SRI VASAVI INSTITUTE OF ENGINEERING & TECHNOLOGY
DEPARTMENT OF MECHANICAL ENGINEERING

COURSE OUTCOMES
2021-22 IV B.TECH I SEM

CO NUMBER	COURSE OUTCOME(CO)STATEMENT –AT THE END OF THE COURSE ,THE STUDENTS WILL BE ABLE TO	BLOOMS TAXONOMY
	MECHATRONICS(C411)	
C411.1	Interpret the knowledge of mechatronics systems	Apply
C411.2	Recognize the Solid state electronic devices	Understand
C411.3	Recognize the Hydraulic and pneumatic actuating systems	Understand
C411.4	Interpret the knowledge of Digital electronics and systems	Apply
C411.5	Distinguish the System and interfacing and data acquisition	Analyze
C411.6	Examine the Dynamic models and analogies	Analyze
	CAD/CAM (C412)	
C412.1	Implement the basic fundamentals of CAD & CAM.	Apply
C412.2	Describe the mathematical basis in the technique of representation of parametric curves, wireframe, surfaces & solid modeling and can visualize the components	Understand
C412.3	Explain the difference between NC's and CNC's and he can also know the methods involved in part programming.	Understand
C412.4	Examine the use of GT and CAPP for the production development	Analyze
C412.5	Identify the importance of CAQC at different contact and non contact inspection methods to improve the quality control	Understand
C412.6	Implement the various elements and their activities in the CIM systems	Apply
	FINITE ELEMENT METHODS (C413)	
C413.1	Explain the concepts behind Variational methods and weighted residual methods in FEM	Understand
C413.2	Select the proper element type, element length, Stiffness matrix, Interpolation function and Boundary conditions	Evaluate
C413.3	Distinguish the application and characteristics of FEA elements such as Trusses and beams.	Analyze
C413.4	Solve two dimensional stress analysis using constant strain triangle	Apply
C413.5	Identify the higher order iso parametric elements, Implement the finite element analysis for 2D four noded element	Apply
C413.6	Solve dynamic and steady state heat transfer problems using FEM	Apply
	POWER PLANT ENGINEERING (C414)	
C414.1	Explain power generation in steam power plants	Understand
C414.2	Explain plant layout and various systems in Diesel power plant and Gas turbine plant	Understand
C414.3	Explain various aspects like power generation, classification of dams, plant layout and plant auxiliaries	Understand
C414.4	Explain various types of reactors in Nuclear power plants	Understand
C414.5	Explain combined operations of different power plants and power plant	Understand

	instrumentation and control systems	Apply
C414.6	Explain demands, loads and calculate various costs for solving the given problem.	Apply
ADDITIVE MANUFACTURING (C415)		Apply
C415.1	Interpret the knowledge of Rapid prototyping systems	Understand
C415.2	Explain the Solid based rapid prototyping systems	Analyze
C415.3	Differentiate the powder based rapid prototyping systems from other rapid prototyping systems.	Apply
C415.4	Interpret the knowledge of Rapid tooling	Analyze
C415.5	Distinguish the rapid prototyping data formats and software's.	Evaluate
C415.6	Select the appropriate rapid prototyping system for suitable application	
ADVANCED MATERIALS(C416)		Understand
C416.1	Describe the basic concepts of composite materials	Understand
C416.2	Illustrate the polymer composites	Apply
C416.3	Demonstrate the different manufacturing methods	Analyze
C416.4	Analyze the macro mechanical analysis of lamina	Understand
C416.5	Classify FGM and Shape memory alloys	Analyze
C416.6	Distinguish the Nano materials	
CAD/CAM LAB(C417)		Apply
C417.1	Implement the basic fundamentals of CAD&CAM.	Understand
C417.2	Describe the mathematical basis in the technique of representation of parametriccurves,wireframe,surfaces&solidmodelingandcanvisualize the components	
C417.3	Explain the difference between NC's and CNC's and he can also know the Methods involved in part programming.	Understand
C417.4	Examine the use of GT and CAPP for the production development	Analyze
C417.5	Implement the various elements and their activities in the CIM systems	Apply
C417.6	Implement the basic fundamentals of CAD&CAM.	Apply
MECHATRONICS LAB (C418)		Apply
C418.1	Demonstarte the Characteristics of LVDT	Understand
C418.2	Measure load, displacement and temperature using analogue and digital sensors	
C418.3	Develop PLC programs for control of traffic lights, water level, lifts and conveyor belts.	Apply
C418.4	Simulate simple programmes using MATLAB	Apply
C418.5	Simulate and analyze PID controllers for a physical system using MATLAB	Analyze

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