ST. XAVIER'S COLLEGE, MAPUSA GOA
Report of Activity conducted in the Academic Year 2025-26

Name of Activity	**Physics Study Field Trip to BITS**
Date/ Duration	**04/02/26**
Venue	**Central Sophisticated Instrumentation Facility (CSIF), BITS Pilani – Goa Campus**
Name of organizing Department/Cell	**Department of Physics**
In collaboration with	
Name/s of Faculty Co ordinator	**Prof Bosco Lawrence (Coordinator)**
Stratum of Event	**College level**
Name & details of Resource Person/s if any	**BITS faculty**
Report	The Department of Physics organized an institutional field visit to the Central Sophisticated Instrumentation Facility (CSIF), BITS Pilani – Goa Campus, on 4th February 2026, to provide the students with an exposure to advanced research instrumentation and facilities. A total of 13 students from the department, accompanied by three faculty members—Dr. Nelson Lobo, Prof. Bosco Lawrence, and Prof. Manoj Salgaonkar participated in the field visit. The group was warmly received by Ms. Ramaya Pillai. During the visit, students had the opportunity to observe and learn about several characterization techniques used to study the properties of matter. The High Resolution Transmission Electron Microscope (HRTEM) was explained in detail, highlighting its capability to achieve magnifications of up to one million times and using high-energy electron beams generated from tungsten and chromate targets. This was followed by an introduction to the Field Emission Scanning Electron Microscope (FESEM), which operates on similar principles and is used for surface and structural analysis. The students were then introduced to the Raman Microscope, which works on the Raman effect and is used to analyze molecular and material properties. The Laser Scanning Confocal Microscope (LSCM) was also demonstrated, with

	special emphasis on its application in observing fluorescent materials and biological samples, such cancer-affected cells. In addition, students were shown several other advanced instruments, including the X-Ray Diffractometer (XRD) for crystal structure analysis, the Nuclear Magnetic Resonance (NMR) Spectrometer for molecular characterization, and the Liquid Chromatography–Mass Spectrometer (LC-MS) for chemical analysis. Overall, the field visit was a valuable and enriching experience for the students. It provided them with meaningful exposure to modern research facilities. Such visits play an important role in motivating students and enhancing their understanding of advanced concepts in research. The number of students who participated = 13
Brochure/Poster	NA
Photographs	https://xavierscollegegoa.ac.in/wp-content/uploads/2026/02/images-of-Physics-Study-Field-Trip-to-BITS.pdf
List of participants with signatures	https://xavierscollegegoa.ac.in/wp-content/uploads/2026/02/Attendance-of-Physics-Study-Field-Trip-to-BITS.pdf
Certificate	NA
Feedback	NA