

I M.TECH. Mechanical Engineering Design

SEMESTER - I

S.No.	Subject Code	Subject	Hours per Week			Th. Credit	Pr. Credit	Maximum Marks				
			L	T	P			TH	CW	SW	Pr.	Total
1	ME80001	Advanced Machine Design	3	-	-	3	-	70	30	-	-	100
2	ME80002	Finite Element Analysis	3	-	-	3	-	70	30	-	-	100
3	ME80003	Computer Aided Design	3	-	-	3	-	70	30	-	-	100
4		Elective I	3	-	-	3	-	70	30	-	-	100
5		Elective II	3	-	-	3	-	70	30	-	-	100
6	ME84451	Machine Design Lab.	-	-	4	-	2	-	-	40	60	100
7	ME84452	Modelling and Simulation Lab.	-	-	4	-	2	-	-	40	60	100
8	ME84498	Comprehensive Viva	-	-	-	-	-	-	-	-	100	100
Total			15	0	8	15	4	350	150	80	220	800

SEMESTER - II

S.No.	Subject Code	Subject	Hours per Week			Th. Credit	Pr. Credit	Maximum Marks				
			L	T	P			TH	CW	SW	Pr.	Total
1	ME84501	Advanced Vibrations and Acoustics	3	-	-	3	-	70	30	-	-	100
2	ME84502	Tribology in Design	3	-	-	3	-	70	30	-	-	100
3	ME84503	Advanced Stress Analysis	3	-	-	3	-	70	30	-	-	100
4		Elective III	3	-	-	3	-	70	30	-	-	100
5		Elective IV	3	-	-	3	-	70	30	-	-	100
6	ME84851	Vibration and Mechatronics Lab.	-	-	4	-	2	-	-	40	60	100
7	ME84852	Tribology and Exp. Stress Analysis Lab.	-	-	2	-	1	-	-	40	60	100
8	ME84881	Minor Project/Seminar-I	-	-	2	-	1	-	-	50	-	50
9	ME84898	Comprehensive Viva	-	-	-	-	-	-	-	-	100	100
Total			15	0	8	15	4	350	150	130	220	850

I M.TECH. Mechanical Engineering Design
List of Electives

Elective I		Semester I
S.No	Subject Code	Subject
1	MA8420 1	Advanced Mathematical Methods in Engineering
2	ME8420 2	Advanced Engineering Materials
3	ME8420 3	Machine Tool Design
4	ME8420 4	Analysis and Synthesis of Mechanism

Elective II		Semester I
S.No	Subject Code	Subject
1	ME8430 1	Design for Manufacturing and Assembly
2	ME8430 2	Robotics
3	ME8430 3	Fracture Mechanics
4	ME8430 4	Hydraulic and Pneumatic Control

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List of Electives

Elective III		Semester II
S.No	Subject Code	Subject
1	ME8470 1	Advanced Finite Element Methods
2	ME8470 2	Condition Monitoring of Machines
3	ME8470 3	Mechatronics and Automation
4	ME8470 4	Mechanics of Composite Materials

Elective IV		Semester II
S.No	Subject Code	Subject
1	ME8475 1	Quantitative Techniques
2	ME8475 2	Experimental Stress Analysis
3	ME8475 3	Optimization Techniques in Design
4	ME8475 4	Bio Mechanics

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SEMESTER - III

S.No.	Subject Code	Subject	Hours per Week			Th. Credit	Pr. Credit	Maximum Marks				
			L	T	P			TH	CW	SW	Pr.	Total
1	ME8493	* Industrial Training/Term Paper/Seminar-II	-	-	8	-	4	-	-	50	-	50
2	ME8493	Dissertation Phase-I	-	-	20	-	10	-	-	40	60	100
3	MA8490	**Research Methodology & IPR	2	-	-	2	-	70	30	-	-	100
Total			2	0	28	2	14	70	30	90	60	250

* Industrial Training to be carried out between II & III Semester during vacation

** This course can be studied online with prior permission of HOD, however, End-semester examination will be conducted in the Institute.

SEMESTER - IV

S.No.	Subject Code	Subject	Hours per Week			Th. Credit	Pr. Credit	Maximum Marks				
			L	T	P			TH	CW	SW	Pr.	Total
1	ME8495	Dissertation Phase-II	-	-	32	-	16	-	-	80	120	200
Total			0	0	32	0	16	0	0	80	120	200