

Metallurgical and Materials Engineering



The Department of Metallurgical and Materials Engineering was established in 1956. The department offers undergraduate program (115 annual intake) and doctoral program since 2012. At present, twelve regular faculty members and four temporary faculties are serving the department. Twelve PhD scholars have graduated from the Department and Twenty-seven scholars are currently pursuing their doctoral work.

Funded research projects worth Rs. 1.4 crores have been completed and of the projects worth 1.6 Crore is ongoing. Six patents have been granted to the faculty members of the department so far. Department has published 160 research papers in indexed journals, conferences, and book chapters since 2012. Four international conferences and four national conferences, ten workshops and four faculty development programs have been conducted since 2015. The high-end instruments of the department serve the testing needs of various departments of the Institute, as well as nearby Institutes and Industries. Testing work worth 29.96 Lacs (2014 onwards) and consultancy work worth 6.18 Lacs (2019 onwards) have been completed by the department.

Major Research facilities:

1. X-Ray Diffraction Laboratory (PanAnalytical 3 kW X'pert Powder – Multifunctional)
2. SEM Facility (ZEISS EVO Series, Model EVO)
3. **Differential Scanning Calorimetry (Make: NETZSCH -DSC 404F3 upto 2000 °C)**
4. High-Temperature horizontal Tube Furnace (1400 °C)
5. Friction Stir welding (upgraded from Milling M/C, Make: Medha Enterprises, Kanpur)
6. Inverted Metallurgical Optical Microscope with Image Analysis software (Make: Carl Zeiss)
7. Microscopy, Model: Axio Vert A1 MAT, Qty: 01)
8. Universal Testing Machine (UTM-100 kN)
9. Digital Charpy-Impact Testing Machine
10. Wet and Dry Abrasion tester (M/S Ducom Instruments, Type TR 44)
11. CNC Wire cut EDM machine (Medha enterprises)
12. High Energy Ball Mill
13. Source measure unit (SMU, make-model: Tektronix Keithley 2450)
14. Centrifuge Instrument (Make: Eppendorf; 5702 RH, 4400 rpm max. speed)

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