

# **Dr. Akhilesh Das Gupta Institute of Professional Studies New Delhi**

## ***Report on Industrial visit to Department of Electronics and Communication Engineering Students to Department of Electrical Engineering at Indian Institute of Technology Roorkee***

**Dated:** 19<sup>th</sup> February 2024

**Department:** Electronics & Communication Engineering

**Venue:** Department of Electrical Engineering at Indian Institute of Technology Roorkee.

**Objective:** To provide students with practical insights into state of Electrical Labs and the recent trends in research and Development as well as Industrial Consultancy by the Departments. It is pertinent to mention that major electronics labs are in Electrical Engineering Department at IIT's.

**Activities:** The visit comprised several activities designed to enhance students' understanding of the modern Labs and their operational processes. The activities included:

### **a. Guided Tour**

Students were given a guided tour of the electrical engineering labs where they were exposed to advanced control lab, Advanced Robotics Lab, Applied Electronics Lab, Applied Instrumentation Lab, Autonomous Vehicle Dynamics and Control Lab, Bio-Medical Instrumentation Lab, Control & Robotics Lab, Drives Simulation Lab, Electrical Measurement Lab, Electrical Science Lab, Embedded Systems Lab, Instrumentation & Signal Processing Lab, Machine Learning Lab, Microprocessor and Computer Lab, Power Electronics Lab, Power System Protection Lab, Power System Simulation Lab. They were briefed on the functioning of each technology and its significance in electronics sector.

### **b. Interactive Sessions**

Interactive sessions were conducted by experts such as from the Department of Electrical Energy. They were briefed by Prof. Barjeev Tyagi, Prof. Mukesh Pathak, Mr. Agradeep Singh, Technical Officer, Ms. Priyanshi Agarwal, Technical Officer, Mr. C. M. Joshi, Technical Officer. They covered topics related to current technological developments and industrial consultancy going on in the department. Students had the opportunity to engage with professionals, ask questions, and clarify their doubts of the equipment and their practical implementation.

### **C. Demonstrations**

Live demonstrations of advanced control lab, Advanced Robotics Lab, Applied Electronics Lab, Applied Instrumentation Lab, Autonomous Vehicle Dynamics and Control Lab, Bio-Medical Instrumentation Lab, Control & Robotics Lab, Drives Simulation Lab, Electrical Measurement Lab, Electrical Science Lab, Embedded Systems Lab, Instrumentation & Signal Processing Lab, Machine Learning Lab, Microprocessor and Computer Lab, Power Electronics Lab, Power System Protection Lab, Power System Simulation Lab with state-of -the-Art. Equipment and instruments facilities to carry out R&D and to evaluate the performance were demonstrated to

provide students with hands-on experience. They witnessed the operation gaining valuable insights into the functioning and maintenance of these systems.

**Benefit of ADGIPS in the Visit:**

The industrial visit to NISE offered numerous benefits to the students:

**a. Practical Exposure**

Students gained practical exposure to state-of-the-art the advanced control lab, Advanced Robotics Lab, Applied Electronics Lab, Applied Instrumentation Lab, Autonomous Vehicle Dynamics and Control Lab, Bio-Medical Instrumentation Lab, Control & Robotics Lab, Drives Simulation Lab, Electrical Measurement Lab, Electrical Science Lab, Embedded Systems Lab, Instrumentation & Signal Processing Lab, Machine Learning Lab, Microprocessor and Computer Lab, Power Electronics Lab, Power System Protection Lab, Power System Simulation Lab, which complemented their theoretical knowledge acquired in the classroom. The hands-on experience helped them visualize concepts and understand the intricacies of the renewable energy systems.

**b. Industry Insights**

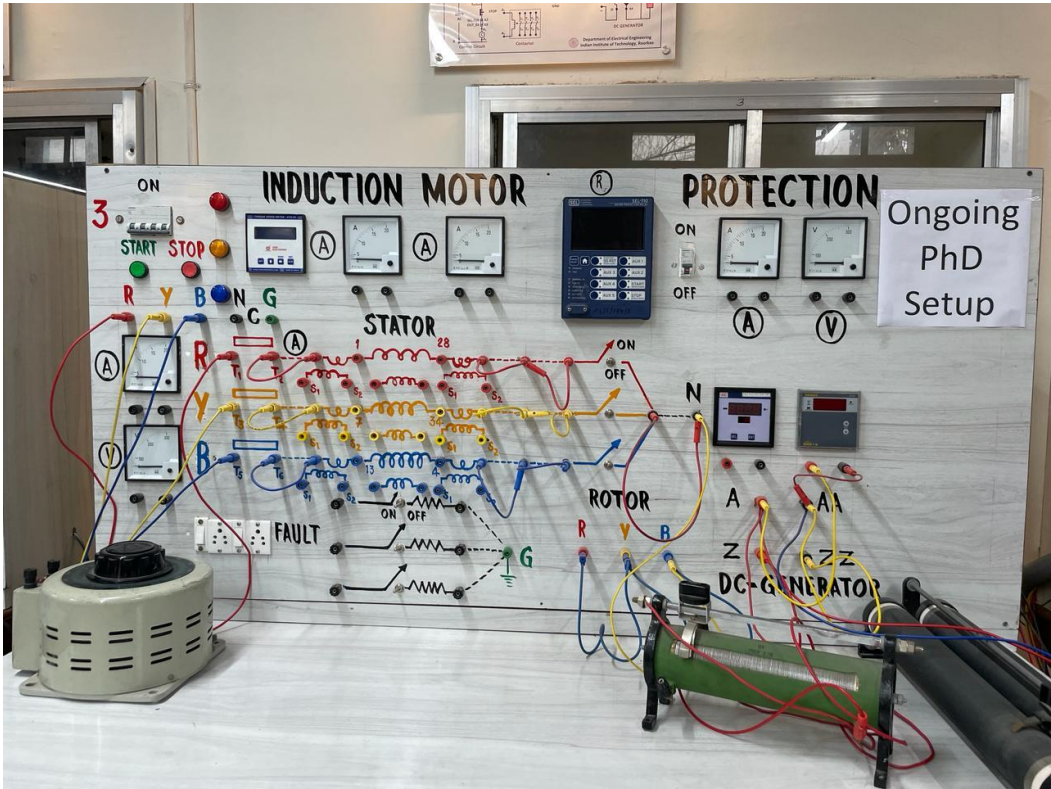
Interacting with technical experts provided students with valuable insights into the current trends, challenges, and advancements in the advanced control, Advanced Robotics, Applied Electronics, Applied Instrumentation, Autonomous Vehicle Dynamics and Control, Bio-Medical Instrumentation, Control & Robotics, Drives Simulation, Electrical Measurement Embedded Systems Instrumentation & Signal Processing Machine Learning, Microprocessor and Computer Power Electronics, Power System Protection Lab, Power System Simulation sector. They gained a deeper understanding of industry practices and emerging technologies, which can guide their future career paths.

**c. Networking Opportunities**

The visit facilitated networking opportunities with professionals and researchers working in the field of the technological development sector. Students could establish connections, seek guidance for future projects or research endeavours, and explore potential internship, research, and job opportunities in the Electronics Field.

**Photograph:**







**(Mr. Harsh Kumar)**  
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