

**13. Courses of Study and Scheme of Assessment
ME ENERGY ENGINEERING**

**(2021 REGULATIONS)
(Minimum No. of credits to be earned: 71*)**

Course Code	Course Title	Hours / Week			Credits	Maximum Marks			CAT
		Lecture	Tutorial	Practical		CA	FE	Total	
III SEMESTER									
21SE__	Professional Elective – IV	3	0	0	3	50	50	100	PE
21____	Open Elective	3	0	0	3	50	50	100	OE
21SE71	Project Work - I	0	0	12	6	50	50	100	EEC
Total 18 hrs		6	0	12	12	150	150	300	
IV SEMESTER									
21SE81	Project Work - II	0	0	24	12	50	50	100	EEC
Total 24 hrs		0	0	24	12	50	50	100	
STREAM SPECIFIC CORE COURSES									
STREAM SPECIFIC CORE 1 (one to be opted)									
21SE05	Industrial Combustion Systems	3	0	0	3	50	50	100	SSC
21SE07	Modeling and Analysis of Electrical Machines	3	0	0	3	50	50	100	SSC
STREAM SPECIFIC CORE 2 (one to be opted)									
21SE08	Thermal Systems Design	3	1	0	4	50	50	100	SSC
21SE10	Electric Drives and Control	3	1	0	4	50	50	100	SSC
PROFESSIONAL ELECTIVE THEORY COURSES (Four to be opted)									
COMMON FOR MECHANICAL AND ELECTRICAL ENGINEERING STREAMS									
21SE21	Advanced Power Plant Engineering	3	0	0	3	50	50	100	PE
21SE22	Green Buildings	3	0	0	3	50	50	100	PE
21SE23	Design of Solar Systems	3	0	0	3	50	50	100	PE
21SE24	Design and Analysis of Turbo machines	3	0	0	3	50	50	100	PE
21SE25	Hydrogen Energy and Fuel Cells	3	0	0	3	50	50	100	PE
21SE26	Bio-Energy Conversion Technologies	3	0	0	3	50	50	100	PE
21SE27	Instrumentation for Energy Systems	3	0	0	3	50	50	100	PE
21SE28	Energy Storage Devices and Systems	3	0	0	3	50	50	100	PE
MECHANICAL ENGINEERING STREAM									
21SE29	Fundamentals of Turbulence and Boundary Layer Theory	3	0	0	3	50	50	100	PE
21SE30	Energy Conservation in HVACR Systems	3	0	0	3	50	50	100	PE
21SE31	Aerodynamics of Streamlined and Bluff Bodies	3	0	0	3	50	50	100	PE
21SE32	Steam Generation Technology	3	0	0	3	50	50	100	PE
21SE33	Design of Wind Energy Systems	3	0	0	3	50	50	100	PE
ELECTRICAL ENGINEERING STREAM									
21SE34	Soft Computing Techniques for Renewable Energy Systems	3	0	0	3	50	50	100	PE
21SE35	Optimization Techniques	3	0	0	3	50	50	100	PE
21SE36	Hybrid Electric Vehicles	3	0	0	3	50	50	100	PE

21SE37	Distributed Generation and Micro Grids	3	0	0	3	50	50	100	PE
21SE38	Smart Grid Technologies	3	0	0	3	50	50	100	PE
21SE39	Flexible AC Transmission System	3	0	0	3	50	50	100	PE
OPEN ELECTIVE THEORY COURSES (One to be opted)									
21SE91	Business Analytics in Practice	3	0	0	3	50	50	100	OE
21SE92	Life Cycle Assessment and Eco-Design	3	0	0	3	50	50	100	OE
21SE93	Systems Engineering and Management	3	0	0	3	50	50	100	OE

* Indicated is the minimum number of credits to be earned by a student.

CAT – Category; PC – Professional Core; PE - Professional Elective; RMC - Research Methodology and IPR; EEC – Employability Enhancement Course; MC - Mandatory Course; Grade – Completed / Not Completed; OE – Open Elective.