

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI

SCHEME OF TEACHING AND EXAMINATION FOR M.TECH. in Thermal Engineering/Thermal Power Engineering

CHOICE BASED CREDIT SYSTEM (CBCS)

I SEMESTER

Subject Code	Name of the Subject	Teaching hours/week		Duration of Exam in Hours	Marks for		Total Marks	CREDITS
		Lecture	Practical / Field Work / Assignmen		I.A.	Exam		
16MTP11	Applied Mathematics	4	-	3	20	80	100	4
16MTP12	Finite Element Method	4	-	3	20	80	100	4
16MTP13	Advanced Fluid Mechanics	4	-	3	20	80	100	4
16MTP14	Thermodynamics & Combustion Engineering	4	-	3	20	80	100	4
16MTP15X	Elective – I	4	-	3	20	80	100	4
16MTP16	Thermal Engineering measurement - Lab 1	--	3	3	20	80	100	2
16MTP/MTH 17	SEMINAR	--	-	--	100	--	100	1
Total		20	3	18	220	480	700	23

Elective – I

16MTP 151	Non Conventional Energy System	14 MTP 153	Energy Conservation and Management
16MTP 152	Nuclear Energy Conversion	14MTP 154	Refrigeration and Air Conditioning

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II SEMESTER

Subject Code	Name of the Subject	Teaching hours/week		Duration of Exam in Hours	Marks for		Total Marks	CREDITS
		Lecture	Practical / Field Work / Assignment		I.A.	Exam		
16MTP21	Advanced Heat Transfer	4	-	3	20	80	100	4
16MTP22	Steam & Gas Turbines	4	-	3	20	80	100	4
16MTP23	Advanced Power Plant Cycles	4	-	3	20	80	100	4
16MTP24	Theory of IC Engines	4	-	3	20	80	100	4
16MTP25X	Elective – II	4	-	3	20	80	100	4
16MTP26	Simulation Laboratory Projects on Thermal Engineering - Lab 2	--	3	3	20	80	100	2
16MTP/MT27	SEMINAR	--	-	--	100	--	100	1
	**PROJECT WORK PHASE-I COMMENCEMENT(6 WEEKS DURATION)	--	--	--	--	--	--	--
Total		20	3	18	220	480	700	23

Elective – II

16MTP251	Thermal Power Station – 1	16MTP253	Modeling and Simulation of Thermal Systems
16MTP252	Alternate Fuels for IC Engines	16MTP254	Computational Methods in Heat Transfer & Fluid Flow

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III SEMESTER

Subject Code	Title	Teaching hours/week		Examination			Total Marks	CREDITS
		Theory	Practical / Field Work / Assignment	Duration	I.A. Marks	Theory / Practical Marks		
16MTP31	Seminar/ Presentation on Internship (After 8 weeks from the date of commencement)	-	-	-	25	-	25	20
16 MTP32	Report on Internship	-	-	-	25	-	25	
16 MTP 33	Evaluation and Viva-Voce of Internship	-	-	-	-	50	50	
16 MTP34	Project Work Phase-1	-	-	-	50	-	50	1
Total		-	-	-	100	50	150	21

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VI SEMESTER

Subject Code	Title	Teaching hours/week		Examination Duration			Total Marks	CREDITS
		Theory	Practical / Field Work /	Duration in Hrs	I.A. Marks	Theory / Practical Marks		
16MTP41	Design of heat Transfer Equipments for thermal power plant	4	2	3	20	80	100	4
	ELECTIVE-III	4	2	3	20	80	100	3
16 MTP 43	Evaluation of Project Work Phase-II	-	-	-	50	-	50	3
16 MTP 44	Evaluation of Project Work and Viva-Voce	-	-	3	-	100+100	200	10
Total		-	4	9	90	360	450	20

ELECTIVE-III

16MTP421	Convective Heat and Mass Transfer	16MTP423	Design & Analysis of Thermal Systems
16MTP422	Engine Flow & Combustion	16MTP424	Experimental Methods in Thermal Power Engineering

Note:

1. Project Phase-2: 16-week duration during 4th semester. Evaluation shall be done by the committee constituted comprising of HoD as Chairman, Guide and Senior faculty of the department.

2. Project Evaluation: Evaluation shall be taken up at the end of 4th semester. Project work evaluation and Viva-Voce examination shall conducted

3. Project evaluation:

- a. Internal Examiner shall carry out the evaluation for 100 marks.
 - b. External Examiner shall carry out the evaluation for 100 marks.
 - c. The average of marks allotted by the internal and external examiner shall be the final marks of the project evaluation.
- c.** Viva-Voce examination of Project work shall be conducted jointly by Internal and External examiner for 100 marks.