



భారతీయ సాంకేతిక విజ్ఞాన సంస్థ హైదరాబాద్
भारतीय प्रौद्योगिकी संस्थान हैदराबाद
Indian Institute of Technology Hyderabad

Admission
2025-26

M. Tech. in Industrial Metallurgy

a fully online program
for the working professionals



Department of Materials Science and
Metallurgical Engineering

INDIAN INSTITUTE OF TECHNOLOGY HYDERABAD



About The Program

- ❑ This program is offered by the Department of Materials Science and Metallurgical Engineering
- ❑ This online M.Tech program is specially designed for working professionals to help them master the essentials of industrial metallurgy.
- ❑ The program caters to the needs of working professionals in metallurgical, materials, and manufacturing industries who wish to upskill or reskill themselves.
- ❑ The program covers both fundamental scientific principles and applied engineering aspects. The program offers great flexibility in terms of courses. It includes a wide range of elective courses spanning across fundamental metallurgical principles, materials processing, materials testing and characterization, new-generation high-performance alloys, and computational materials engineering.
- ❑ There is no residential requirement at IIT Hyderabad. All the courses will be taught in online/hybrid mode following a flexible timetable. The course faculty may share some recorded lectures/tutorials and conduct regular on online interaction sessions as well. Students can learn at their own pace and complete the program in 4 years from the date of admission.
- ❑ This online M.Tech program is equivalent, in all respects, to the regular M.Tech programs offered by IIT Hyderabad.

Courses & Thesis Requirements

- ❑ *Credit requirement:* Candidates shall earn a total of 48 credits within 4 years from the date of admission into the program. Candidates shall complete the course credits (24 credits) within the first 3 years.
- ❑ *Thesis work:* Candidates shall complete the course work in full (24 credits) to start the thesis work. Thesis will have 24 credits, consists of two stages: a) Thesis Stage-I: 12 Credits and b) Thesis Stage-II: 12 Credits).
- ❑ Candidates are required to carry out their dissertation work using the available facilities/infrastructure in their parent organizations. Every candidate is required to identify a guide from IITH and preferably a co-guide from his/her parent organization.
- ❑ *Exit option:* After successful completion of the course work in full (24 credits), candidates may opt to leave the program and obtain an Executive MTech Degree.
- ❑ A full semester course is for 3 credits. We also offer some shorter courses for 1 and 2 credits.

Eligibility and Admission

- ❖ Working professionals in public- and private-sector industries, R&D labs, and academic institutions with more than two years of work experience and a first-class bachelor's degree (BTech, BE or equivalent) in metallurgical engineering, metallurgical and materials engineering, materials science and engineering, mechanical engineering, manufacturing engineering, production engineering, industrial engineering, chemical engineering, and allied disciplines are eligible to apply.
- ❖ Admission will be based on satisfactory performance in written test/interview.
- ❖ GATE score is not required.
- ❖ Applicants are required to submit experience and no-objection certificates at the time of written test/interview.

Metal Additive Manufacturing

Welding Processes

Casting and Solidification

Structure and Characterization of Materials

Thermomechanical Processing of Materials

Modeling & Simulation of Metallurgical Processes

Clean Steel Practices & Technologies

Powder Metallurgy Manufacturing

Electron Microscopy

Wear and Tribology of Materials

Role of Microstructure in Materials Selection and Design

Metallurgy of Welding and Additive Manufacturing

Non-Destructive Testing of Materials

Metallurgical Failure Analysis

Composite Materials

High Entropy Materials

Introduction to Computational Methods in Materials Science

Machine Learning and Data Analytics in Materials Science

Advanced Physical Metallurgy

Deformation Behaviour of Materials

Corrosion Science and Engineering

Applied Phase Equilibria and Phase Transformations

Diffusion Analysis in Materials Engineering

glimpse of some of the courses offered

How to apply

- ❑ Applications shall be submitted online.
- ❑ Please visit IITH website (www.iith.ac.in) for complete information on how to apply.

Fee Structure (follow the link given below)

<https://www.iith.ac.in/academics/fee-structure/>

Contact

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