

COURSE STRUCTURE-MECHANICAL ENGINEERING

I SEMESTER - CHEMISTRY CYCLE

Sl. No	Course No	Course Name	Hours			Total Marks	Credits			Total Credits
			L	T	P		L	T	P	
1	MA131	Mathematics – I	3	0	0	100	3	0	0	3
2	CH132P	Chemistry	3	0	2	100	3	0	1	4
3	EC133P	Basic Electronics	3	0	2	100	3	0	1	4
4	CS134P	Computer Programming	3	0	2	100	3	0	1	4
5	ME135	Basic Mechanical Engineering and Nanoscience	3	0	0	100	3	0	0	3
6	TE136P	Technical English	1	0	2	100	1	0	1	2
7	ME 151	Workshop Practice Lab	0	0	2	50	0	0	1	1
8	HE171	Holistic Education-I	1	0	0	---	1	0	0	1
		Total				550				22

I SEMESTER - PHYSICS CYCLE

Sl. No	Course No	Course Name	Hours			Total Marks	Credits			Total Credits
			L	T	P		L	T	P	
1	MA131	Mathematics – I	3	0	0	100	3	0	0	3
2	PH132P	Physics	3	0	2	100	3	0	1	4
3	EE133P	Basic Electrical Engineering	3	0	2	100	3	0	1	4
4	CE134P	Basics of Civil Engineering & Engineering Mechanics	3	0	2	100	3	0	1	4
5	EG135P	Engineering Graphics	2	0	2	100	2	0	1	3
6	BS136	Bio Science	2	0	0	100	2	0	0	2
7	HE171	Holistic Education-I	1	0	0	---	1	0	0	1
		Total				600				21

II SEMESTER - CHEMISTRY CYCLE

Sl. No	Course No	Course Name	Hours			Total Marks	Credits			Total Credits
			L	T	P		L	T	P	
1	MA231	Mathematics – II	3	0	0	100	3	0	0	3
2	CH232P	Chemistry	3	0	2	100	3	0	1	4
3	EC233P	Basic Electronics	3	0	2	100	3	0	1	4
4	CS234P	Computer Programming	3	0	2	100	3	0	1	4
5	ME235	Basic Mechanical Engineering and Nanoscience	3	0	0	100	3	0	0	3
6	TE236P	Technical English	1	0	2	100	1	0	1	2
7	ME 251	Workshop Practice Lab	0	0	2	50	0	0	1	1
8	HE271	Holistic Education-II	1	0	0	---	1	0	0	1
		Total				650				22

II SEMESTER - PHYSICS CYCLE

Sl. No	Course No	Course Name	Hours			Total Marks	Credits			Total Credits
			L	T	P		L	T	P	
1	MA231	Mathematics – II	3	0	0	100	3	0	0	3
2	PH232P	Physics	3	0	2	100	3	0	1	4
3	EE233P	Basic Electrical Engineering	3	0	2	100	3	0	1	4
4	CE234P	Basics of Civil Engineering & Engineering Mechanics	3	0	2	100	3	0	1	4
5	EG235P	Engineering Graphics	2	0	2	100	2	0	1	3
6	BS 236	Bio Science	2	0	0	100	2	0	0	2
7	HE271	Holistic Education-II	1	0	0	---	1	0	0	1
		Total				600				21

SEMESTER III

Sl. No	Course No	Course Name	Hours			Total Marks	Credits			Total Credits
			L	T	P		L	T	P	
1	MA 331	Mathematics -III	3	0	0	100	3	0	0	3
2	ME 332	Material Science and Metallurgy	3	0	0	100	3	0	0	3
3	ME 333	Basic Thermodynamics	3	0	0	100	3	0	0	3
4	ME 334	Strength of Materials	3	1	2	100	3	0	1	4
5	ME 335	Non-Conventional Energy Resources	3	1	2	100	3	0	1	4
6	ME 336	Professional Development II	3	0	0	100	3	0	0	3
7	ME 351	Foundry and Forging Lab	0	0	2	50	0	0	2	2
8	HE 371	Holistic Education-III	1	0	0	----	1	0	0	1
TOTAL			19	2	6	650	19	0	4	23

