S.G.B.A.U. Amravati (Scheme w.e.f. 2023-24)

Two Year Post Graduate Course in M.E. Mechanical Engineering (Thermal Engineering) Full Time Pattern - Choice Based Credit system (CBCS)

Appendix -A

Semester -I																
Sr No	Subject Code	Subject	Teaching Scheme					Examination Scheme								
			Hours /Week					Theory					Practical			
			Lecture	Tutorial	P/D	Total Hrs / Week	Credits	Duration of Paper (Hr)	Max. Marks Theory Paper	Max. Marks College Assessment	Total Marks	Min. Passing Marks	Max Marks		Total Marks	Min Passing Marks
													Int	Ext		
01	**1MTE1**	Advanced Fluid Dynamics	3	--	--	3	3	3	80	20	100	50	--	--	--	--
02	**1MTE2**	Advanced Thermodynamics	3	--	--	3	3	3	80	20	100	50	--	--	--	--
03	**1MTE3**	Programme Elective I	3	--	--	3	3	3	80	20	100	50	--	--	--	--
04	**1MTE4**	Programme Elective II	3	--	--	3	3	3	80	20	100	50	--	--	--	--
05	**1MTE5**	Research Methodology and IPR	2	--	--	2	2	--	--	50	50	25	--	--	--	--
06	**1MTE6**	Fluid Dynamics Lab	--	--	4	4	2	--	--	--	--	--	25	25	50	25
07	**1MTE7**	Thermal Engineering Lab - I	--	--	4	4	2	--	--	--	--	--	25	25	50	25
08	**1MTE8**	Audit Course –I*	**2**	**--**	**--**	**2**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	
		TOTAL	**16**	**--**	**8**	**24**	**18**	**--**	**--**	**--**	**450**	**--**	**--**	**--**	**100**	**--**
TOTAL															**550**	**--**

1MTE3	Programme Elective -I	(i) Refrigeration & Cryogenics (ii) Gas Turbines & Jet Propulsion (iii) Fuels and Combustion
1MTE4	Programme Elective -II	(i) Advanced Internal Combustion Engines (ii) Design & Analysis of Turbo Machines (iii) Power Plant Engineering
1MTE8	*****Audit Course I & II	(i) English for Research Paper Writing (ii) Disaster Management (iii) Constitution of India (iv) Stress Management by Yoga v) Sanskrit For Technical Knowledge vi) Value Education vii) Pedagogy Studies viii) Personality Development through life Enhancement skills

*** Examination and evaluation for Audit –I & II shall be conducted at the Institute level.**

Semester –II																
Sr No	**Subject Code**	**Subject**	**Teaching Scheme**					**Examination Scheme**								
			Hours /Week			**Total Hrs / Week**	**Credits**	**Theory**					**Practical**			
			Lecture	**Tutorial**	**P/D**			**Duration of Paper (Hr)**	**Max. Marks Theory Paper**	**Max.Marks College Assessment**	**Total Marks**	**Min.Passing Marks**	**Max Marks**		**Total Marks**	**Min Passing Marks**
													Int	**Ext**		
01	**2MTE1**	Computational Methods in Thermal Engineering	3	--	--	3	3	3	80	20	100	50	--	--	--	--
02	**2MTE2**	Advanced Heat Transfer	3	--	--	3	3	3	80	20	100	50	--	--	--	--
03	**2MTE3**	Programme Elective III	3	--	--	3	3	3	80	20	100	50	--	--	--	--
04	**2MTE4**	Programme Elective IV	3	--	--	3	3	3	80	20	100	50	--	--	--	--
05	**2MTE5**	Thermal Systems Simulation Lab	--	--	4	4	2	--	--	--	--	--	25	25	50	25
06	**2MTE6**	Thermal Engineering Lab -II	--	--	4	4	2	--	--	--	--	--	25	25	50	25
07	**2MTE7**	Seminar	--	--	4	4	2	--	--	--	--	--	50	--	50	25
08	**2MTE8**	Audit Course – II*	2	--	--	2	0	--	--	--	--	--	--	--	--	--
		TOTAL	**14**	**--**	**12**	**26**	**18**	**--**	**--**	**--**	**400**	--	**--**	**--**	**150**	**--**
														TOTAL	**550**	**--**

