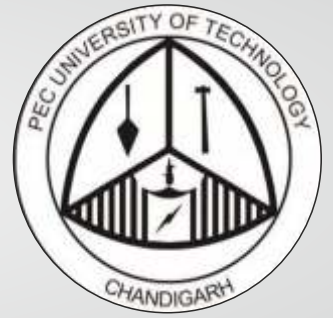




EXPLORE INNOVATION EXCEL



MATERIALS AND METALLURGICAL ENGINEERING

PEC UNIVERSITY OF TECHNOLOGY

PLACEMENT BROCHURE'16

The Department of Materials and Metallurgical Engineering, earlier Metallurgical Engineering at PEC University of Technology Chandigarh was established in 1963. It offers B.E programme in Materials and Metallurgical Engineering, M.E programme in Industrial Materials and Metallurgy and PhD programme. The B.E Programme is NBA accredited for 5 years. The Department has comprehensive curriculum that focuses on a variety of engineering materials like metallic alloys, ceramics, polymers, composites. The department has initiated a unified approach in teaching and industry interaction, through semester long industry internship, and industry-institute interaction week in each semester. This department has well equipped laboratories and highly qualified faculty. The laboratories are being constantly upgraded and course curriculum updated to match the changing needs of present day industry. The graduates of this department have always been well received by the industry and there is hardly any industrial house in the country where its alumni are not enjoying high positions.

PROGRAMS OFFERED

B.Tech.

M.Tech.

PhD



COURSES OFFERED

Basic Sciences (3 Courses)

- Mathematics
- Physics
- Chemistry

Engineering Core & Technical

- Extractive Metallurgy- Ferrous Materials
- Extractive Metallurgy- Steel Making
- Physical Metallurgy
- Mechanical Behaviour of Materials
- Phase Transformation
- Metal Casting
- Steel and Alloy Steel Making
- Cast Iron Technology
- Advance Foundry Technology
- Surface Engineering
- Material Joining Technology

Laboratory Courses (7 Courses)

Open Elective

Humanities & Social Sciences (3 Elective Courses)

- Women in Third World
- Management Concept Practices
- Micro Economics
- Entrepreneurship
- Public Administration
- Corporate Finance
- Business Environment & Industrial legislation

Discipline Core (15 Courses)

Capstone Project (2)

Capstone Project (7th Semester)

Capstone Project (8th Semester)

INDUSTRY INTERNSHIP SEMESTER (6TH SEMESTER) ORGANIZATIONS OFFERED INTERNSHIPS IN LAST 2 YEARS

INDUSTRY & RESEARCH INTERNSHIPS

Vardhman Special Steel Ltd. | LexInnova | Tata Steel, Jamshedpur | Swaraj Division, Mahindra & Mahindra Ltd. | Georgia Tech, U.S.A | Karlsruhe Institute of Technology, Germany | IMEC, Belgium | Maruti Suzuki India Limited, Gurgaon | Hindustan Zinc Limited | General Motor, Pune | Mahle Industries | BARC | DRDO

FINANCE AND ANALYTICS

JP Morgan | Amazon (Opr.) | Uber



INDUSTRIAL COLLABORATIONS

The department has been constantly striving towards collaboration with Industries and research centres in both India and abroad. Project worth more than 1.5 crores (INR) are presently undertaken in the department. Some of the leading collaborations are MHRD, DRDO, University of Birmingham, CRICK Institutions.

Besides, the department offers Industrial consultancies to many Indian firms in the areas.

In recent past, the consultancy was offered to:



RESEARCH & DEVELOPMENT

The department is one of the prime materials & metallurgical Engineering department in the country. Research in this department covers a very wide range of materials, from developing materials to improving materials and processes. The department is well equipped with state of art equipments. The research is sponsored by research organization as well industry. The research projects are interdisciplinary and focus on all materials- biomaterials, ceramics, transparent glasses, metals and composites. Over the last 5 years, the department has published more than 100 papers in International & National journals/ conferences/ seminars.

Some of our research areas include:

- Bio-Materials
- Nano-Materials
- Surface Engineering (Tribology, Carasim, Coating etc.)
- Simulation & Modelling of Materials & Process
- Composite & Ceramic Materials
- Ferrous & Non Ferrous Metallurgy

Some of the future research areas of the department

- Advanced Ferrous & Non Ferrous Metallurgy
- Materials & Devices for Health care
- Transparent Materials for Lasers
- New Functional Materials for Energy & Environment



FACILITIES

- Electrochemical Workstation
- Carl Ziess Microscope (Neophot 2)
- Metallurgical Microscope - NEOMET with image analysis system & software
- Upright and inverted Metallurgical Microscope (Russian and Indian makes)
- Hydraulic Specimen Mounting Press (Chennai metco)
- Pneumatic Mounting Press (Chennai Metco)
- J MAT PRO (ferrous alloys, 5 user licence)
- Jominey End Quench Test Apparatus (Metatech)
- Vickers Hardness Tester (FIE)
- Automatic Abrasive Cutter (Chennai Metco)
- Materials Characterization Lab
- Ultrasonic Flaw Detector
- Vicker's Hardness Tester (Wilson Make, Germany)
- Computerized Wear & Friction Monitor (Magnum)
- Digital Rockwell Hardness Tester (Chennai metco)
- Scanning electron Microscope (SEM) Jeol 840
- Computer Simulation Lab
- 15 Computers
- Melting and casting software
- Matlab software
- Auto cad software
- J Matro Software for structure property simulations in steels
- Two programmable High Temp. Muffle Furnaces (upto 1500 C)
- Programable Melting Furnace with stirrer (upto 1400 C)
- Induction Melting Furnace (Electrotherm)



- Programmable High Temp Muffle Furnace (0-1500 C)
- Micro Processor Based High Temp Muffle Furnace
- Meta Scope, Hot Air Oven
- Carbon Sulphur Apparatus
- Metallurgical Sampling Gun
- Spectrometer BAIRD Corporation Massachusetts, USA
- Digital Ph Meter
- Spinet Digital Magnetic stirrer hotplate
- Magnetic Stirrer
- Centifuge
- Mechanical Stirrer
- Oven, Ultrasonic Cator
- Double Distillation Unit
- Programmable Spin Coater
- Analytical Balance
- Constant Temperature Water Bath (5-25 C)
- Brook field Viscometer
- Three Phase Muffle Furnace (NASKAR)
- Oil Bath Furnace
- Hot Air Oven
- Laboratory Mineral Jig Machine
- Flotation Cells (Fagerrem Type)
- Flotation Cells (Denver Type)
- Wilfly Table
- Centrifugal Classifier
- Ball Mill Machine
- Rotap Sieve Shaker
- Sieve Shaking Machine
- Rotating Field Magnetic Separator
- Pot Mill/ Ball Mill
- Vibration Sieve Complete Unit
- Muffle Furnace