2019eejaswant7641@poornima.edu.in      | PU   |
| 54 | SNEHA BHARTI         | 2018cssneha6885@poornima.edu.in        | PU   |
| 55 | MUKUL SONI           | 2017pietecmukul013@poornima.org        | PIET |
| 56 | SUBHASH YADAV        | 2020bcamaissubhash8934@poornima.edu.in | PU   |
| 57 | VISHESH KISHORE      | 2019mevishesh2372@poornima.edu.in      | PU   |
| 58 | AKSHITA RASTOGI      | 2018pgicsakshita4@poornima.org         | PGI  |
| 59 | JAYESH CHELANI       | 2020bcaitmsjayesh8709@poornima.edu.in  | PU   |
| 60 | NITESH SHARMA        | 2019pgicsnitesh36@poornima.org         | PGI  |
| 61 | AYUSH JHANWAR        | 2018csccloudayush6602@poornima.edu.in  | PU   |
| 62 | FARHAN KHAN          | 2020pcecsfarhan60@poornima.org         | PCE  |
| 63 | PRATHAM GOYAL        | 2020btechaipratham8645@poornima.edu.in | PU   |
| 64 | SURENDER KUMAR       | 2019pceesurender30947@poornima.org     | PCE  |
| 65 | ADARSH PANDEY        | 2020bcaadarsh8977@poornima.edu.in      | PCE  |
| 66 | SANDEEP KUMAR MEENA  | 2020pcecesandeep37@poornima.org        | PCE  |
| 67 | MOHIT KESHWANI       | 2020bcamohit8566@poornima.edu.in       | PU   |
| 68 | JASWANT SINGH CHANDA | 2019eejaswant7641@poornima.edu.in      | PU   |
| 69 | ANUSHKA GUPTA        | 2018pietcsanushka22@poornima.org       | PIET |
| 70 | NARENDRA NATH        | 2019pcecenarendra34@poornima.org       | PCE  |
| 71 | AKASH KUMAR          | 2019pceecakash04@poornima.org          | PCE  |
| 72 | RAHUL SHARMA         | 2019pceecrahul52@poornima.org          | PCE  |
| 73 | AARUSHI KAUSHIK      | 2018pcecsaarushi5@poornima.org         | PCE  |
| 74 | DIGVIJAY SOLANKI     | 2017pcecedigvijay061@poornima.org      | PCE  |
| 75 | ANUJ DHAKA           | 2018pcecsanuj24@poornima.org           | PCE  |
| 76 | ROHAN GOYAL          | 2020bcadsrohan9005@poornima.edu.in     | PU   |
| 77 | CHIRAG AGARWAL       | 2019pceecchirag20@poornima.org         | PCE  |
| 78 | SHYAN WASI           | 2018pcemeshyan706@poornima.org         | PCE  |
| 79 | ATUL MEENA           | 2017pietceatul009@poornima.org         | PIET |

♦ FEEDBACK ANALYSIS / ASSESSMENT:



**Poornima College of Engineering - Activity Report - 2020-21**



- <https://chat.whatsapp.com/DLb90voGHgJI8x5KCH8iIT>
- Organizer has to add me personally as I provided my what's up number above