B.Tech. (Mechanical Engineering) 2022-26

Year	Semester-I	L	T	U	Semester-II	L	T	U
I	Mathematics-I	3	0	3	Mathematics-II	3	0	3
	English Language Skills	2	2	3	Professional Communication	3	0	3
	Chemistry	3	2	4	Environment Sciences & SDGs	2	0	2
	Essence of Indian Traditional Knowledge (Audit)				Physics	3	2	4
	Introduction to Electrical and Electronics Sciences	3	2	4	Digital Signal Processing	3	0	3
	Computer Programming	3	2	4	Introduction to AI and DS	3	0	3
	Engineering Graphics	2	4	4	Digital Fabrication	2	4	4
Total No of Credits				22	**Total No of Credits**			22
	Semester-III				**Semester-IV**			
	Introduction to IoT	3	0	3	Matlab Based Numerical Methods	3	2	4
	Object Oriented Programming Concepts	2	4	4	Industry coding practice (Python and R)	2	2	3
II	Mathematics-III	3	0	3	Strength of Materials	3	0	3
	Principles of Managerial Economics	3	0	3	Applied Thermodynamics	3	0	3
	Engineering Mechanics	3	0	3	Kinematics & Dynamics of Machinery	3	0	3
	Thermal Engineering	3	0	3	Machine Drawing	2	4	4
	Fluid Mechanics and HM	2	2	3				
	CRT	0	2	1	CRT	0	2	1
Total No of Credits				23	**Total No of Credits**			21
Summer Internship program								**5**
	Semester-V				**Semester-VI**			
	Control Systems	3	0	3	Digital Humanities Eective1	3	0	3
III	Machine Learning Applications in Mechanical Engineering	2	0	2	Intelligent Transport Systems	2	0	2
	Optimization Techniques	3	0	3	Manufacturing Processes & Technology	3	2	4
	Hydraulics & Hydraulic Machinery	3	2	4	Computer Aided Design	3	2	4

	Design of Machine Elements	3	0	3	Supply Chain Management	3	0	3
	Machine Tools & Metrology	3	2	4	Special Project / TIP / Capstone Project	0	6	3
	Audit Course	0	0	0	CRT	0	2	1
	CRT	0	2	1				
Total No of Credits				20	**Total No of Credits**			20
	Semester-VII				**Semester-VIII**			
IV	Internship Program II /Thesis	20			Internship Program II /Thesis	20		
	Electives (4) + Professional / Discipline Electives	Or 18			Electives (4) + Professional / Discipline Electives	Or 18		
	Humanities Electives (1)				Humanities Electives (1)			
Total No of Credits		**20/18**			**Total No of Credits**	**18/20**		
Total No of Credits						**171**		

Discipline Electives			
	L	**T**	**P**
Manufacturing			
Precision Engineering	3	2	3
Advanced in Material Science	2	2	3
Nanotechnology	3	0	3
Computer Aided Manufacturing	2	2	3
Smart Manufacturing - Industry 4.0	3	0	3
Green Manufacturing	2	2	3
Design			
Mechanical Equipment Design	3	0	3
Theory of Elasticity	3	0	3
Principles of Tribology	3	0	3
Mechanics of Composite Materials	3	0	3
Vibration Control	2	2	3
AI & ML in Design Analysis	2	2	3
Energy Engineering			
Automotive Engineering	3	0	3
Refrigeration and Air Conditioning	2	3	3

Power Plant Engineering	3	0	3
Nonconventional Sources of Energy	3	0	3
Computational Fluid Dynamics	2	2	3
Cryogenics	3	0	3
Industrial Engineering			
Production Planning & Control	3	0	3
Automation and Intelligent Systems	3	0	3
Quality Assurance & Reliability	3	0	3
Operations Research and Decision Sciences	3	0	3
Systems Analysis	3	0	3
Simulation & Modeling	2	2	3
Emerging Areas			
Additive Manufacturing Processes and Applications	2	2	3
Mechatronics	2	2	3
Robotics & Automation	2	2	3
Machine to Machine Communication	3	0	3
Reverse Engineering	3	0	3
Autonomous Vehicle	3	0	