

**Malaria National Institute of Technology Jaipur**  
**Department of Metallurgical & Materials Engineering**

**Under graduate Programme**

**Programme Outcomes (POs)**

1. Working knowledge of the fundamentals of chemistry, physics, mathematics, material science, etc. to formulate, analyze, and solve technical and engineering practical problems. PO(1)
2. Working knowledge of fundamental principles of thermodynamics and kinetics to understand the processing and development of materials. PO(2)
3. Knowledge of iron and steel making processes in detail including environmental safety and social aspects for sustainable development. PO(3)
4. Ability to design experiments, generate and analyze data, use latest characterization tools and gazettes in addressing practical Metallurgical and Materials engineering problems. PO(4)
5. Knowledge of basic computational tools to analyze and solve complex metallurgical problems. PO(5)
6. Ability to design a process or component with the help of various manufacturing technologies including practical, economical, environmental, safety considerations, ethical and social implications required for professional engineering skills. PO(6)
7. Ability to apply the knowledge of physical metallurgy in quality control, design and development in industry and research. PO(7)
8. Ability to apply the knowledge of extractive metallurgy in ferrous and non-ferrous processing industries keeping in mind of its associated societal, environmental and global impact in their professional life. PO(8)
9. Inherent leadership qualities whenever working in a group and while handling Multidisciplinary engineering projects. PO (9)
10. Acquire skills to compile data and write coherent, concise, and accurate technical reports and also deliver effective presentations. PO(10)
11. Ability to apply the knowledge of manufacturing technologies, such as rolling, forging, welding, foundry, powder technology and other processes for addressing the problems of industry. PO(11)
12. Aptitude for learning new innovative technologies including nanotechnology in Metallurgical and Materials Engineering to pursue advanced studies and research. PO(12)