

KLUNIVERSITY
GreenFields, Vaddeswaram.

List of Pre-Ph.D Courses approved by
DEPARTMENT OF MECHANICAL ENGINEERING

S.NO	PAPER-2	Code	PAPER-3	Code
1.	Numerical Methods in Thermal Engineering	20ME201	Incompressible and Compressible Flows	20ME301
2.	Advanced Thermodynamics	20ME202	Computational Fluid Dynamics	20ME302
3.	Design of Thermal Systems	20ME203	Refrigeration and Cryogenics	20ME303
4.	Advanced Heat and Mass Transfer	20ME204	Measurements in Thermal Engineering	20ME304
5.	Heat Exchanger Design	20ME205	Engine Systems and Performance	20ME305
6.	Convection and Two-Phase Flow	20ME206	IC Engine Combustion and Pollution	20ME306
7.	Compact Heat Exchangers	20ME207	Alternative Fuels	20ME307
8.	Principles of Turbo-Machinery	20ME208	Energy Conservation, Management & Audit	20ME308
9.	Gas Turbine Engineering	20ME209	Renewable Energy Technology	20ME309
10.	Turbo-Compressors	20ME210	Solar Energy and Wind Energy	20ME310
11.	Design Methods	20ME211	Mechanical Vibrations	20ME311
12.	Design With Advanced Materials	20ME212	Design for Optimization	20ME312
13.	Theory of Elasticity and Plasticity	20ME213	Advanced Strength of Materials	20ME313
14.	Modeling & Analysis-1 (Cad)	20ME214	Modeling & Analysis-2 (FEM)	20ME314
15.	Precision and Quality Engineering	20ME215	Design of Pressure Vessels and Plates	20ME315
16.	Advanced Mechanisms	20ME216	Tribological SystemDesign	20ME316
17.	Concurrent Engineering	20ME217	Product Design and Development	20ME317
18.	Mechanics of Composite Materials	20ME218	Engineering Noise & Control	20ME318
19.	Machine Tool Design	20ME219	Engineering Failure Analysis and Prevention	20ME319
20.	Fracture Mechanics	20ME220	Design for Manufacturing, Assembly and Environment	20ME320
21.	Advanced Composites	20ME221	Experimental Stress Analysis	20ME321
22.	Quality Engineering and Reliability	20ME222	Micro and Nano Manufacturing	20ME322
23.	Intelligent Manufacturing Systems	20ME223	Additive Manufacturing for Medical Applications	20ME323
24.	Quality Engineering in Manufacturing	20ME224	Computer integrated Manufacturing	20ME324
25.	Operational Planning and Control	20ME225	Supply Chain Management	20ME325

26.	Condition Monitoring and Fault Diagnosis	20ME226	Advanced Optimization Techniques	20ME326
27.	Energy Systems Modelling and Analysis	20ME227	Materials Management	20ME327
28.	Fundamentals of Mechatronics	20ME228	Fuels and Combustion Technology	20ME328
29.	Advanced Engineering Mathematics	20ME229	Control of Mechatronic Systems	20ME329
30.	Robotic Modeling Analysis and Control	20ME230	Robotics: Advanced Concepts and Analysis	20ME330
31.	Modeling and Simulation of Mechatronic Systems	20ME231	Mechatronics Product Design	20ME331
32.	Signal Processing in Mechatronic Systems	20ME232	Vehicle Dynamics and Multi-Body Systems	20ME332
33.	MEMS and NEMS	20ME233	AI for Robotics	20ME333
34.	Intelligent Visual Surveillance	20ME234	Sensors and Actuators	20ME334
35.	Microprocessors and Embedded Systems	20ME235	Industrial Automation and Control	20ME335
36.	Fuzzy Sets and Artificial intelligence	20ME236		
37.	Emerging Smart Materials for Mechatronics Applications	20ME237		