

Department of Mechanical Engineering

Programme: Degree in Mechanical Engineering

Year I		Semester I				
Course code		Course Title	L	T	P	C
PH	21102	Physics	4	0	2	5
MA	21101	Mathematics –I	3	1	0	4
ES	21100	Basic Electrical Engineering (offered by EE)	3	1	2	5
ES	21151	Engineering Graphics and Design (offered by CE+ME)	0	0	6	3
FR	21121	Biology for Engineers	2	1	0	3
						Total 20

Year I		Semester II				
Course code		Course Title	L	T	P	C
HS	21201	English	2	0	2	3
MA	21201	Mathematics –II	3	1	0	4
CY	21201	Chemistry	3	1	2	5
ES	21200	Programming for Problem Solving (offered by CS)	3	0	2	4
ES	21251	Workshop Practices (offered by ME)	0	0	6	3
ES	21277	Environmental Sciences (Audit course)	2	0	0	0
						Total 19

Year II			Semester III			
Course code		Course Title	L	T	P	C
MA	22101	Mathematics III	3	1	0	4
ES	22100	Engineering Mechanics (offered by CE+ME)	3	1	0	4
ES	22101	Basic Electronics Engineering (offered by ECE)	3	0	2	4
ME	22101	Engineering Metallurgy	3	0	0	3
ME	22102	Thermodynamics	3	1	0	4
ME	22151	Machine Drawing	0	0	6	3
						Total 22

Year II		Semester IV			
Course code	Course Title	L	T	P	C
HS 22201	Entrepreneurship and Start ups	3	0	0	3
HS 22277	Indian Constitution	0	0	0	0
ME 22201	Applied Thermodynamics	3	1	0	4
ME 22202	Fluid Mechanics and Machines	3	1	2	5
ME 22203	Strength of Materials	3	0	2	4
ME 22204	Theory of Machines	3	0	2	4
Total				20	

Year III		Semester V			
Course code	Course Title	L	T	P	C
HS 23101	Principles of Economics	3	0	0	3
HS 23177	Essence of Indian Traditional Knowledge	0	0	0	0
ME 23101	Heat Transfer	3	0	2	4
ME 23102	Mechanics of Solids	3	0	0	3
ME 23103	Manufacturing Processes	4	0	2	5
ME 23104	Design of Machine Elements	3	0	2	4
ME 23105	Instrumentation and Control	3	0	2	4
ME 23166	Study Tour (AUDIT)	0	0	0	0
Total				23	

Year III		Semester VI			
Course code	Course Title	L	T	P	C
HS 23201	Organizational Behaviour	3	0	0	3
ME 23201	Manufacturing Technology	4	0	2	5
ME 23202	Machine Design	3	0	2	4
ME 230**	Programme Elective-I	3	0	0	3
ME 230**	Programme Elective-II	3	0	0	3
MO 230**	Open Elective -I (From MOOC)	3	0	0	3
ME 23289	Seminar	0	0	2	1
Total				22	

Year IV		Semester VII			
Course code	Course Title	L	T	P	C
ME 24101	Automation in Manufacturing	3	0	0	3
ME 24102	Mechanical Vibrations	3	0	0	3
ME 240**	Programme Elective – III	3	0	0	3
ME 240**	Programme Elective – IV	3	0	0	3
** 240**	Open Elective-II	3	0	0	3
ME 24199	Project-I	0	0	6	3
ME 24179	Industrial Training (For 4 Weeks)	0	0	0	3
Total				21	

Year IV		Semester VIII			
Course code	Course Title	L	T	P	C
ME 24201	Energy Conversions Techniques	3	0	0	3
ME 240**	Programme Elective V	3	0	0	3
ME 240**	Programme Elective VI	3	0	0	3
MO 240**	Open Elective-III (From MOOC)	3	0	0	3
** 240**	Open Elective-IV	3	0	0	3
ME 24299	Project-II	0	0	12	6
ED 24288	Extra Curricular Activities and Discipline	0	0	0	2
Total				23	

PROFESSIONAL ELECTIVES:

List of Programme Elective I			L	T	P	C
ME	23001	Power Plant Engineering	3	0	0	3
ME	23002	Two Phase Flow and Heat Transfer	3	0	0	3
ME	23003	Boundary Layer Theory	3	0	0	3
ME	23004	Fluid Power Control Systems	3	0	0	3
ME	23005	Refrigeration and Air-conditioning	3	0	0	3

List of Programme Elective II			L	T	P	C
ME	23006	Non-conventional Machining	3	0	0	3
ME	23007	Industrial Robotics	3	0	0	3
ME	23008	Composite Materials	3	0	0	3
ME	23009	Production Planning and Control	3	0	0	3

List of Elective III			L	T	P	C
ME	24010	Internal Combustion Engines	3	0	0	3
ME	24011	Combustion Engineering	3	0	0	3
ME	24012	Compressible Flow	3	0	0	3
ME	24013	Heat Exchanger Design	3	0	0	3
ME	24014	Energy Management	3	0	0	3

List of Elective IV			L	T	P	C
ME	24015	Numerical Control and CAM	3	0	0	3
ME	24016	Management of Production Systems	3	0	0	3
ME	24017	Total Quality Management	3	0	0	3
ME	24018	Intelligent Manufacturing Systems	3	0	0	3

List of Elective V			L	T	P	C
ME	24019	Numerical Analysis	3	0	0	3
ME	24020	Principles of Tribology	3	0	0	3
ME	24021	Engineering Materials	3	0	0	3
ME	24022	Computer Aided Design and Graphics	3	0	0	3

List of Elective VI			L	T	P	C
ME	24023	Finite Element Methods	3	0	0	3
ME	24024	Fracture Mechanics	3	0	0	3
ME	24025	Theory of Elasticity	3	0	0	3
ME	24026	Rotor Dynamics	3	0	0	3

LIST OF OPEN ELECTIVES FROM ME DEPTT			L	T	P	C
ME	24041	Non-conventional Energy Source	3	0	0	3
ME	24042	Mechatronics Systems	3	0	0	3
ME	24043	Operations Research	3	0	0	3
ME	24044	Wind and Solar Energy Systems	3	0	0	3

Subject offered to CE Students			L	T	P	C
ME	22021	Basics of Mechanical Engineering	2	0	0	2

Syllabus of subject offered to other branch:

ME 22021 Basics of Mechanical Engineering (2-0-0-2 Cr) [For CE Students]

Unit I	Introduction to engineering thermodynamics: Thermodynamic systems & surroundings, thermodynamic properties, states, processes and cycles, heat and work transfer, path function and point function, thermodynamic equilibrium, quasi-static processes, flow & non flow processes, thermodynamic laws & their applications..	6 lectures
Unit II	Introductory heat transfer: Conduction, convection & radiation, heat flow through building materials, simple power generating equipments like boiler, turbines and IC engines.	5 lectures
Unit III	Engineering materials: (cast iron, steel and their alloys) properties, various heat treatment and manufacturing processes, fibers and composites, applications of composite materials.	6 lectures