

Report on the Visit of MSc Physics Students to Department of Material Science & Engineering, Department of Physics and Photonics Science and Department of Electronic and Communication Engineering of National Institute of Technology (NIT) Hamirpur

On **03/05/2024**, a group of MSc Physics students from NSCBM Govt. College visited the Department of Material Science & Engineering, Department of Physics, Photonics Science and Department of Electronic and Communication Engineering of National Institute of Technology (NIT) Hamirpur. The visit was organized to provide knowledge to the students about research and development happening in the field of material science and simulations. The visit aimed to bridge the gap between theoretical knowledge and practical implementation, offering students valuable insights into real-world scientific research.

Tour of Research Labs

The main highlight of the visit was the guided tour of the research labs, where students were exposed to advanced equipment and experimental setups used in material science research.

1. **Material Science Laboratories:** In Material Science Laboratories the students observed the synthesis and characterization of nanoparticles. The labs hosts advanced instruments like the X rays Diffractometer (XRD), the Scanning Electron Microscope (SEM) and Atomic Force Microscope (AFM), FTIR, UV-Vis Spectrometer, impedance spectroscopy, Zetasizer, Ball Milling, Hydraulic Pallet Press etc. which are used to synthesize and characterize the materials at the nanoscale.
2. **Thin Film Deposition Laboratory:** Next, the students visited the Thin Film Deposition Lab, where they learned about Thermal coating system, Pulsed laser deposition techniques and spin coating etc. to fabricate thin films of various materials, which are essential in the production of semiconductors, solar cells, and other electronic devices.
3. **Electronics Laboratory:** In the Electronics Laboratory, students learned about various simulation softwares which are very helpful in theoretical research.
4. **Interaction with Researchers:** The students also interacted there with Ph.D scholars of various departments and discussed about the various research programs running in the National Institute of technology.

Conclusion

The visit to the research Labs at NIT was an enlightening experience for the MSc Physics students. It allowed them to witness the application of Physics in the development of new materials and technologies. The tour not only enhanced their understanding of material science but also inspired many to consider research opportunities in this exciting field.

