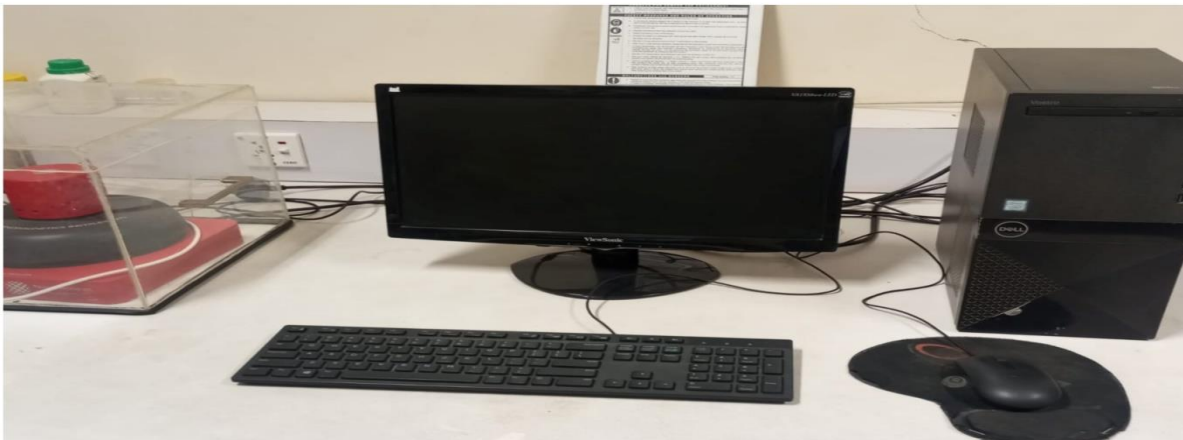




Laboratory Brief Overview

University/Institute: NED University of Engineering and Technology

Department: Metallurgical Engineering

Lab Name: Atomic Force Microscopy (AFM) Lab

Lab In-Charge: Engr. **Dr. Muhammad Ali Siddiqui**

Email: m.siddiqui@cloud.neduet.edu.pk

Lab Overview

The AFM lab is equipped with advanced instrumentation for nanoscale surface analysis. Our AFM system enables researchers to investigate surface morphology and properties of various materials. Key features of our AFM setup include:

- Tapping Mode: Allows for high-resolution imaging of surface topography with minimal sample damage.
- 2D and 3D Imaging: Provides detailed information on surface morphology in both two-dimensional and three-dimensional representations.
- Height Graph Analysis: Enables quantitative analysis of surface features, including height, roughness, and other relevant parameters.

Serving as a hub for innovative research, training, and collaboration, the Advanced Materials Laboratory continues to foster scientific advancements in the field of functional and protective coatings.

3. Research Applications / Areas

Our AFM lab supports research applications in materials science and related fields, where researchers can utilize the system to:

- Analyze surface roughness and topography of thin films, coatings, and materials.
- Study surface morphology and structure-property relationships.
- Characterize material properties at the nanoscale.

With these capabilities, our AFM lab facilitates advanced research and analysis of material surfaces, enabling researchers to gain valuable insights into their properties and behavior.