SEMESTER IV

Sl. No	Course No	Course Name	Hours			Total Marks	Credits			Total Credits
			L	T	P		L	T	P	
1	MA 431	Mathematics-IV	3	0	0	100	3	0	0	3
2	ME 432	Applied Thermodynamics	3	1	0	100	3	0	0	3
3	ME 433	Kinematics of Machines	3	0	0	100	3	0	0	3
4	ME 434	Primary Manufacturing	3	0	2	100	3	0	1	4
5	ME 435	Fluid Mechanics	3	0	2	100	3	0	1	4
6	ME 436	Engineering Metrology	3	0	2	100	3	0	1	4
7	ME 437	Computer Aided Machine Drawing	2	4	0	100	2	2	0	4
8	HE 471	Holistic Education-IV	1	0	0	---	1	0	0	1
TOTAL			21	5	6	700	21	2	3	26

SEMESTER V

Sl. No	Course No	Course Name	Hours			Marks	Credits			Total Credits
			L	T	P		L	T	P	
1	ME 531	Design of Machine Elements	3	0	0	100	3	0	0	3
2	ME 532E	Elective-I(Core)	3	0	0	100	3	0	0	3
3	ME 533	Dynamics of Machinery	3	0	0	100	3	0	0	3
4	ME 534	Turbo Machines	3	0	2	100	3	0	1	4
5	ME 535	Internal Combustion Engines	3	0	2	100	3	0	1	4
6	ME 536	Advanced Manufacturing Technology	3	0	0	100	3	0	0	3
7	ME 551	Simulation Laboratory	0	0	2	50	0	0	2	2
		TOTAL	18	0	6	650	18	0	4	22

SEMESTER VI

Sl. No	Course No	Course Name	Hours			Marks	Credits			Total Credits
			L	T	P		L	T	P	
1	ME 631	Design of Transmission System	3	0	0	100	3	0	0	3
2	ME 632	Heat and Mass Transfer	3	1	2	100	3	0	1	4
3	ME 633	Finite Element Methods	3	0	2	100	3	0	1	4
4	ME 634	Mechatronics and Microprocessor	3	0	0	100	3	0	0	3
5	ME 635	Hydraulic and Pneumatic Control	3	0	2	100	3	0	1	4
6	ME636O EXX	Elective-II(Open)	3	0	0	100	3	0	0	3
		TOTAL	18	1	6	600	18	0	3	21

SEMESTER VII

Sl. No	Course No	Course Name	Hours			Marks	Credits			Total Credits
			L	T	P		L	T	P	
1	ME 731	Engineering Economics	3	0	0	100	3	0	0	3
2	ME 732	Mechanical Vibrations	3	1	2	100	3	0	1	4
3	ME 733	Operations Research	3	0	0	100	3	0	0	3
4	ME 734	Automation and Robotics	3	1	2	100	3	0	1	4
5	ME 735E	Elective-III(Core)	3	0	0	100	3	0	0	3
6	XX	Elective- IV(Humanities)	2	0	0	50	2	0	0	2
7	ME751	Analysis Laboratory	0	0	2	50	0	0	2	2
8	ME771	Service Learning	0	0	2	50	1	0	1	2
9	ME772	Internship	0	0	4	-	0	0	2	2
		TOTAL	17	2	12	650	18	0	7	25

SEMESTER VIII

Sl.No	Course No	Course Name	Hours			Marks	Credits			Total Credits
			L	T	P		L	T	P	
1	ME 831	Control Engineering	3	1	0	100	3	0	0	3
2	ME 832E	Elective-V(Core)	3	0	0	100	3	0	0	3
3	ME 833E	Elective-VI(Core)	3	0	0	100	3	0	0	3
4	ME 871	Project Work	0	0	12	200	0	0	6	6
5	ME 872	Comprehension	0	0	2	50	0	0	2	2
7	BTCY01	Cyber Security	2	0	0	--	2	0	0	2
8	IC	Constitution of India	1	0	0	--	1	0	0	1
		TOTAL	12	1	14	550	12	0	8	20

ELECTIVE- I (ME532E)										
Sl.No	Course No	Course Name	Hours			Marks	Credits			Total Credits
			L	T	P		L	T	P	
1	ME532E1	Project Management	3	0	0	100	3	0	0	3
2	ME532E2	Non Traditional Machining	3	0	0	100	3	0	0	3
3	ME532E3	Composite Materials	3	0	0	100	3	0	0	3
4	ME532E4	Refrigeration and Air Conditioning	3	0	0	100	3	0	0	3
5	ME532E5	Energy Engineering	3	0	0	100	3	0	0	3
6	ME532E6	Theory of Elasticity	3	0	0	100	3	0	0	3
7	ME532E7	Non Destructive Testing	3	0	0	100	3	0	0	3
8	ME532E8	Knowledge Management	3	0	0	100	3	0	0	3
9	ME532E9	Statistical Quality Control	3	0	0	100	3	0	0	3
10	ME532E10	Micro and Smart System Technology	3	0	0	100	3	0	0	3

