



School of Engineering and Technology Department of Mechanical Engineering

M. Tech. - Thermal and Fluid Engineering (TFE)
Course Structure (From Academic Session 2023-24 onwards)

Semester I:

Theory/ Practical	Sl. No	Course Type	Course Code	Course Name	Hours per week			Credit	Marks	
					L	T	P		C	IA
T	1.	PCC	TFE23501T	Advanced Thermodynamics	3	1	0	4	40	60
T	2.	PCC	TFE23502T	Advanced Fluid Mechanics	3	1	0	4	40	60
T	3.	PCC	TFE23503T	Gas Turbines	3	1	0	4	40	60
P	4.	PCC	TFE23502P	Fluid Mechanics and Hydraulic Lab	0	0	4	2	20	30
T	5.	PEC	TFE2352XX	***Professional Elective-I	3	0	0	3	40	60
T	6.	OEC	XXX2353XX	*Open Elective	3	0	0	3	40	60
T	7.	MAC	TFE23504T	Research Methodology & IPR	2	0	0	2	40	60
T	8.	AUC	XXX2358XX	**Audit Course – I	2	0	0	0	00	100
Total					19	3	4	22	260	390

Semester II:

Theory/ Practical	Sl. No	Course Type	Course Code	Course Name	Hours per week			Credit	Marks	
					L	T	P		C	IA
T	1.	PCC	TFE23510T	Advanced Heat Transfer	3	1	0	4	40	60
T	2.	PCC	TFE23511T	Fuel and Combustion	3	1	0	4	40	60
T	3.	PCC	TFE23512T	Design of Heat Exchangers	3	1	0	4	40	60
P	4.	PCC	TFE23510P	Heat Transfer Lab	0	0	4	2	20	30
T	5.	PEC	TFE2352XX	***Professional Elective-II	3	0	0	3	40	60
T	6.	PEC	TFE2352XX	***Professional Elective-III	3	0	0	3	40	60
T	7.	AUC	XXX2358XX	**Audit Course - II	2	0	0	0	00	100
Total					17	3	4	20	220	330



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***Professional Elective-I (PEC-I)

Sl. No.	Course Type	Code	Course
1.	PEC	TFE23520T	Energy Conservation and Management
2.	PEC	TFE23521T	Solar and Wind System
3.	PEC	TFE2352XX	Any other subject offered from time to time with the approval of the University

***Professional Elective-II (PEC-II)

Sl. No.	Course Type	Code	Course
1.	PEC	TFE23524T	Computational Fluid Dynamics
2.	PEC	TFE23525T	Advanced Internal Combustion Engines
3.	PEC	TFE2352XX	Any other subject offered from time to time with the approval of the University

***Professional Elective-III (PEC-III)

Sl. No.	Course Type	Code	Course
1.	PEC	TFE23527T	Advanced Power Plant Engineering
2.	PEC	TFE23528T	Two phase Flow and Boiling
3.	PEC	TFE23529T	Compressible Flow

*Open Elective (OEC)

Sl. No.	Course Type	Code	Course
1.	OEC	TFE23530T	Waste to Energy
2.	OEC	TFE23531T	Operation Research
3.	OEC	MSE23532T	Industrial safety
4.	OEC	MSE23533T	Cost Management of Engineering Projects
5.	OEC	TFE23534T	Composite Materials
6.	OEC	---	Any other subject offered from time to time with the approval of the University

**Audit Course – I

Sl. No.	Course Type	Code	Course
1.	AUC	MEN23580T	English for Research paper writing
2.	AUC	MSE23581T	Disaster Management
3.	AUC	MCS23581T	Business Analytics
4.	AUC	---	Any other subject offered from time to time with the approval of the University

**Audit Course – II

Sl. No.	Course Type	Code	Course
1.	AUC	MPO23583T	Constitution of India
2.	AUC	TFE23584T	Pedagogy Studies
3.	AUC	MEN23585T	Digital Humanities
4.	AUC	---	Any other subject offered from time to time with the approval of the University



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Semester III:

Theory/ Practical	Sl. No	Course Type	Course Code	Course Name	Hours per week			Credit	Marks	
					L	T	P		C	IA
R	1.	PCC	TFE23601R	Comprehensive viva	0	0	0	3	100	00
R	2.	PCC	TFE23602R	Seminar	0	0	0	3	100	00
R	3.	PROJ	TFE23603R	Dissertation phase-I	0	0	20	10	100	200
Total					0	0	0	16	300	200

Semester IV:

Theory/ Practical	Sl. No	Course Type	Course Code	Course Name	Hours per week			Credit	Marks	
					L	T	P		C	IA
R	1.	PROJ	TFE23604R	Dissertation phase-II	0	0	32	16	100	300
Total					0	0	0	16	100	300

M. Tech Mark Distribution

Semester	Mark Distribution			Credit
	IA	EA	Total	
Semester-I	260	390	650	22
Semester-II	220	330	550	20
Semester-III	300	200	500	16
Semester-IV	100	300	400	16
Total:	880	1220	2100	74