

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI
Scheme of Teaching and Examination – 2018-19
M.Tech in Thermal Engineering/Thermal Power Engineering (MTP)
Outcome Based Education(OBE) and Choice Based Credit System (CBCS)

I SEMESTER

Sl. No	Course	Course Code	Title	Teaching Hours /Week		Examination				Credits
				Theory	Practical work/ Assignment	Duration in hours	CIE Marks	Marks	Total Marks	
1	PCC	18MTP11	Mathematics	04	--	03	40	60	100	4
2	PCC	18MTP12	Finite Element Method	04	--	03	40	60	100	4
3	PCC	18MTP13	Advanced Fluid Mechanics	04	--	03	40	60	100	4
4	PCC	18MTP14	Thermodynamics & Combustion Engineering	04	--	03	40	60	100	4
5	PEC	18MTP15	Energy Conservation and Management	04	--	03	40	60	100	4
6	PCC	18MTPL16	Thermal Engineering measurement - Lab 1	-	04	03	40	60	100	2
7	PCC	18RMI17	Research Methodology and IPR	02	--	03	40	60	100	2
TOTAL				22	04	21	280	420	700	24

Note: PCC: Professional core, PEC: Professional Elective.

Internship: All the students have to undergo mandatory internship of 6 weeks during the vacation of I and II semesters and /or II and III semesters. A University examination shall be conducted during III semester and the prescribed credit shall be counted for the same semester. Internship shall be considered as a head of passing and shall be considered for the award of degree. Those, who do not take-up/complete the internship shall be declared as failed and have to complete during the subsequent University examination after satisfying the internship requirements.

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II SEMESTER

Sl. No	Course	Course Code	Title	Teaching Hours /Week		Examination				Credits
				Theory	Practical/ Field work/ Assignment	Duration in hours	CIE Marks	SEE Marks	Total Marks	
1	PCC	18MTP21	Advanced Heat Transfer	04	--	03	40	60	100	4
2	PCC	18MTP22	Steam & Gas Turbines	04	--	03	40	60	100	4
3	PCC	18MTP23	Refrigeration and Air Conditioning	04	--	03	40	60	100	4
4	PEC	18MTP24X	Professional elective 1	04	--	03	40	60	100	4
5	PEC	18MTP25X	Professional elective 2	04	--	03	40	60	100	4
6	PCC	18MTPL26	Simulation Laboratory Projects on Thermal Engineering - Lab 2	--	04	03	40	60	100	2
7	PCC	18MTP27	Technical Seminar	--	02	-	100	-	100	2
TOTAL				20	06	18	340	360	700	24

Note: PCC: Professional core, PEC: Professional Elective, OEC: Open Elective, Aud: Audit Course

Professional Elective 1		Professional Elective 2	
Course Code under 18MTP24X	Course title	Course Code under 18MTP25X	Course title
18MTP241	Advanced Power Plant Cycles	18MTP251	Theory of IC Engines
18MTP242	Thermal Power Station – 1	18MTP252	Modeling and Simulation of Thermal Systems
18MTP243	Alternate Fuels for IC Engines	18MTP253	Computational Methods in Heat Transfer & Fluid Flow

Note:

1. Technical Seminar: CIE marks shall be awarded by a committee comprising of HoD as Chairman, Guide/co-guide, if any, and a senior faculty of the department. Participation in the seminar by all postgraduate students of the same and other semesters of the programme shall be mandatory.

The CIE marks awarded for Technical Seminar, shall be based on the evaluation of Seminar Report, Presentation skill and Question and Answer session in the ratio 50:25:25.

2. Internship: All the students shall have to undergo mandatory internship of 6 weeks during the vacation of I and II semesters and /or II and III semesters. A University examination shall be conducted during III semester and the prescribed credit shall be counted in the same semester. Internship shall be considered as a head of passing and shall be considered for the award of degree. Those, who do not take-up/complete the internship shall be declared as failed and have to complete during the subsequent University examination after satisfying the internship requirements.

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III SEMESTER

Sl. No	Course	Course Code	Course Title	Teaching Hours /Week			Examination				Credits
				Theor y	work /	Assig nmen	ion in hours	Mark s	s	total Mark s	
1	PCC	18MTP31	Design of heat Transfer Equipments for thermal power plant	04	--		03	40	60	100	4
2	PEC	18MTP32X	Professional elective-3	04	--		03	40	60	100	4
3	PEC	18MTP33X	Professional elective- 4	04	--		03	40	60	100	4
4	Proj	18MTP34	Evaluation of Project phase -1	--	02		--	100	--	100	2
5	INT	18MTPI35	Internship	(Completed during the intervening vacation of I and II semesters and /or II and III semesters.)			03	40	60	100	6
TOTAL				12	02		12	260	240	500	20

Note: PCC: Professional core, PEC: Professional Elective.

Professional elective 3			Professional elective 4		
Course Code under 18XXX32X	Course title		Course Code under 18XXX33X	Course title	
18MTP321	Convective Heat and Mass Transfer		18MTP331	Experimental Methods in Thermal Power Engineering	
18MTP322	Engine Flow & Combustion		18MTP332	Biomass Conversion and Technologies	
18MTP323	Design & Analysis of Thermal Systems		18MTP333	CAD for thermal engineering	

Note:

1. Project Phase-1: Students in consultation with the guide/co-guide if any, shall pursue literature survey and complete the preliminary requirements of selected Project work. Each student shall prepare relevant introductory project document, and present a seminar. CIE marks shall be awarded by a committee comprising of HoD as Chairman, Guide/co-guide if any, and a senior faculty of the department. The CIE marks awarded for project work phase -1, shall be based on the evaluation of Project Report, Project Presentation skill and Question and Answer session in the ratio 50:25:25.
SEE (University examination) shall be as per the University norms.

2. Internship: Those, who have not pursued /completed the internship shall be declared as failed and have to complete during subsequent University examinations after satisfying the internship requirements.
Internship SEE (University examination) shall be as per the University norms.

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IV SEMESTER

Sl. No	Course	Course Code	Title	Teaching Hours /Week		Examination				Credits
				Theo ry	Field work/ Assig nmen	Dura tion in hours	CIE Marks	SEE Marks	Viva voce	Total Marks
1	Proj	18MTP41	Project work phase -2	--	04	03	40	60	100	20
TOTAL				--	04	03	40	60	100	20

Note: PC: Proj: Project.

Note:

1. Project Phase-2:

CIE marks shall be awarded by a committee comprising of HoD as Chairman, Guide/co-guide, if any, and a Senior faculty of the department. The CIE marks awarded for project work phase -2, shall be based on the evaluation of Project Report subjected to plagiarism check, Project Presentation skill and Question and Answer session in the ratio 50:25:25.

SEE shall be at the end of IV semester. Project work evaluation and Viva-Voce examination (SEE), after satisfying the plagiarism check, shall be as per the University norms.