



# St. Francis

## College for Women

Begumpet, Hyderabad-500016  
(Autonomous & Affiliated to Osmania University)  
NAAC Re-accredited with 'A' Grade 4<sup>th</sup> Cycle



जैवप्रौद्योगिकी विभाग  
DEPARTMENT OF  
**BIOTECHNOLOGY**

सत्यमेव जयते

ST. FRANCIS COLLEGE FOR WOMEN, HYDERABAD

ACADEMIC YEAR 2025 - 2026

### Report on Online Hands-on workshop in “Scientific Data Analysis for Material Characterization using Origin Software”

**Date:** 17<sup>th</sup> -18<sup>th</sup> February 2026

**Time:** 6:30 PM – 8.30 PM

**Brochure:**

The brochure features the logos of St. Francis College for Women and the Department of Biotechnology. It identifies the event as a DBT STAR COLLEGE (Under Strengthening Component) activity organized by the Department of Physics. The resource person is Dr. Roopam Gaur, DST Inspire Faculty at Jawaharlal Nehru University. The workshop is titled 'Scientific Data Analysis for Material Characterization using Origin' and is scheduled for February 17 & 18, 2026, from 6:30 pm to 8:30 pm. It includes QR codes for joining the workshop and a WhatsApp group.

The Department of Physics organized an experimental workshop on “Scientific Data Analysis for Material Characterization using Origin” under DBT STAR COLLEGE (Strengthening Component) for the UG and PG students of St. Francis College for Women. Around 45 students and 12 faculty members participated in this two-day workshop. The resource person was Dr. Roopam Gaur, DST Inspire faculty, Centre for Nanomaterials, Jawaharlal Nehru University, Delhi.



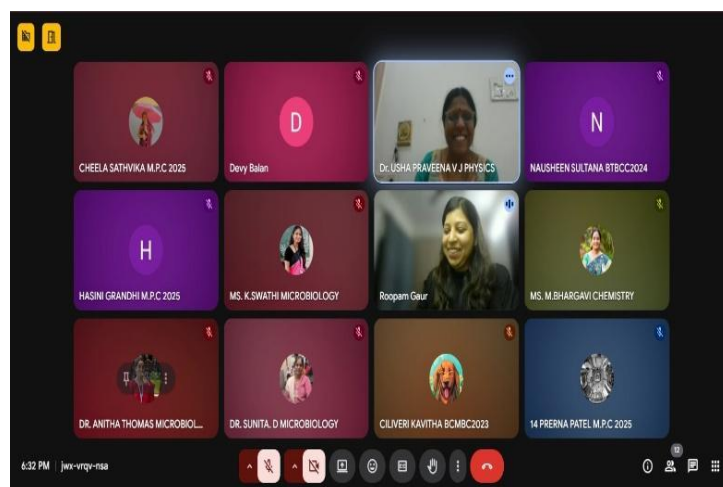
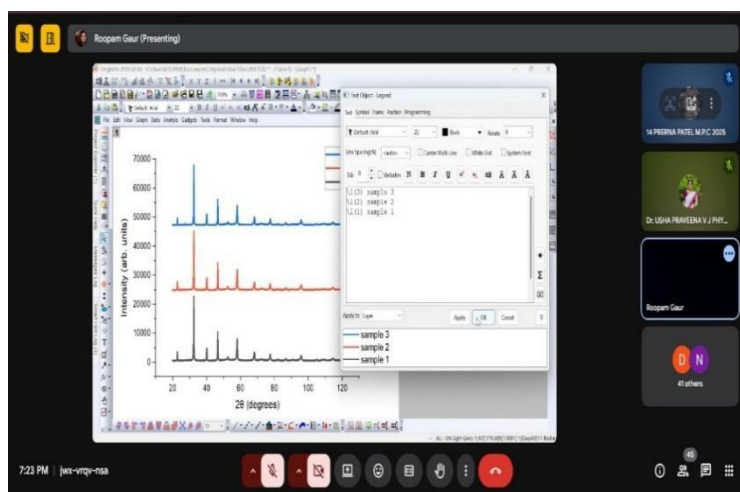
### Objectives:

1. To introduce students to Materials and Characterization Techniques, fundamentals of XRD and Introduction to SEM Principles.
2. To provide hands-on experience in Data Handling in using ORIGIN software and Image J Software.
3. To enhance understanding of Data Analysis & Interpretation and Applications in Research and Industry.

### Outcomes:

1. Students gained practical knowledge of Materials & Characterization Techniques, XRD and SEM Principles.
2. Improved understanding of Data Handling and Analysis using Origin and Imaging and Resolution Capabilities of Image J Software.
3. The demonstrative explanation strengthened basic knowledge and provided clarity in the applications in Research and Industry.

### Pictures:





सत्यमेव जयते

Roopam Geur (Presenting)

### EDS (ELEMENTAL ANALYSIS)

- Principle of EDS
- Qualitative vs quantitative
- Mapping
- Limitations (light elements, overlap peaks)

Element	Atomic %	Weight %
Pb	15.62	60.11
Ti	17.18	14.26
La	2.56	5.65
Al	2.16	1.06
O	62.28	18.82
Total	100	100

6:57 PM | jwx-vrqq-rsa

Roopam Geur (Presenting)

7:03 PM | jwx-vrqq-rsa