



Accredited with NAAC **A** Grade

12-B Status from UGC

TEERTHANKER MAHAVEER UNIVERSITY

(Established under Govt. of U. P. Act No. 30, 2008)

Delhi Road, Moradabad (U.P)

Phone No.: 0591-2476813

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Course Name: Basic Data Analysis and Interpretation Techniques in Experimental Materials Science

Course Objective: To Make PG/UG students acquainted with the basic analysis technique of data acquired through different sophisticated instruments and how to interpret the analysed data in order to write a convincing report/article

Total Duration of the Course: 60 hours (11th July 2022- 10th August 2022)

Faculty Name:

1. Dr. Diptonil Banerjee
2. Prof. S. P. Pandey
3. Dr. Amit K. Sharma
4. Dr. Parag Agarwal

Targeted Audience: UG/PG students with basic background of Physics, Chemistry and interest in Material Science

Registration Fees: Rs. 500/- for Department of Physics, TMU, Rs. 750 for TMU students, 1000 for students outside TMU students

Broad Distribution of the Course and the Faculty Name

Sl. No.	Topic	Allotted Lecture	Faculty Name
1.	Basic Theoretical Background and hand on training regarding basic of graph plotting	L1 – L8	Dr. Diptonil Banerjee Dr. Amit K. Sharma
2.	X-ray in material Science 1. X-ray Diffraction 2. X-ray photoelectron spectroscopy 3. Energy Dispersive X-ray analysis	L9 – L20	Dr. Diptonil Banerjee Prof. S. P. Pandey
3.	Spectroscopy in material Science 1. UV-Vis spectroscopy 2. FTIR spectroscopy 3. Raman Spectroscopy 4. Photoluminescence spectroscopy	L 21-L 36	Dr. Diptonil Banerjee Dr. Parag Agarwal
4.	Microscopy in material Science 1. Scanning Probe microscopy 2. Electron microscopy	L 37 –L 47	Dr. Diptonil Banerjee Dr. Amit K. Sharma
5.	Miscellaneous Analysis 1. Surface energy calculation through contact angle measurement. 2. Rate constant and reaction kinetic analysis in photo-catalysis and adsorption 3. Field enhancement and effective work function determination in cold emission	L 48 – L 54	Dr. Diptonil Banerjee
6.	Doubt clearance and evaluation	L 55 – L 60	

P. J.

Banerjee

Sharma

Agarwal

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