Department of Mechanical Engineering

NEP courses for the batch admitted from AY 2024-25

Details of Departmental Compulsary (DC) Courses

Departmental Compulsary (DC) Courses					
S. No.	**Course Code**	**Course Name**	**L-T-P**	**Credit**	**Course Type**
1	NMEC501	Machining Science	3-1-0	4	Theory
2	NMEC502	Thermo Production Process	3-1-0	4	Theory
3	NMEC503	Theory of Metal Forming	3-1-0	4	Theory
4	NMEC504	Thermo-Production Lab	0-0-3	1.5	Practical
5	NMEC505	Modelling and Simulation Lab	0-0-3	1.5	Practical
6	NMEC506	Machining Lab	0-0-3	1.5	Practical
7	NMEC507	Theory of Elasticity	3-1-0	4	Theory
8	NMEC508	Mechanical Vibration	3-1-0	4	Theory
9	NMEC509	Finite Element Methods	3-1-0	4	Theory
10	NMEC510	Computation Lab	0-0-3	1.5	Practical
11	NMEC511	Mechanical Vibration Lab	0-0-3	1.5	Practical
12	NMEC512	Structural Modelling and Simulation lab	0-0-3	1.5	Practical
13	NMEC513	Numerical Methods	3-1-0	4	Theory
14	NMEC514	Advanced Fluid Dynamics	3-1-0	4	Theory
15	NMEC515	Advanced Thermodynamics	3-1-0	4	Theory
16	NMEC516	Thermo-Fluids Lab-I	0-0-3	1.5	Practical
17	NMEC517	Thermo-Fluids Lab-II	0-0-3	1.5	Practical
18	NMEC518	Computing Lab	0-0-3	1.5	Practical
19	NMEC519	Fracture Mechanics	3-1-0	4	Theory
20	NMEC520	Advanced Dynamics	3-1-0	4	Theory
21	NMEC521	Control System	3-1-0	4	Theory
22	NMEC522	Computational Fluid Dynamics	3-1-0	4	Theory
23	NMEC523	Conduction and Radiation	3-1-0	4	Theory
24	NMEC524	Convection and Two-Phase Flow	3-1-0	4	Theory
25	NMEC525	Additive Manufacturing	3-1-0	4	Theory
26	NMEC526	CAM and Automation	3-1-0	4	Theory
27	NMEC527	CAM and Mechatronics Lab	0-0-3	1.5	Practical
28	NMEC528	Additive Manufacturing Lab	0-0-3	1.5	Practical
29	NMEC529	Unconventional Manufacturing Lab	0-0-3	1.5	Practical
30	NMEC530	Computaional Fluid Dynamics Lab	0-0-3	1.5	Practical
31	NMEC531	Thermo-fluids Lab – III	0-0-3	1.5	Practical
32	NMEC532	Solar Thermal lab	0-0-3	1.5	Practical
33	NMEC533	Control System Lab	0-0-3	1.5	Practical
34	NMEC534	Mechanical Characterization Lab	0-0-3	1.5	Practical
35	NMEC535	Finite element analyses lab	0-0-3	1.5	Practical
36	NMEC536	Unconventional Manufacturing Processes	3-1-0	4	Theory
37	NMEC595	Research Methodology	3-0-0	3	Theory
38	NMEC596	Research Methodology	3-0-0	3	Audit
39	NMEC597	Thesis	0-0-0	20	Non-contact
40	NMEC598	Thesis	0-0-0	20	Non-contact
41	NMEC599	Thesis	0-0-0	20	Audit

Details of Departmental Elective (DE) Courses

Departmental Elective Courses					
S. No.	**Course Code**	**Course Name**	**L-T-P**	**Credit**	**Course Type**
1	NMED501	Engineering Tribology	3-0-0	3	Theory
2	NMED502	Condition Monitoring of Machines	3-0-0	3	Theory
3	NMED503	Rotor Dynamics	3-0-0	3	Theory
4	NMED504	Design of Tribological Components	3-0-0	3	Theory
5	NMED505	Composite Materials	3-0-0	3	Theory
6	NMED506	Theory of Plates and Shells	3-0-0	3	Theory
7	NMED507	Theory of Plasticity	3-0-0	3	Theory
8	NMED508	Acoustics and Noise Control	3-0-0	3	Theory
9	NMED509	Gas Dynamics	3-0-0	3	Theory
10	NMED510	Fundamentals of Aerodynamics	3-0-0	3	Theory
11	NMED511	Fundamentals of Aeroacoustics	3-0-0	3	Theory
12	NMED512	Microfluidics	3-0-0	3	Theory
13	NMED513	Finite Element Method in Thermal Engineering	3-0-0	3	Theory
14	NMED514	Solar Energy	3-0-0	3	Theory
15	NMED515	Advanced Steam Power Plant	3-0-0	3	Theory
16	NMED516	Cryogenic Engineering	3-0-0	3	Theory
17	NMED517	Laser Processing of Materials	3-0-0	3	Theory
18	NMED518	Surface Engineering	3-0-0	3	Theory
19	NMED519	Design of Tools, Jigs and Fixtures	3-0-0	3	Theory
20	NMED520	Industrial Robotics	3-0-0	3	Theory
21	NMED521	Design of Fluid Power Systems	3-0-0	3	Theory
22	NMED522	Non-linear Oscillations	3-0-0	3	Theory
23	NMED523	Computational Fracture Mechanics	3-0-0	3	Theory
24	NMED524	Computer-Aided Design	3-0-0	3	Theory
25	NMED525	Bearing Design and Lubrication	3-0-0	3	Theory
26	NMED526	Mechanical Behaviors of Engineering Materials	3-0-0	3	Theory
27	NMED527	Structural Dynamics and Aero-elasticity	3-0-0	3	Theory
28	NMED528	Navier-Stokes Solvers	3-0-0	3	Theory
29	NMED529	Advanced Refrigeration Systems	3-0-0	3	Theory
30	NMED530	Fundamentals of Lattice Boltzmann method	3-0-0	3	Theory
31	NMED531	Introduction to Machine Learning	3-0-0	3	Theory
32	NMED532	Green Energy	3-0-0	3	Theory
33	NMED533	Quality Engineering and Management	3-0-0	3	Theory
34	NMED534	Fundamentals of Electro Magneto-Hydrodynamic Flows	3-0-0	3	Theory
35	NMED535	Industrial Automation	3-0-0	3	Theory
36	NMED536	Course is not assigned agaisnt this code			
37	NMED537	Acoustic and Noise Control	3-0-0	3	Theory
38	NMED538	Computer Aided Design	3-0-0	3	Theory
39	NMED539	Turbomachinery	3-0-0	3	Theory
40	NMED540	Heat Exchanger Design	3-0-0	3	Theory
41	NMED541	Micro and Precision Manufacturing	3-0-0	3	Theory