Department of Metallurgy and Material Engineering

COEP Technological University Pune

(Unitary Public University of Government of Maharashtra)
(Formerly known as College of Engineering Pune)

- The department of Metallurgical Engineering was established in 1948.
- The department is known in India for excellence in technical education research, and industrial consultancy.
- NBA Accredited B.Tech. and M.Tech. Programs. Department also offers Ph.D. program.
- Faculty members with their academic research and consultancy activities in various areas of materials engineering and technology science.

VISION

- To achieve global excellence in quality of Metallurgical and Materials Engineering education imparted and become the leading Department in the nation in frontier areas of Metallurgical and Materials engineering technology that offers relevant training, research and development for the students, society, and country.

Programs	Specialization	Intake
B.Tech	Metallurgy and Material Technology	75
M.Tech	Process Metallurgy	18
M.Tech	Materials Engineering	18

Silent Features of the Programs:

- **Industry**-relevant and well-structured curriculum
- Expert **faculty** with deep domain knowledge
- Advanced facilities for **cutting-edge** research
- Hands-on, project-driven learning approach

MISSION

- **M1** : To foster creativity, innovation, productivity and build an awareness of social responsibilities in students necessary for development of the individual and the country.
- **M2** : To provide students the highest quality knowledge base and skill set of the fundamental and applied concepts of the Metallurgical and Materials engineering field towards achieving professional excellence.
- **M3** : To make the students capable of offering technical support to the industry and accept the challenges of changing modern technologies.
- **M4** : To inculcate capabilities in students to function as educators and scientist's instrumental in invention of new technologies in the country and to function as entrepreneurs.

Distinguished Alumni

Bharat Gite
CEO of Taural India

Mr. H.M.Nerurkar
Ex MD TATA Steel Jamshedpur

Mr.Sanjeev Tambolkar
Managing Director (Sanjeev Auto Parts Manufacturers Pvt. Ltd.)

Dr. N. B. Dahotre
Professor, University of North Texas USA

Core Courses Offered in the Department of Metallurgy and Material Engineering:

- Principles of Physical Metallurgy
- Materials Thermodynamics and Kinetics
- Device Materials
- Polymers and Composites
- Manufacturing of Electronic Devices
- Extractive Metallurgy
- Materials Characterization
- Iron Making
- Mineral Processing and Extractive Metallurgy
- Process Metallurgy
- Structural Metallurgy
- Modelling of Engineering Materials
- Advances in Ceramics Engineering
- Electronic and Magnetic Materials
- Nano Materials and Nano Technology
- Corrosion Engineering
- Nuclear Materials
- Engineering Polymers
- Laser Material Processing

Research Facilities

X-Ray Diffraction (XRD) Bruker, D8 Advance

- Phase Identification
- Crystalline size measurement
- Residual Stress measurement
- Failure analysis
- Investigation of defects

(FE-SEM) (up to 800000 X), Carl Zeiss

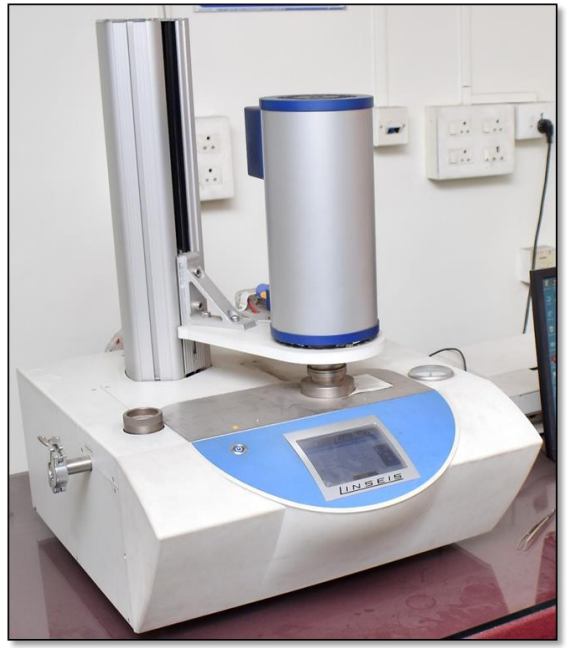
- Surface topography
- Elemental analysis (EDS)
- Microstructural analysis

FTIR 4100, JASCO

UV spectrophotometer , V630, JASCO

- Structural analysis of matrix and composite
- Identification of unknown compounds

DSC TGA, Linseis STA 1600 ,(up to 1000^{0}C)



- Caloric reactions (HDSC) include
- Enthalpy, Melting energy
- Specific heat , Glass point
- Crystallinity, Reaction enthalpy
- Thermal stability, Oxidation stability
- Aging and Purity, Phase transformation

