Appendix-

DEPARTMENT OF METALLURGICAL AND MATERIALS ENGINEERING
INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

Program Code: **40** **M.Tech. (Materials Engineering)**
Department: **MT** **Metallurgical and Materials Engineering**
Year: **I**

Teaching Scheme					Contact Hours/Week			Exam Duration		Relative Weight (%)				
S. No.	Subject Code	Course Title	Subject Area	Credits	L	T	P	Theory	Practical	CWS	PRS	MTE	ETE	PRE
Semester- I (Autumn)														
1.	MA-501F	Numerical Methods, Probability and Statistics	PCC	4	3	1	0	3	0	25	-	25	50	-
2.	MTN-501	Structure of Materials	PCC	4	3	1	0	3	0	25	-	25	50	-
3.	MTN-503	Characterization of Materials	PCC	4	3	0	2	3	0	15	25	20	40	-
4.		Program Elective-I	PEC	4	3	1	0	3	0	25	-	25	50	-
5.		Program Elective-II	PEC	4	3	1	0	3	0	25	-	25	50	-
		Total		20	9	2	2							
Semester-II (Spring)														
1.	MTN-502	Modelling, Simulation and Computer Applications	PCC	4	3	0	2	3	0	15	25	20	40	-
2.	MTN-504	Phase Transformation	PCC	4	3	1	0	3	0	25	--	25	50	-
3.	MTN-700	Seminar	SEM	2	-	-	-	-	-	-	-	-	100	-
4.		Program Elective-III	PEC	4	3	1	0	3	0	25	-	25	50	-
5.		Program Elective-IV	PEC	4	3	1	0	3	0	25	-	25	50	-
		Total		18	6	1	2							

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Program Code: **40** **M.Tech. (Materials Engineering)**
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Year: **II**

Teaching Scheme					Contact Hours/Week			Exam Duration		Relative Weight (%)				
S. No.	**Subject Code**	**Course Title**	**Subject Area**	**Credits**	**L**	**T**	**P**	**Theory**	**Practical**	**CWS**	**PRS**	**MTE**	**ETE**	**PRE**
Semester- I (Autumn)														
1.	MTN-701A	Dissertation Stage–I (to be continued next semester)	DIS	12	-	-	-	-	-	-	-	-	100	-
		Total		12										
Note: Students can take 1 or 2 audit courses as advised by the supervisor, if required.														
Semester-II (Spring)														
1.	MTN-701B	Dissertation Stage–II (contd. From III semester)	DIS	18	-	-	-	-	-	-	-	-	100	-
		Total		18										

Summary				
Semester	1	2	3	4
Semester-wise Total Credits	**20**	**18**	**12**	**18**
Total Credits	**68**			

Program Elective Courses (Materials Engineering)

Teaching Scheme					Contact Hours/Week			Exam Duration		Relative Weight (%)				
S. No.	Subject Code	Course Title	Subject Area	Credits	L	T	P	Theory	Practical	CWS	PRS	MTE	ETE	PRE
Electives I-II (Autumn)														
1.	MTN-513	Engineering Ceramics	PEC	4	3	1	0	3	0	25	-	25	50	-
2.	MTN-522	Composite Materials	PEC	4	3	1	0	3	0	25	-	25	50	-
3.	MTN-511	Thin Film Technology	PEC	4	3	1	0	3	0	25	-	25	50	-
4.	MTN-531	Electronic Materials	PEC	4	3	1	0	3	0	25	-	25	50	-
5.	MTN-517	High Temperature Materials	PEC	4	3	1	0	3	0	25	-	25	50	-
Electives III-IV (Spring)														
1.	MTN-542	Biomaterials	PEC	4	3	1	0	3	0	25	-	25	50	-
2.	MTN-516	Principles of Materials Selection	PEC	4	3	1	0	3	0	25	-	25	50	-
3.	MTN-530	Nanomaterials and Applications	PEC	4	3	1	0	3	0	25	-	25	50	-
4.	MTN-528	Tribology of Engineering Materials	PEC	4	3	1	0	3	0	25	-	25	50	-
5.	MTN-558	Energy Storage Materials	PEC	4	3	1	0	3	0	25	-	25	50	-