DEPARTMENT OF MECHANICAL ENGINEERING		
YEAR: II[nd]	SEMESTER: IInd	COURSE OUTCOMES(R20)
S.No	**COURSE CODE: R2022031**	**COURSE NAME: MATERIALS SCIENCE & METALLURGY**
1	**CO1:** Understand the crystalline structure of different metals and study the stability of phases in different alloy systems.	
	CO2: Study the behavior of ferrous and non ferrous metals and alloys and their application in different domains	
	CO3: Able to understand the effect of heat treatment, addition of alloying elements on properties of ferrous metals.	
	CO4: Grasp the methods of making of metal powders and applications of powder metallurgy	
	CO5: Comprehend the properties and applications of ceramic, composites and other advanced methods.	
	COURSE CODE: R2022011	**COURSE NAME: COMPLEX VARIABLES AND STATISTICAL METHODS**
2	**CO1:** Apply Cauchy-Riemann equations to complex functions in order to determine whether a given continuous function is analytic (L3)	
	CO2: Find the differentiation and integration of complex functions used in engineering problems (L5)	
	CO3: Make use of the Cauchy residue theorem to evaluate certain integrals (L3)	
	CO4: Apply discrete and continuous probability distributions (L3)	
	CO5: Design the components of a classical hypothesis test (L6)	
	CO6: Infer the statistical inferential methods based on small and large sampling tests (L4)	
	COURSE CODE: R2022032	**COURSE NAME: DYNAMICS OF MACHINERY**
3	**CO1:** To compute the frictional losses and transmission in clutches, brakes and dynamometers	
	CO2: To determine the effect of gyroscopic couple in motor vehicles, ships and aeroplanes	
	CO3: To analyze the forces in four bar and slider crank mechanisms and design a fly wheel	
	CO4: To determine the rotary unbalanced mass in reciprocating equipment	
	CO5: To determine the unbalanced forces and couples in reciprocating and radial engines	
	CO6: To determine the natural frequencies of discrete systems undergoing longitudinal, torsional and transverse vibrations.	
	COURSE CODE: R2022033	**COURSE NAME: THERMAL ENGINEERING - I**
4	**CO1:** Derive the actual cycle from fuel-air cycle and air- standard cycle for all practical applications.	
	CO2: Explain working principle and various components of IC engine	
	CO3: Explain combustion phenomenon of CI and SI engines and their impact on engine variables.	
	CO4: Analyze the performance of an IC engine based on the performance parameters.	
	CO5: Explain the cycles and systems of a gas turbine and determine the efficiency of gas turbine.	
	CO6: Explain the applications and working principle of rockets and jet propulsion.	

	COURSE CODE: R2022034	**COURSE NAME: INDUSTRIAL ENGINEERING AND MANAGEMENT**
5	**CO1:** Design and conduct experiments, analyse, interpret data and synthesize valid conclusions	
	CO2: Design a system, component, or process, and synthesize solutions to achieve desired needs	
	CO3: Use the techniques, skills, and modern engineering tools necessary for engineering practice with appropriate considerations for public health and safety, cultural, societal, and environmental constraints.	
	CO4: Function effectively within multi-disciplinary teams and understand the fundamental precepts of effective project management	
	COURSE CODE: R2022036	**COURSE NAME: MACHINE DRAWING PRACTICE**
6	**CO1:** Draw and represent standard dimensions of different mechanical fasteners and joints and Couplings.	
	CO2: Draw different types of bearings showing different components.	
	CO3: Assemble components of a machine part and draw the sectional assembly drawing showing the dimensions of all the components of the assembly as per bill of materials	
	CO4: Select and represent fits and geometrical form of different mating parts in assembly drawings.	
	CO5: To prepare manufacturing drawings indicating fits, tolerances, surface finish and surface treatment requirements.	

HOD PRINCIPAL