Subject	COURSE OUTCOME	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
6ME1A: Design of Machine Elements - II	To estimate the stress and strain on mechanical components due to fluctuating loads, and understand, identify and quantify the fatigue failure modes for mechanical parts using the Soderberg and Goodman techniques.	H	H	H	M	L	M	L	M	M	M	M	H
	To select the material and configuration including design of various automobile parts under diffrent service conditions.	H	H	H	M	L	M	M	L	H	L	M	M
	To understand knowledge of basics analytical design and uncertainties inherent in material properties of machine elements.	H	M	M	H	L	M	H	L	H	M	L	M
	To estimate the transverse and torsional deflections/stress of machine elements with analytic methods.	H	H	H	H	M	L	L	M	L	M	L	H
6ME2A: Newer Machining Methods	Students will be able to identify the best machining process for machining of particular material among the conventional and unconventional machining process.	H				M	H			H			H
	Students will be able to understand the principle, mechanism of metal removal of various unconventional machining processes.	H	M	M	H			M		H		M	H
	Students will be able to evaluate the effect of unconventional machining condition on MRR and surface roughness.	H	H	H	H	H	H						H
	Students will be able to categorise nano and micromachining processes and their industrial applications.	H				H		H	H	M		H	H
6ME3A: Mechatronics	To explain the basics of Mechatronics and to relate Mechanical Engineering with Electronics Engineering.	M	L	L	L	L	H	H	H	M	M	M	H
	To analyze and design fabrication and designing of MEMS.	L	L	H	L	L	M	M	L	M	M	L	M
	To analyze and design real time systems and their representations in Z transforms. To learn Data Acquisition and their related system.	M	L	M	M	M	M	H	L	H	M	H	L
	To design mechatronics system for day to day life and for industrial purpose.	H	H	H	H	M	M	L	M	L	H	M	H

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6ME4A: Vibration Engineering	Understand the propagation of sound, noise sources and need of vibration analysis in mechanical design of machine parts.	H	M	M	M	H	H	H		H		H	H
	Ability to formulate mathematical models of problems in vibrations	H	H	M	H	L	M	L		M		L	H
	Ability to determine vibratory responses of single and multi degree of freedom system	H	H	H	H	M	M	M		M		L	H
	Estimate the parameters of vibration isolation system	H	H	H	H	H	H	H		H		M	H
6ME5A: Steam Engineering	To identify elements and functions of boiler and analyze its design and maintenance.	H	H	H	H	H	H	H		H	H	M	H
	To determine performance of steam nozzles and steam turbine based on load variations and analyze the factors affecting its performance.	H	M	M	M	H	M	L		L	L	L	M
	Explain the blade shapes and calculate the performance of steam turbines with the help of performance parameters.	H	M	M	M	H	M	M		M	M	M	M
	Able to calculate the thermal efficiency of rankine cycle and methods to improve the efficiency of a steam power plant.	H	M	M	M	M	M	L		L	L	L	L
6ME6.3A: Maintenance Management	To relate role of maintenance in environment conservation challenges/issues.	H	H	H	M	M	M	M	L	M	H	M	M
	To develop and implement effective maintenance strategy considering different factors including tribological aspect.	H	H	H	H	M	M	M		M	M	H	H
	To discriminate and apply different condition monitoring techniques and related Instruments.	H	M	H	M	M	L	L		M	L	H	M
	To develop the relationship of key concepts in reliability, availability and maintainability, and application to deciding suitable maintenance strategies in a manufacturing environment.	H	H	H	H	M	M	L		H	M	H	H
6ME7A: Machine Design Sessional -II	To demonstrate understanding by either analyzing an existing problem or by modifying design to certain given specifications for mechanical elements.	H	H	H	H	L	M	M	M	H	M	L	H
	To categorize the separate and distinct phases that define the decision-making process as applied to machine design.	H	H	H	H	L	L	M	M	H	M	M	H

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6ME8A: Industrial Engineering Lab-I	To implement various concepts involved in statistical process controlas an Industrial Engineer in industry.	H	H	H	H	H	M	H		M	M	H	H
	To understand and verify probability distributions and solve the problems using statistical process control software in lab.	H	H	H	H	H	H	H		H	M	H	H
6ME9A: Mechatronics Lab	To use devices like analog and digital multi-meter, signal generator, regulated power supply etc.	H	H	H	M	M	H	M					M
	To measure different mechanical variables like – displacement, temperature, torque, strain, position, velocity using electronic sensors.	H	H	H	H	H	H	H			M		M
6ME10A: Vibration Engineering Lab	Ability to determination of natural frequency of vibration problems that contain single and multi-degree of freedom systems.	H	H	M	M		H	M				H	H
	Ability to investigate the whirling problem of a rotating shaft	H	H	M	M	H	H	L				M	H