

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

(2015 REGULATIONS)
(Minimum No. of credits to be earned: 74)

Course Code	Course Title	Hours/Week			Credits	Maximum Marks			CAT
		Lecture	Tutorial	Practical		CA	FE	Total	
I SEMESTER									
15SE01	Applied Numerical Analysis	2	2	-	3	50	50	100	FC
15SE02	Concepts of Energy Engineering	3	-	-	3	50	50	100	FC
15SE03	Thermodynamics and Combustion Systems	3	2	-	4	50	50	100	PC
15SE04	Thermal Energy Conservation and Management	3	-	-	3	50	50	100	PC
15SE05	Renewable Energy Systems	3	-	-	3	50	50	100	PC
15SE51	Heat Power Laboratory	-	-	4	2	100	-	100	PC
15SE61	Industry Visit & Technical Seminar	1	-	3	2	100	-	100	EEC
Total 26 Hrs		15	4	7	20	400	250	700	
II SEMESTER									
15SE06	Energy Economics, Forecasting and Modeling	3	-	-	3	50	50	100	PC
15SE07	Energy and Thermal Systems Design	3	-	-	3	50	50	100	PC
15SE08	Computational Fluid Dynamics	3	-	-	3	50	50	100	PC
15SE09	Instrumentations for Energy Systems	3	-	-	3	50	50	100	PC
15SE10	Electrical Energy Conservation and Management	3	-	-	3	50	50	100	PC
15SE__	Elective 1	3	-	-	3	50	50	100	PE
15SE52	Computational Fluid Dynamics Laboratory	0	-	4	2	100	-	100	PC
Total 22 Hrs		18	-	4	20	400	300	700	
III SEMESTER									
15SE__	Elective 2	3	-	-	3	50	50	100	PE
15SE__	Elective 3	3	-	-	3	50	50	100	PE
15SE__	Elective 4	3	-	-	3	50	50	100	PE
15SE__	Elective 5	3	-	-	3	50	50	100	PE
15SE__	Elective 6	3	-	-	3	50	50	100	PE
15SE53	Energy Engineering Laboratory	0	-	4	2	100	-	100	PC
15SE71	Project Work I	0	-	6	3	100	-	100	EEC
Total 25 Hrs		15	-	10	20	450	250	700	
IV SEMESTER									
15SE72	Project Work II	-	-	28	14	50	50	100	EEC
ELECTIVE THEORY COURSES(Six to be opted)									
15SE21	Cleaner Production and CDM.	3	-	-	3	50	50	100	PE
15SE22	Building Energy Conservation and Green Buildings	3	-	-	3	50	50	100	PE
15SE23	Solar Energy Technologies	3	-	-	3	50	50	100	PE
15SE24	Design of Solid and Liquid Waste Conversion Systems	3	-	-	3	50	50	100	PE
15SE25	Advanced Energy Technologies and Sustainable Development	3	-	-	3	50	50	100	PE
15SE26	Nano Technologies And Energy Systems	3	-	-	3	50	50	100	PE
15SE27	Design of Bio Energy Systems	3	-	-	3	50	50	100	PE
15SE28	Nuclear Reactor Engineering	3	-	-	3	50	50	100	PE
15SE29	Energy Storage Systems	3	-	-	3	50	50	100	PE
15SE30	Industrial Processes and Energy Conservation	3	-	-	3	50	50	100	PE
15SE31	Advanced IC Engines	3	-	-	3	50	50	100	PE
15SE32	Experimental Analysis of Systems	3	-	-	3	50	50	100	PE

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

CAT – Category; FC – Foundation Course; PC – Professional Core; PE – Professional Elective
EEC – Employability Enhancement Course

ONE CREDIT COURSES

15MK01	Process Engineering and Costing
15MK02	Strategic and Human Resources Management
15MK03	Measurement of Vibration and Sound
15MK04	Challenges in Implementing Lean Manufacturing
15MK05	Computational Fluid Flow and Heat Transfer Analysis of Mechanical Systems
15MK06	Thermal Analysis of Mechanical Systems using Finite Element Method
15MK07	Creative and Innovative Methods for Design and Development
15MK08	Concepts of Product Design
15MK09	Cooling of Electronic Equipment
15MK10	Value Analysis and Value Engineering
15MK11	Characterization of Turbo Machinery Using CFD
15MK12	Characterization of Heat Exchangers Using CFD

SCIENCE ELECTIVES

15ID01	Micro Electro Mechanical Systems (MEMS)
15ID02	Sensors for Engineering Applications
15ID03	Laser Processing of Materials
15ID04	Plasma Technology
15ID05	Nanosensor and its Applications
15ID06	Nano Magnetism and Spintronics
15ID07	Corrosion Science and Engineering
15ID08	Instrumental Methods of Chemical Analysis
15ID09	Polymer Science and Technology
15ID10	Nanomaterials and Nanotechnology
15ID11	Thin Film Technology

HUMANITIES AND LANGUAGES ONE CREDIT COURSES

15OK01	Research Writing in Engineering Sciences
15OK02	Indian Ethos and Human Values
15OK03	Personality Development
15OK04	Financial Accounting and Cost Accounting