

### Scheme for B.Tech:Mechanical Department

Third Semester					
Sr.No.	Course Code	Course Name	Type DC/DE	Structure	Credits
1	MEL203	Engineering Thermodynamics	DC	3+1+0	4
2	MEL204	Engineering Metallurgy	DC	3+0+0	3
3	MEP204	Engineering Metallurgy Lab	DC	0+0+2	1
4	MAL201	Integral Transformation and PDE	DC	3+1+0	4
5	MEL206	Solid Mechanics	DC	3+1+0	4
6	MEL201	Theory of Machines-I	DC	3+1+0	4
Total credits					20

Fourth Semester					
Sr.No.	Course Code	Course Name	Type DC/DE	Structure	Credits
1	MEL202	Fluid Mechanics	DC	3+1+0	4
2	MEP202	Fluid Mechanics Lab	DC	0+0+2	1
3	MEL207	Manufacturing Processes – I	DC	3+0+0	3
4	MEL304	Machine Design – I	DC	3+0+0	3
5	MEL301	Theory of Machine – II	DC	3+0+0	3
6	MEP301	Theory of Machine – II Lab	DC	0+0+2	1
7	MEL303	Energy Conversion - I	DC	4+0+0	4
8	MEP207	Manufacturing Processes – 1 Lab	DC	0+0+2	1
9	MEP208	Design - I Lab	DC	0+0+2	1
Total credits					21

Fifth Semester					
Sr.No.	Course Code	Course Name	Type DC/DE	Structure	Credits
1	MEL302	Heat Transfer	DC	4+0+0	4
2	MEL308	Energy Conversion - II	DC	3+0+0	3
3	MEL305	Manufacturing Processes - II	DC	3+0+0	3
4	MEL307	Fluid Mechanics	DC	3+0+0	3
5	MEP307	Fluid Mechanics Lab	DC	0+0+2	1
6	MEP305	Manufacturing Processes – II Lab	DC	0+0+2	1
7	MEL313	Machine Drawing	DC	2+0+0	2
8	MEP313	Machine Drawing Practice	DC	0+0+2	1
9	MEP302	Thermal Lab	DC	0+0+2	1
Elective/OC (Any One)					
1	MEL416	Industrial Robotics	DE/OC/HM	3+0+0	3
2	MEL421	Computational Methods in Engineering			
3	MEL446	Product Design			
		OC/HM			
Total credits					22

Sixth Semester					
Sr.No.	Course Code	Course Name	Type DC/DE	Structure	Credits
1	MEL311	Metrology and Quality Assurance	DC	3+0+0	3
2	MEL312	Mechanical Measurements	DC	3+0+0	3
3	MEP314	Mechanical Measurements and Metrology Lab	DC	0+0+2	1
4	MEL309	Machine Design - II	DC	3+1+0	4
5	MEL310	Manufacturing Process Automation	DC	3+0+0	3
6	MEP310	Manufacturing Process Automation Lab	DC	0+0+2	1
7	MEP309	Design – II Lab	DC	0+0+2	1
8	MEL432 MEL422	1. Computer Graphics and Solid Modelling 2. Automobile Engineering	DE	3+0+0	3
9	MEP432 MEP422	1. Computer Graphics and Solid Modelling Lab 2. Automobile Engineering Lab	DE	0+0+2	1
Elective/OC (Any One)					
1	MEL429	Renewable Energy Sources	DE/OC/HM	3+0+0	3 (3×1=3)
2	MEL418	Advanced Stress Analysis			
3	MEL415	Mechanical Vibration			
4	MEL405	Optimization			
5	MEL453	Product Development			
6	MEL447	Engineering Eco			
7	MEL450	Cost Accounting			
		OC/HM			
Total credits					23

Seventh Semester					
Sr.No.	Course Code	Course Name	Type DC/DE	Structure	Credits
1	MED401	Project Phase - I	DC		2
2	MEL435	1. Computational Fluid Dynamics	DE	3+0+0	3
	MEL420	2. Finite Element Method			
3	MEP435	1. Computational Fluid Dynamics Lab	DE	0+0+2	1
	MEP420	2. Finite Element Method Lab			
Elective/OC (Any Four)					
1	MEL407	Bio Mechanics	DE/OC/HM	3+0+0	3 (3×4=12)
2	MEL414	Tribology			
3	MEL433	Design for Manufacturing and Assembly			
		Air Conditioning			
5	MEL431	Advanced Mechanisms			
6	MEL437	Composite Materials			
7	MEL408	Supply Chain Management			
8	MEL425	Reliability and Maintenance Engineering.			
		Machine Vision & its Application			
10	MEL450	Advanced Machining Processes			
11	MEL417	Power Plant Engineering			
12	MEL402	Surface Engineering			
13		OC/HM			
Total credits					18

Eighth Semester					
Sr.No.	Course Code	Course Name	Type DC/DE	Structure	Credits
1	MED402	Project Phase - II	DC		4
2	MEL426 MEL430	1. Refrigeration and Cryogenics 2. Advanced IC Engines	DE	3+0+0	3
3	MEP426 MEP430	1. Refrigeration and Cryogenics Lab 2. Advanced IC Engines Lab	DE	0+0+2	1
Elective/OC (Any Five)					
1	MEL443	Air Pollution Control	DE/OC/HM	3+0+0	3 (3×5=15)
2	MEL449	Adv. Turbo Machinery			
3	MEL401	Control System			
4	MEL424	Industrial Engineering Management			
5	MEL428	Machine Tool Design			
6	MEL403	Operation Research			
7	MEL448	AI in Manufacturing			
8	MEL413	Fracture Mechanics			
9	MEL427	Quality Engineering Management			
10	MEL453	Product development			
11	MEP452	Machine System Design			
Total credits					23

Total Credits (Semester wise)

Sr. No	Type	III Sem	IV Sem	V Sem	VI Sem	VII Sem	VIII Sem	Total
1	DC	20	21	19	16	2	4	82
2	DE/OC/HM	0	0	3	7	16	19	45