



ST. XAVIER'S COLLEGE, MAPUSA GOA

Report of Activity conducted in the Academic Year 2025-26

Name of Activity	Institutional Visit to BITS Pilani, K K Birla Goa Campus
Date/ Duration	24 th January 2026
Venue	BITS Pilani, K K Birla Goa Campus
Name of organizing Department/Cell	Department of Post Graduate Department of Physical Chemistry, St. Xavier's College.
In collaboration with	
Name/s of Faculty Co ordinator	Mrs. Rupali Neje and Ms. Fami Fernandes
Stratum of Event	College/ State/ Regional/National
Name & details of Resource Person/s if any	
Report	<p>Institutional Visit to BITS Pilani, K K Birla Goa Campus</p> <p>Post Graduate Department of Physical Chemistry of St. Xavier's College, Mapusa-Goa, conducted an Institutional Visit to BITS Pilani, K K Birla Goa Campus on 24th January 2026 for the Students of M.Sc. Part I and II. The visit was organized with the objective of providing students with practical exposure to advance analytical and characterization Instruments used in modern research laboratories. The students were accompanied by Mrs. Rupali Neje and Ms. Fami Fernandes, whose guidance ensured smooth coordination throughout the visit.</p> <p>During the visit, students were introduced to various sophisticated analytical instruments and were given detailed explanations regarding their working principles, applications, and significance in research. The first session included an overview of chromatographic techniques such as Gas Chromatography–Mass Spectrometry (GC–MS) and Liquid Chromatography–Mass Spectrometry (LC–MS). The experts explained how these instruments are used for qualitative and quantitative analysis of complex samples, and students were shown chromatograms, helping them understand peak interpretation and compound identification. In addition, instruments such as the polarimeter, X-ray diffraction (XRD) system, and Fourier Transform Infrared Spectroscopy (FTIR) were demonstrated, highlighting their importance in structural analysis, crystallinity studies, and functional group identification.</p> <p>The visit further included a tour of the Central Sophisticated Instrumentation Centre (CSIC) at BITS Pilani. This facility houses highly advanced research instruments used for nanoscale and materials characterization. Students observed the High-Resolution Transmission Electron Microscope (HRTEM) and Field Emission Scanning Electron Microscope (FESEM), where the importance of surface morphology, particle size analysis, and lattice imaging at nanometer resolution was explained. The demonstration of high-resolution X-ray diffraction equipped with a 50 MHz magnet provided insight into precise crystallographic analysis and advanced</p>

	<p>material studies.</p> <p>Additionally, students were introduced to high-resolution Nuclear Magnetic Resonance (NMR) spectroscopy, where the role of strong magnetic fields in obtaining detailed molecular structural information was discussed. The visit also included an overview of the zeta potential and Nanoparticle analyzer, emphasizing its application in determining particle size distribution and surface charge.</p> <p>Overall, the Institutional visit proved to be a highly informative and enriching experience.</p>
Brochure/Poster	NA
Photographs	https://xavierscollegegoa.ac.in/wp-content/uploads/2026/01/images-for-Institutional-Visit-to-BITS-Pilani-K-K-Birla-Goa-Campus.pdf
List of participants with signatures	https://xavierscollegegoa.ac.in/wp-content/uploads/2026/01/participants-for-Institutional-Visit-to-BITS-Pilani-K-K-Birla-Goa-Campus.pdf
Certificate	NA