



# Sree Chitra Thirunal College of Engineering

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## Consolidated Course Outcomes Report

Batch	Sno	Subject	CO	Topic	Bloom's taxonomy level
MA 2K20	1	VECTOR CALCULUS, DIFFERENTIAL EQUATIONS AND TRANSFORMS	CO1	Explain the theory of derivatives and integrals of vector valued function.	Understanding(U)
			CO2	Apply calculus of vector valued function in the evaluation of line integral, surface integral and volume integral.	Applying(P)
			CO3	Solve homogeneous and non-homogeneous linear differential equations with constant coefficients.	Applying(P)
			CO4	Explain the concept of Fourier Transform and Laplace Transform.	Understanding(U)
			CO5	Solve the ordinary differential equation using Laplace Transform.	Applying(P)
	2	PROGRAMMING IN C	CO1	Analyze a computational problem and develop an algorithm/flowchart to find its solution	Analyzing(A)
			CO2	Develop readable* C programs with branching and looping statements, which uses Arithmetic, Logical, Relational or Bitwise operators.	Applying(P)
			CO3	Write readable C programs with arrays, structure or union for storing the data to be processed	Applying(P)
			CO4	Divide a given computational problem into a number of modules and develop a readable multi-function C program by using recursion if required, to find the solution to the computational problem	Applying(P)
			CO5	Write readable C programs which use pointers for array processing and parameter passing	Applying(P)
			CO6	Develop readable C programs with files for reading input and storing output	Applying(P)
	3	ENGINEERING CHEMISTRY	CO1	Describe the basic concepts of electrochemistry and corrosion to explore its possible applications in various engineering fields.	Understanding(U)
			CO2	Interpret the spectral data from spectroscopic techniques like UV-Visible, IR, NMR and its applications or predict the Spectral data of a given structure.	Understanding(U)
			CO3	Outline the principle, classification, instrumentation, procedure and applications of TGA, DTA, Column Chromatography, TLC, Gas Chromatography, HPLC and SEM analytical instruments.	Understanding(U)
			CO4	Explain the basics of stereochemistry, its application and structure properties application of polymers (Kevlar and ABS plastics)	Understanding(U)
			CO5	Discuss the quality of water (based on hardness, DO) and water treatment methods (sewage and municipal) to develop skills for treating wastewater.	Understanding(U)
	4	ENGINEERING MECHANICS	CO1	Identify principles and theorems related to rigid body mechanics.	Understanding(U)
			CO2	Identify and describe the components of system of forces acting on the rigid body.	Applying(P)
			CO3	Apply the conditions of equilibrium to various practical problems involving different force system.	Applying(P)
			CO4	Choose appropriate theorems, principles or formulae to solve problems of mechanics.	Applying(P)
			CO5	Solve problems involving rigid bodies, applying the properties of distributed areas and masses.	Applying(P)
5	BASICS OF CIVIL & MECHANICAL ENGINEERING	CO6	Analyse thermodynamic cycles and calculate its efficiency		
		CO7	Illustrate the working and features of IC Engines		
		CO8	Explain the basic principles of Refrigeration and Air Conditioning		
		CO9	Describe the working of hydraulic machines		
		CO10	Explain the working of power transmission elements		
		CO11	Describe the basic manufacturing, metal joining and machining processes		
			CO1	Develop vocabulary and language skills relevant to engineering as a profession	Applying(P)

6	<b>PROFESSIONAL COMMUNICATION</b>	CO2	Analyze a variety of textual content	Analyzing(A)
		CO3	Create effective technical presentations	Create(C)
		CO4	Discuss a given technical/non-technical topic in a group setting and arrive at generalizations/consensus	Understanding(U)
		CO5	Identify drawbacks in listening patterns and apply listening techniques for specific needs	Applying(P)
		CO6	Create professional and technical documents that are clear and adhering to all the necessary conventions	Create(C)
7	<b>ENGINEERING CHEMISTRY LAB</b>	CO1	Synthesize of UF resin and PF resin	Applying(P)
		CO2	Interpret the IR spectra and NMR spectra of simple organic compounds	Applying(P)
		CO3	Estimate the Water Quality parameters (Hardness, DO, pH, Conductivity, Fe content)	Applying(P)
		CO4	Analyse and accurately determine the concentration of analyte in a given sample using conventional analytical laboratory techniques (Potentiometric Titration, Colorimetric, Iodometric Titrations, Complexometric Titration)	Applying(P)
8	<b>CIVIL &amp; MECHANICAL WORKSHOP</b>	CO1	Name the different tools and devices used for civil engineering measurements and explain the uses.	Understanding(U)
		CO2	Demonstrate the steps involved in basic civil engineering activities like setting out operation and levelling.	Understanding(U)
		CO3	Choose methods and materials required for basic civil engineering activities like masonry work and plumbing.	Understanding(U)
9	<b>BASICS OF CIVIL &amp; MECHANICAL ENGINEERING</b>	CO1	Identify the role of civil engineer in society and to relate the various disciplines of Civil Engineering.	Understanding(U)
		CO2	Explain different types of buildings, building components, building materials and building construction	Understanding(U)
		CO3	Describe the importance, objectives and principles of surveying.	Understanding(U)
		CO4	Summarise the basic infrastructure services MEP, HVAC, elevators, escalators and ramps	Understanding(U)
		CO5	Discuss the Materials, energy systems, water management and environment for green buildings.	Understanding(U)
10	<b>CIVIL &amp; MECHANICAL WORKSHOP</b>	CO4	Understand appropriate safety measurements with respect to the mechanical workshop.	Understanding(U)
		CO5	Understand the usage of appropriate hand tools, instruments and machines with respect to the various mechanical trades	Understanding(U)
		CO6	Understand Basic Mechanical Workshop operation and making models in accordance with the materials and objects.	Understanding(U)