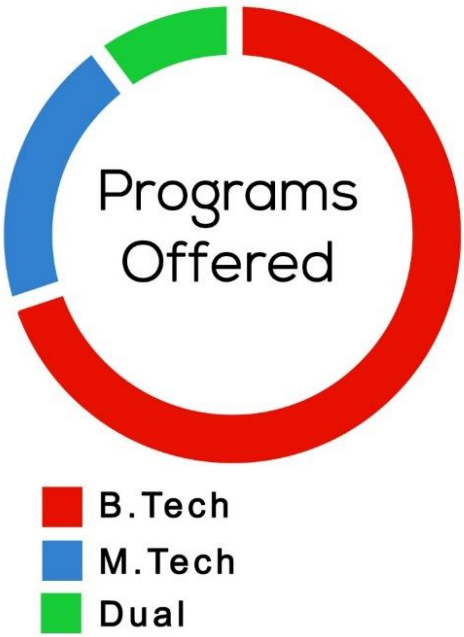
Material Science And Engineering
IIT Kanpur

Placement Brochure' 16

About Us:Materials Science and Engineering at IIT Kanpur strives to prepare technologists/engineers for developing new materials and processes for applications in variety of industries in metal and mining, automotive, chemical, aviation, plastic, biotechnology, semiconductor solar and energy sector



Relevant Courses

Metallurgical Engineering

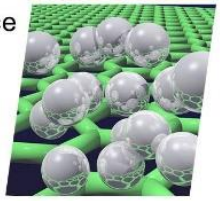
Principles of metal extraction and refining
Advances in Iron and Steel Making
Physical Metallurgy
Mechanical Behavior of Materials
Computing Applications in Metallurgy
Structure and Characterization of Materials
Metallurgical Kinetics
Materials Failure: Analysis and Prevention
Phase Transformations

Materials in Manufacturing

Materials Processing
Process Engineering
Selection & Design of Engineering Materials
Manufacturing processes
Solidification Processing and Joining
Heat Treatment and Surface Hardening
Powder Metallurgy
Fundamentals of Spray techniques

Electronic Materials

Electronic and Magnetic Prop. of Materials
Electronic Devices and Characterization
Thin Films and Device Fabrication
Energy Materials and Technologies
Electro ceramic Materials and Applications
Solid state Ionics
Computer Simulations in Materials Science
Materials For Semiconductor Industry



Bio and Nanomaterials

Introduction to Biomaterials
Materials Science Technologies for Applications in Life Sciences
Transmission Electron Microscopy and Nano Analysis of Materials
Nanostructures and Nanomaterials: Characterization and

Research Areas

Structural Materials

Structure Property Correlations
Polymers and Composites
Metals & Alloys
Ceramics

Extraction and Processing

Iron and Steel Making
Process Modelling
Extractive Metallurgy

Computational Materials Science

Materials Modelling
Molecular Dynamics Simulations
Finite Element Method

Device Materials

MultiFerroic and Magneto electric Materials
Thin Film Technology
Display Technologies
Structural Ceramics
Optical and Electronic Devices

Biomaterials

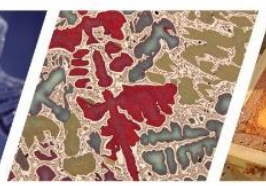
Bio-ceramics
Implant Materials

Materials Degradation

Corrosion and Oxidation
Abrasion and Wear

Metal Processing and Manufacturing

Casting
Metal Forming
Powder Metallurgy
Surface engineering



Industrial Collaboration

Ministry of steel, Govt. of India

Setting up of a comprehensive water modelling laboratory for steelmaking process analysis and design

Tata Steel

Explored the feasibility of organic solar cells and light emitting diodes on steel sheets

SAMTEL group of industries

Developed the passive matrix organic light emitting diode display for mobile application

GM Global R&D, Warren, USA

Explored development of next generation of aluminium alloys for engine applications

Sahasra Electronics Ltd.

Development of solid state lighting prototype using white organic light emitting diodes

Naval Research Board, India

Development of corrosion and wear resistant Ni and Al-based metallic glass and nano-crystalline coatings

ISRO

Development of brazing filler alloys for dissimilar metal (Ti-based Alloys with steel) brazing

Effect of heat treatment on the mechanical properties of thermo mechanically processed Russian grade 12X21H5T duplex steel

Internship

Research Internships

Caltech University
Max Plank, Germany
Universität Siegen
Hokkaido University
Tsinghua University, Beijing, China
University of Vienna
University West, Sweden
Baosteel, China
BARC
NCL
DRDO

Finance and Analytics

Deutsche Bank
Housing.com , Mumbai
Intellecap Angel Investment Network
Neuralsoft algorithmic trading
Development Bank of Singapore
AIESEC Jordan