DEPARTMENT OF MECHANICAL ENGINEERING

YEAR: IInd	SEMESTER: Ist COURSE OUTCOMES(R20)

S.No	COURSE CODE: R2021011	COURSE NAME:VECTOR CALCULUS FOURIER TRANSFORMS and PDE (M-III)
1	**CO1:** Interpret the physical meaning of different operators such as gradient, curl and divergence (L5)	
	CO2: Estimate the work done against a field, circulation and flux using vector calculus (L5)	
	CO3: Apply the Laplace transform for solving differential equations (L3)	
	CO4: Find or compute the Fourier series of periodic signals (L3)	
	CO5: Know and be able to apply integral expressions for the forwards and inverse Fourier transform to a range of non-periodic waveforms (L3)	
	CO6: Identify solution methods for partial differential equations that model physical processes (L3)	

	COURSE CODE: R2021031	COURSE NAME: MECHANICS OF SOLIDS
2	**CO1**: Model & Analyze the behavior of basic structural members subjected to various loading and support conditions based on principles of equilibrium.	
	CO2: Understand the apply the concept of stress and strain to analyze and design structural members and machine parts under axial, shear and bending loads, moment and torsional moment.	
	CO3: Students will learn all the methods to analyze beams, columns, frames for normal, shear, and torsion stresses and to solve deflection problems in preparation for the design of such structural components. Students are able to analyse beams and draw correct and complete shear and bending moment diagrams for beams.	
	CO4: Students attain a deeper understanding of the loads, stresses, and strains acting on a structure and their relations in the elastic behavior	
	CO5: Design and analysis of Industrial components like pressure vessels.	

	COURSE CODE: R2021032	COURSE NAME: FLUID MECHANICS & HYDRAULIC MACHINES
3	**CO1:** The basic concepts of fluid properties.	
	CO2: The mechanics of fluids in static and dynamic conditions.	
	CO3: Boundary layer theory, flow separation and dimensional analysis.	
	CO4: Hydrodynamic forces of jet on vanes in different positions.	
	CO5: Working Principles and performance evaluation of hydraulic pump and turbines.	

	COURSE CODE: R2021033	COURSE NAME: PRODUCTION TECHNOLOGY
4	**CO1:** Able to design the patterns and core boxes for metal casting processes	
	CO2: Able to design the gating system for different metallic components	
	CO3: Know the different types of manufacturing processes	
	CO4: Be able to use forging, extrusion processes	
	CO5: Learn about the different types of welding processes used for special fabrication.	

	COURSE CODE: R2021034	COURSE NAME: KINEMATICS OF MACHINERY
5	**CO1:** Contrive a mechanism for a given plane motion with single degree of freedom.	
	CO2: Suggest and analyze a mechanism for a given straight line motion and automobile steering motion.	
	CO3: Analyze the motion (velocity and acceleration) of a plane mechanism.	
	CO4: Suggest and analyze mechanisms for a prescribed intermittent motion like opening and closing of IC engine valves etc.	
	CO5: Select a power transmission system for a given application and analyze motion of different transmission systems	
6	COURSE CODE: R2021035	COURSE NAME: COMPUTER AIDED ENGINEERING DRAWING PRACTICE
	CO1: Student get exposed on working of sheet metal with help of development of surfaces.	
	CO2: Student understands how to know the hidden details of machine components with the help of sections and interpenetrations of solids.	
	CO3: Student shall exposed to modeling commands for generating 2D and 3D objects using computer aided drafting tools which are useful to create machine elements for computer aided analysis.	

HOD   PRINCIPAL