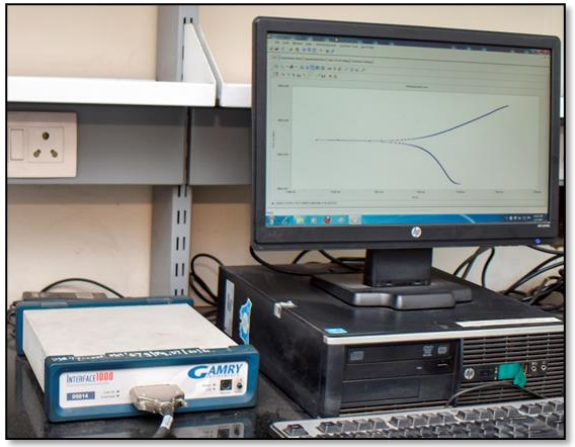
Research Facilities

Muffle furnace (up to 1700° C) Therelek

BET Surface Analyzer

- Use for surface area measurement
- Mechanical properties improvement

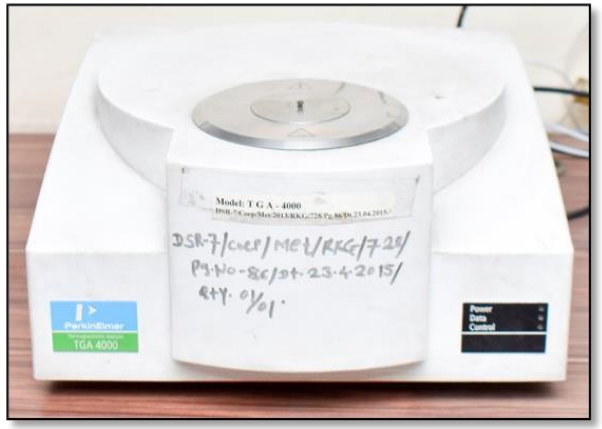
Galvanostat/ Potentiostat Interface 1000 (Gamry)



- Use for testing of physical electrochemistry,
- Electrochemical corrosion
- Paint, coatings and sensors

Cyclic Corrosion Test, Equilam

TGA 4000, Perkin Elmer



- Analysis of corrosion resistance of materials and surface coatings

(DSC)Q20, TA Instruments

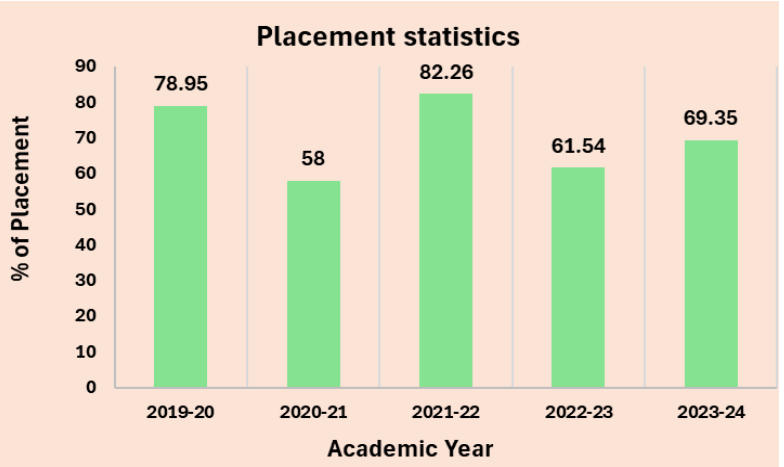
UTM (2T), Universal Motion Inc

Companies for Placement

Prominent companies:

- Tata Motors
- Vedanta
- Arcelor Mittal
- Reliance
- JSW steel
- Nippon Steel
- Aditya Birla
- Siemens PLM
- Caterpillar
- Bharat Forge
- Godrej & Boyce
- Tata Steel Downstream Products
- Maruti Suzuki
- Bajaj Finserv
- Cognizant
- Jindal Saw
- TCS
- Pratiti Technologies
- Infosys
- Acharya Academy Pvt. Ltd.

Placement Statistics



Industry and Academia collaborations

- Coventya India Pvt. Ltd.
- Cummins India Ltd.
- Ador Welding Ltd.
- ARAI
- N. D. Gupta Enterprises
- JSW Steels Ltd.
- Ghordia Steels
- Jai Hind Industries,
- AVI Oilless Die Comp.P. Ltd.
- ARAI
- DIAT
- C-MET

Faculty Achievements

- The faculty members are engaged in pioneering research, disseminating their findings through esteemed international journals.
- They actively participate in various national and international conferences, presenting their research through papers and presentations.
- Additionally, faculty members contribute to academic literature by writing book chapters.
- They have also taken part in Faculty Development Programs and training activities.
- Furthermore, the faculty secures funding from government organizations such as the DST and AICTE.
- Through sponsored and consultancy projects, the faculty provides innovative technological solutions.

Address for communication

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