

**Department of Electronics and Communication Engineering**

Event Name	Industrial Visit by 3rd Semester ECE Students of RV Institute of Technology and Management to Centre for Nanoscience and Engineering, IISc
Date	2 nd February, 2024
Venue	IISc, Bangalore
Audience	Faculties and UG students
Resource person	-

Objectives:

1. To familiarize students with nanofabrication processes and equipment.
2. To understand the practical applications of nanotechnology in electronics and communication.
3. To inspire students towards research and innovation in nanoscience and engineering.

Topics Covered:

- Cutting edge areas of Electronics Engineering such as VLSI and Nanofabrication and many more

Brief Report:**Activities:**

1. **Introduction to Nanotechnology:** The visit commenced with an introductory session on nanotechnology, highlighting its significance and impact on various industries. Students were briefed on the fundamentals of nanoscience and its role in advancing technology.
2. **Tour of Nanofabrication Lab:** Students were taken on a guided tour of the Nanofabrication Lab at CeNSE. They were introduced to the clean room environment and safety protocols necessary for working with nanoscale materials. The tour covered different fabrication processes, including lithography, etching, deposition, and characterization techniques.

3. **Interactive Sessions:** Throughout the visit, students engaged in interactive sessions with researchers and technical staff. They had the opportunity to ask questions, discuss ongoing projects, and gain insights into the practical aspects of nanofabrication research.
4. **Live Demonstrations:** The highlight of the visit was the live demonstrations of nanofabrication equipment and processes. Students observed the operation of advanced machinery such as electron beam lithography systems, plasma etchers, and atomic layer deposition tools, SEM, TEM, UV, PL, XPS and so forth. They learned about the precision and complexity involved in fabricating nanostructures.
5. **Applications in ECE:** Presentations were delivered on the applications of nanotechnology in the field of Electronics and Communication Engineering. Case studies and examples were shared to illustrate how nanoelectronics, nanophotonics, and nanomaterials are revolutionizing device design and functionality.

Outcomes:

1. **Enhanced Understanding:** The industrial visit deepened students' understanding of nanofabrication techniques and their relevance to ECE. They gained insights into the practical challenges and opportunities associated with working at the nanoscale.
2. **Inspiration for Research:** Many students expressed a newfound interest in pursuing research or projects in nanotechnology after the visit. Witnessing the advanced facilities and ongoing research at CeNSE inspired them to explore the possibilities of nanoscience and engineering further.
3. **Professional Networking:** Students had the chance to interact with experts and researchers in the field, expanding their professional network and gaining valuable contacts for future endeavors.

Conclusion: The industrial visit to the Centre for Nanoscience and Engineering, IISc Nanofabrication Lab, was a valuable learning experience for the third-semester ECE students of RV Institute of Technology and Management. It provided them with practical exposure to cutting-edge nanofabrication technologies and instilled a sense of curiosity and enthusiasm for research and innovation in nanoscience and engineering.



Students of 3rd semester with faculty during the Industrial Visit at CeNSE, IISc

Coordinator Signature

HOD's Signature