

**DEPARTMENT OF MECHANICAL AND INDUSTRIAL ENGINEERING
INDIAN INSTITUTE OF TECHNOLOGY ROORKEE**

Program Code: **38** **M. Tech. (Welding Engineering)**
 Department: **ME** **Mechanical and Industrial Engineering**
 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.	MI-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.	MI-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 (Welding 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
1.	MI-500	Instrumentation and Experimental Methods	PEC	4	3	1	2/2	3	--	20	20	20	40	--
2.	MI-593	Non-Conventional Welding Processes	PEC	4	3	1	2/2	3	--	20	20	20	40	--
3.	MI-594	Safety Aspects of Welded Structures	PEC	4	3	1	0	3	--	25	--	25	50	--
4.	MI-595	Failure Analysis of Weld Joints	PEC	4	3	1	2/2	3	--	20	20	20	40	--
5.	MI-596	Automation and Applications of Robots in Welding	PEC	4	3	1	0	3	--	25	--	25	50	--
6.	MI-597	Welding Procedures for Specific Applications	PEC	4	3	1	0	3	--	25	--	25	50	--
7.	MI-598	Weldability of Metals	PEC	4	3	1	0	3	--	25	--	25	50	--
8.	MI-599	Surface Engineering	PEC	4	3	1	2/2	3	--	20	20	20	40	--
9.	MI-609	Solid state joining processes	PEC	4	3	1	2/2	3	--	20	20	20	40	--
10.	MI-610	Laser Material Processing	PEC	4	3	1	2/2	3	--	20	20	20	40	--