ELECTIVE- III (ME735E)										
Sl.No	Course No	Course Name	Hours			Marks	Credits			Total Credits
			L	T	P		L	T	P	
1	ME735E1	Total Quality Management	3	0	0	100	3	0	0	3
2	ME735E2	Supply Chain Management	3	0	0	100	3	0	0	3
3	ME735E3	Product Design & Manufacturing	3	0	0	100	3	0	0	3
4	ME735E4	Flexible Manufacturing System	3	0	0	100	3	0	0	3
5	ME735E5	Smart Materials	3	0	0	100	3	0	0	3
6	ME735E6	Experimental Stress Analysis	3	0	0	100	3	0	0	3

7	ME735E7	Advanced Machine Design	3	0	0	100	3	0	0	3
8	ME735E8	Computational Fluid Dynamics	3	0	0	100	3	0	0	3
9	ME735E9	Design of Heat Exchangers	3	0	0	100	3	0	0	3
10	ME735E10	Theory of Plasticity	3	0	0	100	3	0	0	3
11	ME735E11	Research Methodology	3	0	0	100	3	0	0	3

ELECTIVE- V (ME832E)										
Sl.No	Course No	Course Name	Hours			Marks	Credits			Total Credits
			L	T	P		L	T	P	
1	ME832E1	Organizational Behaviour, Communication and Leadership	3	0	0	100	3	0	0	3
2	ME832E2	Entrepreneurship Development	3	0	0	100	3	0	0	3
3	ME832E3	Plant Layout and Material Handling Systems	3	0	0	100	3	0	0	3
4	ME832E4	Gas Dynamics and Space Propulsion	3	0	0	100	3	0	0	3
5	ME832E5	Cryogenics	3	0	0	100	3	0	0	3
6	ME832E6	Advanced Automotive Engineering	3	0	0	100	3	0	0	3
7	ME832E7	Nano Technology	3	0	0	100	3	0	0	3
8	ME832E8	Fracture Mechanics	3	0	0	100	3	0	0	3
9	ME832E9	Lean Manufacturing	3	0	0	100	3	0	0	3
10	ME832E10	Product Lifecycle Management	3	0	0	100	3	0	0	3

ELECTIVE- VI (ME833E)										
Sl.No	Course No	Course Name	Hours			Marks	Credits			Total Credits
			L	T	P		L	T	P	
1	ME833E1	Operations Management	3	0	0	100	3	0	0	3
2	ME833E2	Management Information System	3	0	0	100	3	0	0	3
3	ME833E3	Rapid Prototyping	3	0	0	100	3	0	0	3
4	ME833E4	Power Plant Engineering	3	0	0	100	3	0	0	3
5	ME833E5	Gas Turbine and Jet Propulsion	3	0	0	100	3	0	0	3
6	ME833E6	Professional Ethics and Intellectual Property Rights	3	0	0	100	3	0	0	3
7	ME833E7	Tribology	3	0	0	100	3	0	0	3
8	ME833E8	Design of Experiments	3	0	0	100	3	0	0	3
9	ME833E9	Geometric Modelling	3	0	0	100	3	0	0	3
10	ME833E10	Agile Manufacturing	3	0	0	100	3	0	0	3

OPEN ELECTIVES OFFERED BY THE DEPARTMENT										
Sl.No	Course No	Course Name	Hours			Marks	Credits			Total Credits
			L	T	P		L	T	P	
1	ME63OE01	Green Belt Practice	3	0	0	100	3	0	0	3
2	ME63OE02	Facility Planning and Design	3	0	0	100	3	0	0	3
3	ME63OE03	Basic Automobile Engineering	3	0	0	100	3	0	0	3
4	ME63OE04	Project Management	3	0	0	100	3	0	0	3
5	ME63OE05	Basic Aerospace Engineering	3	0	0	100	3	0	0	3
6	ME63OE06	Industrial Robotics	3	0	0	100	3	0	0	3
7	ME63OE07	Non Destructive Testing	3	0	0	100	3	0	0	3

8	ME63OE08	Energy and Environment	3	0	0	100	3	0	0	3
9	ME63OE09	Alternative Energy Sources for Automobiles	3	0	0	100	3	0	0	3
10	ME63OE10	Advanced Manufacturing Technology	3	0	0	100	3	0	0	3