

M. Tech. in Design Engineering (Two Years)

M. Tech. in Design Engineering - I Semester					
S. No.	Course Code	Name of Course	L-T-P	Credits	Course Type
Theory Courses					
1	MA 406 / MA 402/ MA 507	Operation, Research / Modeling and Simulation/ Optimization Techniques	3-1-0	4	GE
2	ME 501	Finite Element Methods and Analysis	3-1-0	4	CC-C57
3	ME 503	Mechatronics System Design	3-1-0	4	CC-C58
4		(Elective I)	3-0-0	3	DSE1
5		(Elective II)	3-0-0	3	DSE2
6.		Open Elective I (Only 2 Years M. Tech.)	3-0-0	3	OE1
Practical Labs					
7	ME 521	Finite Element Methods and Analysis Lab	0-0-3	2	CC-C59
8	ME 500	Seminar	0-0-3	2	SEC
9	GP	General Proficiency		NC	
		Total	18-3-6	25	
		Total Contact Hours			

Open Elective: Courses from other schools

M. Tech. in Design Engineering - II Semester					
S. No.	Course Code	Name of Course	L-T-P	Credits	Course Type
Theory Courses					
1	ME 502	Industrial Tribology	3-1-0	4	CC-C51
2	ME 504	Experimental Stress Analysis	3-0-0	3	CC-C52
3	ME 506	Design of Experiments	3-1-0	4	CC-C53
4		(Elective III)	3-0-0	3	DSE4
5		(Elective IV)	3-0-0	3	DSE5
Practical Labs					
6	ME 522	Project	0-0-10	5	DP1
7	ME 524	Advanced Design Lab	0-0-3	2	CC-C54
8	GP	General Proficiency		NC	
		Total	15-2-13	24	
		Total Contact Hours			

P4 / SM

plus
8-8-15

Page 0

0-0-15

M. Tech. in Design Engineering - III Semester					
S. No.	Course Code	Name of Course	L-T-P	Credits	Course Type
Theory Courses					
1	ME 601	Analysis and Synthesis of Mechanisms	3-1-0	4	CC-C55
2	ME 603	Reliability in Engineering Design	3-1-0	4	CC-C56
3		(Elective V)	3-0-0	3	DSE6
Practical Labs					
4	ME 613	Dissertation Part I	2*-0-24	8	DP2
5	GP	General Proficiency		NC	
Total			11-0-24	19	
Total Contact Hours					

M. Tech. in Design Engineering - IV Semester					
S. No.	Course Code	Name of Course	L-T-P	Credits	Course Type
Theory Courses					
	-----	-----			
	-----	-----			
Practical Labs					
1	ME 614	Dissertation Part II	0-0-44	22	DP3
2	GP	General Proficiency		NC	
Total				22	
Total Contact Hours					

M. Tech. in Design Engineering (Two Years)

Type of Courses	Ability Enhancement Courses		Core Courses		Elective Courses			Open Elective	Total
Sem	AECC	SEC	FC	CC	E-DSE	E-D/P	E-GE	OE	
I				12	6		4	3	25
II				13	6	5			24
III				8	3	8			19
IV						22			22
Total				33	15	35	4	3	90

14 / sm

pure
8-8-15

Page
20

List of Electives for M. Tech. Design Engineering

S. No.	Course Code	Name of Course	L-T-P	Credits
Elective -I - DSE1				
1	ME 505	Advanced Mechanical Design	3-0-0	3
2	ME 507	Advanced Mechanics of Solids	3-0-0	3
3	ME 509	Design of Pressure Vessels and Piping	3-0-0	3
4	ME 511	Bearings and Rotor-dynamics	3-0-0	3
Elective -II-DSE2				
1	ME 513	Mechanical Behavior of Materials	3-0-0	3
2	ME 515	Design of Hydraulic and Pneumatic Systems	3-0-0	3
3	ME 517	Design of Automotive Components	3-0-0	3
4	ME 519	Design of Material Handling Equipment	3-0-0	3
Elective -III-DSE3				
1	ME 508	Vibration Engineering	3-0-0	3
2	ME 510	Machine Tool Design	3-0-0	3
3	ME 512	Environmental Engineering and Pollution Control	3-0-0	3
Elective -IV-DSE4				
1	ME 514	Engineering Fracture Mechanics	3-0-0	3
2	ME 516	Theory of Elasticity	3-0-0	3
3	ME 518	Theory of Plates and Shells	3-0-0	3
4	ME 520	Composite Materials and Analysis	3-0-0	3
Elective -V-DSE5				
1	ME 605	Rapid Prototyping and Manufacturing	3-0-0	3
2	ME 607	Vehicle Dynamics	3-0-0	3
3	ME609	Robotic Engineering	3-0-0	3
4	ME 611	Design of Process Equipment	3-0-0	3

14/ 8/2

plus
8-8-15

Agg

sum
0-0-15