M. Tech. in Thermal Engineering (Two Years)

M. Tech. in Thermal 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 561	Advanced Fluid Mechanics	3-1-0	4	CC-C57
3	ME 501	Finite Element Methods and Analysis	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 579	Advanced Thermal Engineering 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 Thermal Engineering - II Semester					
S. No.	Course Code	Name of Course	L-T-P	Credits	Course Type
		Theory Courses			
1	ME 562	Advanced Refrigeration and Air Conditioning	3-1-0	4	CC-C51
2	ME 564	Measurement and Process Control	3-1-0	4	CC-C52
3	ME 566	Computational Fluid Dynamics	3-0-0	3	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 582	Computational Fluid Dynamics Lab	0-0-3	2	CC-C54
8	GP	General Proficiency		NC	
		Total	**15-2-13**	**24**	
		Total Contact Hours			

8-8-15

M. Tech. in Thermal Engineering - III Semester					
S. No.	Course Code	Name of Course	L-T-P	Credits	Course Type
	Theory Courses				
1	ME 661	Advanced I. C. Engines and Gas Turbines	3-1-0	4	CC-C55
2	ME 663	Energy Engineering and Management	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 Thermal Engineering - IV Semester					
S. No.	Course Code	Name of Course	L-T-P	Credits	Course Type
	Theory Courses				
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	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 Thermal 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

List of Electives for M. Tech. Thermal Engineering

S. No.	Course Code	Name of Course	L-T-P	Credits
Elective –I-DSE1				
1	ME 563	Advanced Heat and Mass Transfer	3-0-0	3
2	ME 565	Convective Heat and Mass Transfer	3-0-0	3
3	ME 567	Boiling, Condensation and Two-phase Flow	3-0-0	3
4	ME 569	Air Conditioning and Ventilation Systems	3-0-0	3
Elective –II-DSE2				
1	ME 571	Advanced Thermodynamics	3-0-0	3
2	ME 573	Theory of Combustion and Emission	3-0-0	3
3	ME 575	Cryogenic Technology	3-0-0	3
4	ME 577	Thermal and Nuclear Power Plant	3-0-0	3
Elective –III- DSE3				
1	ME 568	New and Renewable Energy Resources	3-0-0	3
2	ME 570	Alternate Fuels	3-0-0	3
3	ME 572	Solar Energy	3-0-0	3
4	ME 512	Environmental Engineering & Pollution Control	3-0-0	3
Elective –IV- DSE4				
1	ME 574	Turbo Machines	3-0-0	3
2	ME 576	Aircraft and Rocket Propulsion	3-0-0	3
3	ME 578	Gas Dynamics	3-0-0	3
4	ME 580	Wind Energy Technology	3-0-0	3
Elective –V- DSE5				
1	ME 665	Optimum Design of Thermal Systems	3-0-0	3
2	ME 667	Heat Exchanger Analysis and Design	3-0-0	3
3	ME 669	Experimental Methods in Thermal Engineering	3-0-0	3
4	ME 611	Design of Process Equipment	3-0-0	3