

DEPARTMENT OF METALLURGICAL ENGINEERING AND MATERIALS SCIENCE
Credit Structure and semester-wise scheduling of courses for M.Tech. Programme

Specialization: **Corrosion Science & Engineering**

CREDITS					
Course Work	Sem. I	Sem. II (Incl. Summer)	Sem. III	Sem. IV	Total Credits
Core Courses	18	6	-	-	24
Elective	12	12	6	-	30
Ins. Elective	-	6		-	06
Lab. Course	4	-	-	-	04
Seminar	-	4	-	-	04
R&D Project	-	-	-	-	00
Communication Skills (***)	-	6	-	-	06
Training	-	-	-	-	00
Course Total	34	28+6	6	-	68+6
Project	-	-	50	40	90
Total Credits	34	28+6	56	40	158+6

(**) No outside department course is proposed as compulsory. However, the candidate may choose courses from outside the department as a part of the electives in consultation with the guide. (***) PP/NP only

Semester I

Course No.	Course Name	L	T	P	C
MM 713	Aqueous Corrosion and its Control	3	0	0	6
MM 695	High Temperature Corrosion	3	0	0	6
MM 732	Structural Characterization of Materials	3	0	0	3
		(Half Semester Course in the first half)			
MM 729	Characterization of Materials for Corrosion Control	3	0	0	3
		(Half Semester Course in the second half)			
MM 699	Corrosion Laboratory	0	0	4	4
	Restricted Elective-I	3	0	0	6
	Department Open Elective 1	3	0	0	6
	Total Credits	34			

PP/NP Course , L – Lecture, T – Tutorial, P – Practical, C – Credit

II Semester

MM 650	Protective Coatings	3	0	0	6
MM 694	Seminar	0	0	4	4
MM 899	Communication and Presentation Skills	1	2	0	6
	Restricted Elective - II	3	0	0	6
	Department Open Elective 2	3	0	0	6

	Institute elective	3 0 0 6
	Total Credits	28+6

III Semester

	Department Open Elective 3	3 0 0 6
MM 797	Project Stage-I	50
	Total Credits	56

IV Semester

MM 798	Project Stage-II	40
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Restricted Electives:

Course No.	Course Name	L	T	P	C
MM 717	Electrochemical Materials Science	3	0	0	6
MM 712	Advances in Design and Corrosion Control for Industries	3	0	0	6
MM 651	Thermodynamics of Materials	3	0	0	6
MM 677	Diffusion and Kinetics	3	0	0	6
MM 685	Electrical Materials: fundamentals and applications	3	0	0	6
MM 730	Topics in Mechanical Behavior of Materials	3	0	0	6
MM 684	X-ray diffraction and Electron Microscopy	3	0	0	6
MM 759	Structure and Defects	3	0	0	6

Students opting to convert from M.Tech. to Ph.D. must take any two courses from sl. no. 3-8 from the restricted list.

Department Open Electives					
MM 680	Welding Science & Technology	3	0	0	6
MM 453	Engineering Polymers and Composites	2	0	1	6
MM 409	Colloidal & Interfacial Science	3	0	0	6
MM 655	Modeling & Analysis	3	0	0	6
MM 641	Numerical Methods in Materials Processing	3	0	0	6
MM 724	Plasma Processing of Materials	3	0	0	6
More electives from other specializations					