Sree Chitra Thirunal College of Engineering

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Consolidated Course Outcomes Report

Batch	Slno	Subject	CO	Topic	Bloom's taxonomy level
MA 2K20	1	DESIGN AND ENGINEERING	CO1	Explain the different concepts and principles involved in design engineering	Remembering(R)
			CO2	Apply design thinking while learning and practicing engineering.	Understanding(U)
			CO3	Develop innovative, reliable, sustainable and economically viable designs incorporating knowledge in engineering.	Applying(P)
	2	PARTIAL DIFFERENTIAL EQUATION AND COMPLEX ANALYSIS	CO1	Solve partial differential equation by different methods	Applying(P)
			CO2	Solve one dimensional heat equation and wave equation	Applying(P)
			CO3	Explain the concept of analytic function and its properties	Understanding(U)
			CO4	Explain the concept of power series and singularities of analytic function	Understanding(U)
			CO5	Evaluation of line integrals of complex functions by different methods	Applying(P)
	3	AUTO CHASSIS	CO1	Distinguish between the different types of chassis frame construction and its arrangements	Understanding(U)
			CO2	Evaluate the different types of front axles and steering systems used in vehicles	Understanding(U)
			CO3	Identify the suspension system and different classes of wheels used in a vehicle	Understanding(U)
			CO4	Understand the braking systems and its testing methods	Understanding(U)
			CO5	Comparing the different types of rear axles and adjoining components	Understanding(U)
	4	METALLURGY & MATERIAL SCIENCE	CO1	Understand the basic chemical bonds, crystal structures (BCC, FCC, and HCP), and their relationship with the properties	Remembering(R),Understanding(U)
			CO2	Analyze the microstructure of metallic materials using phase diagrams and modify the microstructure and properties using different heat treatments.	Remembering(R),Understanding(U),Applying(P)
			CO3	How to quantify mechanical integrity and failure in materials.	Remembering(R),Understanding(U)
			CO4	Apply the basic principles of ferrous and non-ferrous metallurgy for selecting materials for specific applications.	Remembering(R),Understanding(U),Applying(P)
			CO5	Define and differentiate engineering materials on the basis of structure and properties for engineering applications.	Remembering(R),Understanding(U)
	5	SUSTAINABLE ENGINEERING	CO1	Summarize the relevance and the concept of sustainability and the global initiatives in this direction	Understanding(U)
			CO2	Classify the different types of environmental pollution problems and their sustainable solutions	Understanding(U)
			CO3	Summarize the environmental regulations and standards	Understanding(U)
			CO4	Compare the concepts related to conventional and non-conventional energy	Understanding(U)

			CO5	Discover the broad perspective of sustainable practices by utilizing engineering knowledge and principles	Applying(P)
	6	**Fluid Mechanics and Machinery**	**CO1**	Understand the fundamental concepts of fluid mechanics.	Understanding(U)
			CO2	Analyse various problems on fluid statics, kinetics and dynamics.	Applying(P)
			CO3	Understand basic concepts, boundary layer (BL), BL thickness and various flow measuring instruments and their applications.	Understanding(U)
			CO4	Analyse the various types of hydraulic turbines and their operating principles	Applying(P)
			CO5	Understand the various types of hydraulic pumps and their characteristic parameters	Understanding(U)
	7	**COMPUTER AIDED MACHINE DRAWING**	**CO1**	Apply the knowledge of engineering drawings and standards to prepare standard dimensioned drawings of machine parts and other engineering components.	
			CO2	Prepare standard assembly drawings of machine components and valves using part drawings and bill of materials.	
			CO3	Apply limits and tolerances to components and choose appropriate fits for given assemblies	
			CO4	Interpret the symbols of welded, machining and surface roughness on the component drawings.	
			CO5	Prepare part and assembly drawings and Bill of Materials of machine components and valves using CAD software.	