

## SHRI G S INSTITUTE OF TECHNOLOGY &amp; SCIENCE, INDORE

## 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	ME84500	Comprehensive Viva	-	-	-	-	-	-	-	-	Grade	Grade
<b>Total</b>			15	0	8	15	4	350	150	80	120	700

## 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	ME84900	Comprehensive Viva	-	-	-	-	-	-	-	-	Grade	Grade
<b>Total</b>			15	0	8	15	4	350	150	130	120	750

## SHRI G S INSTITUTE OF TECHNOLOGY &amp; SCIENCE, INDORE

## I M.TECH. Mechanical Engineering Design

## List of Electives

Elective I		Semester I
S.No	Subject Code	Subject
1 ✓	MA84201	Advanced Mathematical Methods in Engineering
2	ME84202	Advanced Engineering Materials
3	ME84203	Machine Tool Design
4	ME84204	Analysis and Synthesis of Mechanism

Elective II		Semester I
S.No	Subject Code	Subject
1	ME84301	Design for Manufacturing and Assembly
2	ME84302	Robotics
3	ME84303	Fracture Mechanics
4 ✓	ME84304	Hydraulic and Pneumatic Control

**SHRI G S INSTITUTE OF TECHNOLOGY & SCIENCE, INDORE**

<b>Elective III</b>		<b>Semester II</b>
<b>S.No</b>	<b>Subject Code</b>	<b>Subject</b>
1	ME84701	Advanced Finite Element Methods
2	ME84702	Condition Monitoring of Machines
3	ME84703	Mechatronics and Automation
4	ME84704	Mechanics of Composite Materials

<b>Elective IV</b>		<b>Semester II</b>
<b>S.No</b>	<b>Subject Code</b>	<b>Subject</b>
1	ME84751	Quantitative Techniques
2	ME84752	Experimental Stress Analysis
3	ME84753	Optimization Techniques in Design
4	ME84754	Bio Mechanics

## SHRI G S INSTITUTE OF TECHNOLOGY &amp; SCIENCE, INDORE

## II M.TECH. Mechanical Engineering Design

## 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	ME84931	* Industrial Training/Term Paper/Seminar-II	-	-	8	-	4	-	-	50	-	50
2	ME84932	Dissertation Phase-I	-	-	20	-	10	-	-	40	60	100
3	MA84902	**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	ME84951	Dissertation Phase-II	-	-	32	-	16	-	-	80	120	200
Total			0	0	32	0	16	0	0	80	120	200