



Maulana Azad National Institute of Technology, Bhopal-462003

Department of Materials and Metallurgical Engineering

New Codes for Materials Science and Technology (MTech) Program

First Semester:

Course No.	Subject	Schemes of studies periods per week			Total Credits
		L	T	P	
MM MT 1101	Advanced Materials Processing	3	-	-	3
MM MT 1102	Thermodynamics and Kinetics of Materials	3	-	-	3
MM MT 1103	Advanced Characterization Techniques	3	-	-	3
MM MT 1151-	Department Elective-1	3	-	-	3
MM MT 1159	Department Elective-2	3	-	-	3
MM MT 1104	Materials Processing Lab	-	-	2	1
MM MT 1105	Materials Characterization Lab.	-	-	2	1
MM MT 1106	Seminar-I	-	-	2	1
MM MT 1107	Minor Project-1(Self Learning)				2
HS 1101	Communication Skills (Audit Course)	-	-	-	-
Total Hours: 23 Total Credits: 20		Total Semester Credits			20

Second Semester:

Course No.	Subject	Schemes of studies periods per week			Total Credits
		L	T	P	
MM MT 1201	Phase Equilibria and Phase Transformations	3	-	-	3
MM MT 1202	Computational Materials Science	3	-	-	3
MM MT 1251-	Department Elective-3	3	-	-	3
MM MT 1259	Department Elective-4	3	-	-	3
	Open Elective	3	-	-	3
MM MT 1203	Phase Equilibria and Phase Transformation Lab	-	-	2	1
MM MT 1204	Computational Materials Lab	-	-	2	1
MM MT 1205	Seminar-II	-	-	2	1
MM MT 1206	Minor Project-2(Self Learning)				2
Total Hours: 23 Total Credits: 40		Total Semester Credits			20

Third Semester:

Course No.	Subject	Schemes of studies periods per week			Total Credits
		L	T	P	
MM MT 2101	Dissertation Phase-I	-	-	40	20
Total Hours: 40 Total Credits: 60		Total Semester Credits			20

Fourth Semester:

Course No.	Subject	Schemes of studies periods per week			Total Credits
		L	T	P	
MM MT 2201	Dissertation Phase-II	-	-	40	20
Total Hours: 40 Total Credits: 80		Total Semester Credits			20

List of Program Electives A		List of Open Electives C	
Department Elective-1 & 2			
MM MT 1151	Powder Processing of Materials		
MM MT 1152	Semiconductors and Devices		
MM MT 1153	Additive Manufacturing Technology		
MM MT 1154	Advanced Composite Materials		
MM MT 1155	Advanced Casting and Solidification		
MM MT 1156	Computational Welding Mechanics		
MM MT 1157	Energy Storage Materials		
MM MT 1158	Non-equilibrium processing of materials		
MM MT 1159	Research Methodology		
Department Elective-3 & 4			
MM MT 1251	Corrosion Science and Engineering		
MM MT 1252	High Temperature Materials		
MM MT 1253	Nanotechnology Science and Applications		
MM MT 1254	Advanced Magnetic Materials and Their Applications		
MM MT 1255	Advanced Metal Forming Techniques		
MM MT 1256	Multi-Functional Materials		
MM MT 1257	Advanced Joining Technologies		
MM MT 1258	Hydrogen Energy: Production, Storage, and Applications		
MM MT 1259	Solidification Processes		