



ST. XAVIER'S COLLEGE, MAPUSA GOA

Report of Activity conducted in the Academic Year 2026-27

Name of Activity	Online sessions on Advanced Data Analysis and Scientific Graphing in Origin
Date/Duration	8 th and 22 nd of August, 2026 from 12:00 noon to 1:00 pm
Venue	Room No. 210 Science Block St. Xavier's College - Mapusa
Name of organizing Department/Cell	Department of Chemistry St. Xavier's College- Mapusa
In collaboration with	
Name/s of Faculty Coordinator	Ms. Janesline Fernandes Co-Coordinator: Ms. Sheryl D'Cruz and Dr. Johnross Albuquerque
Stratum of Event	Online session for TYBSc Project documentation
Name & details of Resource Person/s If any	Mr. Shubham Vilas Warudkar Research Scholar Anand Niketan College Anandwan, Warora
Report	Driven by a commitment to empowering students through quality education and research-oriented learning, the Department of Chemistry organized a specialized two-part online workshop on "Advanced Data Analysis and Scientific Graphing in Origin," on August 8 & August 22, 2026 (Saturdays) from 12:00 PM – 1:00 PM. Designed specifically for Final Year B.Sc. (TYBSc) students, the interactive one-hour sessions aimed to equip them with essential software skills for data visualization and analysis required for their upcoming dissertation projects. Session Highlights & Topics Covered Session 1: August 8, 2026 - Exporting raw text data files for UV-Vis, IR, FTIR, and XRD spectroscopy. - Fundamental plotting techniques and customization in Origin. - High-resolution graph extraction and exporting for reports/publications. - Deconvolution and peak fitting techniques. - Applying the Debye-Scherrer equation: calculating interplanar

	spacing ,crystallite size , diffraction angle, and Full Width at Half Maximum (FWHM). • Trigonometric unit conversions (degrees to radians in software calculations). Session 2: August 22, 2026 • Determination of lattice parameters and unit cell constants. • Microstrain calculations from XRD data. • Interpreting and indexing spectra using JCPDS standard reference cards. • Interactive assessment quiz evaluating concepts covered across both sessions. Practical Exposure & Impact To ensure a hands-on learning experience, students were provided with raw experimental datasets along with access to the Origin software prior to the sessions, allowing them to practice in real time. Because most TYBSc research projects rely heavily on spectroscopic and structural characterization techniques, this workshop proved immensely beneficial. It provided students with the practical toolset needed to analyze experimental data accurately and publish high-quality scientific graphs for their project dissertations.
Brochure/Poster	https://xavierscollegegoa.ac.in/wp-content/uploads/2026/09/Poster-of-Online-sessions-on-Advanced-Data-Analysis-and-Scientific-Graphing-in-Origin.pdf
Photographs	https://xavierscollegegoa.ac.in/wp-content/uploads/2026/09/Images-of-Online-sessions-on-Advanced-Data-Analysis-and-Scientific-Graphing-in-Origin.pdf
List of participants With signatures	https://xavierscollegegoa.ac.in/wp-content/uploads/2026/09/ATTENDANCE-of-Online-sessions-on-Advanced-Data-Analysis-and-Scientific-Graphing-in-Origin.pdf
Certificate	NA