



B.Tech. program in
Metallurgical and Materials Engineering
Indian Institute of Technology Patna

Semester wise courses structure

Semester – I

S. No.	Subject ID	Subject	L	T	P	C	Remark
1	CE111	Engineering Drawing	1	0	3	5	
2	EE101	Electrical Sciences	3	1	0	8	
3	HS103	Communicative English for Engineers	2	0.5	1	6	
4	MA101	Mathematics – I	3	1	0	8	
5	ME110	Workshop – I	0	0	3	3	
6	PH103	Physics – I	3	1	0	8	
7	PH110	Physics Laboratory	0	0	3	3	
TOTAL			12	3.5	10	41	

Semester – II

S. No.	Subject ID	Subject	L	T	P	C	Remark
1	CB102 and CE102	Biology and Environmental Studies	3	0	0	6	
2	CH103	Introductory Chemistry	3	1	0	8	
3	CH110	Chemistry Laboratory	0	0	3	3	
4	CS101	Programming and Data Structures	3	0	0	6	
5	CS110	Programming and Data Structures Laboratory	0	0	3	3	
6	EE102	Basic Electronics Laboratory	0	0	3	3	
7	MA102	Mathematics-II	3	1	0	8	
8	ME102	Engineering Mechanics	3	1	0	8	
TOTAL			15	3	9	45	

Semester - III

S. No.	Subject ID	Subject	L	T	P	C	Remark
1	MA201	Mathematics-III	3	1	0	8	
2	HS2XX	HSS Elective – I	3	0	0	6	
3	MM201	Introduction to Metallurgical and Materials Engineering	3	0	0	6	
4	MM203	Introduction to Mineral Processing and Raw Materials	3	0	3	9	
5	MM205	Metallurgical Thermodynamics and Kinetics	3	1	0	8	
TOTAL			15	2	3	37	

Semester - IV

S. No.	Subject ID	Subject	L	T	P	C	Remark
1	HS2XX	HSS Elective – II	3	0	0	6	
2	XX2XX	Open Elective – I	3	0	0	6	
3	MM202	Process Metallurgy	3	1	0	8	
4	MM204	Phase Transformation and Diffusion	3	1	0	8	
5	MM210	Metallography and Heat Treatment Lab	0	0	3	3	
6	MM206	Mechanical Metallurgy	3	1	0	8	
TOTAL			15	3	3	39	

Semester – V

S. No.	Subject ID	Subject	L	T	P	C	Remark
1	XX3XX	Open Elective - II	3	0	0	6	
2	MM301	Techniques of Materials Characterization	2	0	2	6	
3	MM303	Iron and Steel Making	3	0	0	6	
4	MM305	Engineering Polymers	3	0	0	6	
5	MM307	Ceramic and Glass	3	0	0	6	
6	MM311	Materials Processing Lab I	0	0	3	3	
TOTAL			14	0	5	33	

Semester – VI

S. No.	Subject ID	Subject	L	T	P	C	Remark
1	HS3XX	HSS Elective – III	3	0	0	6	
2	MM302	Thermomechanical Processing of Metallic Materials	3	1	0	8	
3	MM304	Corrosion and Degradation in Materials	3	0	0	6	
4	MM306	Functional Materials	3	0	0	6	
5	MM312	Materials Processing Lab II	0	0	3	3	
6	MM314	Mechanical Metallurgy Lab	0	0	3	3	
TOTAL			12	1	6	32	

Semester – VII

S. No.	Subject ID	Subject	L	T	P	C	Remark
1	XX4XX	Open Elective – III	3	0	0	6	
2	MM401	Environmental Sustainability and Industrial Safety	3	0	0	6	
3	MMXXX	Department Elective - I	3	0	0	6	
4	MMXXX	Department Elective - II	3	0	0	6	
5	MM431	B.Tech Project	0	0	6	6	
TOTAL			12	0	6	30	

Semester – VIII

S. No.	Subject ID	Subject	L	T	P	C	Remark
1	MMXXX	Departmental Elective-III	3	0	0	6	
2	MMXXX	Departmental Elective-IV	3	0	0	6	
3	MM432	B.Tech Project	0	0	18	18	
TOTAL			6	0	18	30	

Total Credit: 287