2MTE3	Programme Elective -III	(i) Air-conditioning System Design (ii) Design & Optimization of Thermal Systems (iii) Computational Fluid Dynamics
2MTE4	Programme Elective -IV	(i) Design of Heat Exchangers (ii) Experimental Methods in Thermal Engineering (iii) Energy Conservation and Waste Management
2MTE8	***Audit Course I & II	(i) English for Research Paper Writing (ii) Disaster Management (iii) Constitution of India (iv) Stress Management by Yoga v) Sanskrit For Technical Knowledge vi) Value Education vii) Pedagogy Studies viii) Personality Development through life Enhancement skills

*** Examination and evaluation for Audit –I & II shall be conducted at the Institute level.**

Semester –III																
Sr No	**Subject Code**	**Subject**	**Teaching Scheme**					**Examination Scheme**								
			Hours /Week					**Theory**					**Practical**			
			Lecture	**Tutorial**	**P/D**	**Total Hrs / Week**	**Credits**	**Duration of Paper (Hr)**	**Max. Marks Theory Paper**	**Max.Marks College Assessment**	**Total Marks**	**Min.Passing Marks**	**Max Marks**		**Total Marks**	**Min Passing Marks**
													Int	**Ext**		
01	**3MTE1**	Programme Elective -V	3	--	--	3	3	3	80	20	100	50	--	--	--	--
02	**3MTE2**	Open Elective	3	--	--	3	3	3	80	20	100	50	--	--	--	--
03	**3MTE3**	Dissertation Phase I	--	--	20	20	10	--	--	--	--	--	100	--	100	50
		TOTAL	**6**	**--**	**20**	**26**	**16**	**--**	**--**	**--**	**200**	**--**	**--**	**--**	**100**	**--**
														TOTAL	**300**	**--**

3MTE1	Programme Elective -V	(i)) Renewable Energy Technologies (ii) Hydrogen and Fuel Cell Technologies (iii) Finite Element Method
3MTE2	Open Elective	i) Business Analytics ii) Industrial Safety iii) Operations Research iv) Cost Management of Engineering Projects v) Composite Materials vi) Waste to Energy

Semester –IV																
Sr No	**Subject Code**	**Subject**	**Teaching Scheme**					**Examination Scheme**								
			Hours /Week			**Total Hrs / Week**	**Credits**	**Theory**					**Practical**			
			Lecture	**Tutorial**	**P/D**			**Duration of Paper (Hr)**	**Max. Marks Theory Paper**	**Max.Marks College Assessment**	**Total Marks**	**Min. Passing Marks**	**Max Marks**		**Total Marks**	**Min Passing Marks**
													Int	**Ext**		
01	**4MTE1**	Dissertation Phase- 2	--	--	32	32	16	--	--	--	--	--	100	200	300	150
		TOTAL	**-**	**--**	**32**	**32**	**16**	**--**	**--**	**--**	**--**	**-**	**--**	**--**	**300**	**--**
														TOTAL	**300**	**--**

GRAND TOTAL (Semester I, II, III & IV)	**1700**

Note:- Passing Criteria for Subjects / Practicals / Dissertation is including the internal marks.

Semester III:

Title of the dissertation work to be submitted to the University on or before 15th September for regular examination and 15th of February for Supplementary Examination every year.

Dissertation Work - Phase I shall be evaluated for 100 marks by the committee members consisting of dissertation guide, Head of Department and subject expert appointed by the Principal ofthe college / Head of University Department.

Semester IV:

Dissertation Work - Phase II shall be evaluated for 300 marks by the committee members consisting of dissertation guide, Head of Department and subject expert appointed by the Principalof the college / Head of University Department

Candidate has to publish / present at least one research paper in referred journal / conference based on dissertation

work.Dissertation Work shall be evaluated for 200 marks by external examiner appointed by the University.

Note: Thesis of dissertation work must be submitted to the University on or before 30th April for Regular Exam and 30th September for Supplementary Exam every year.