



# Sree Chitra Thirunal College of Engineering

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## Consolidated Course Outcomes Report

Batch	Sno	Subject	CO	Topic	Bloom's taxonomy level
BT 2K20	1	PARTIAL DIFFERENTIAL EQUATION AND COMPLEX ANALYSIS	CO1	Solve pde by different methods	Applying(P)
			CO2	Solve one dimensional wave equation and heat 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)
	2	PROFESSIONAL ETHICS	CO1	Understand the core values that shape the ethical behaviour of a professional.	Understanding(U)
			CO2	Adopt a good character and follow an ethical life.	Applying(P)
			CO3	Explain the role and responsibility in technological development by keeping personal ethics and legal ethics	Understanding(U)
			CO4	Solve moral and ethical problems through exploration and assessment by established experiments.	Analyzing(A)
			CO5	Apply the knowledge of human values and social values to contemporary ethical values and global issues	Applying(P)
	3	SUSTAINABLE ENGINEERING	CO1	Understand the relevance and the concept of sustainability and the global initiatives in this direction	Understanding(U)
			CO2	Explain the different types of environmental pollution problems and their sustainable solutions	Understanding(U)
			CO3	Discuss the environmental regulations and standards	Understanding(U)
			CO4	Outline the concepts related to conventional and non-conventional energy	Understanding(U)
			CO5	Demonstrate the broad perspective of sustainable practices by utilizing engineering knowledge and principles	Applying(P)
	4	MICROBIOLOGY LAB	CO1	Demonstrate proper usage of various microscopes and visually recognize the microscopic characteristics of bacteria and other microbes	Understanding(U)
			CO2	Apply appropriate laboratory techniques and methodology for isolation, characterization, propagation and enumeration of microorganisms in a given sample.	Applying(P)
			CO3	Demonstrate the impact of microorganisms in Agriculture, Environment, ecosystem and human health.	Understanding(U)
			CO4	Apply appropriate microbiology laboratory techniques, methodologies, instruments and equipments in accordance with current laboratory safety protocol.	Applying(P)
	5	FLUID FLOW AND PARTICLE TECHNOLOGY LAB	CO1	Determine fluid properties, particle size, characterize flows, measure pressure, calibrate flow measuring equipment and analyze frictional flows by performing experiments in the laboratory.	Applying(P)
CO2			Design experiments and analyze/ interpret data collected from experimental investigation in fluid statics and kinematics.	Applying(P)	
CO3			Apply modern computing tools necessary for analysis of the experimental data in fluid statics and kinematics.	Applying(P)	
CO4			Exhibit ethical principles in the engineering profession by practicing ethical approaches in experimental investigation, collection and reporting of data and adhering to the relevant safety practices in the laboratory.	Applying(P)	
6	BIOPROCESS CALCULATIONS	CO1	Summarize the different system units for quantities used in process engineering and also their conversions	Understanding(U)	
		CO2	Illustrate the material and energy balance equations for unit operations and unit processes	Understanding(U)	
		CO3	Apply the material balance and energy balance equations for unit operations and unit processes	Applying(P)	
		CO4	Apply principles of stoichiometry and thermodynamics to cell growth, product formation and growth media formulation	Applying(P)	
			CO1	Elaborate the microbial morphology and methods to visualize and classify microorganisms	Understanding(U)

	7	<b>MICROBIOLOGY</b>	<b>CO2</b>	Describe the various methods of culturing microorganisms and controlling microbial growth	Understanding(U)
			<b>CO3</b>	Demonstrate that the microorganisms have a vital role in environment and in causing diseases	Understanding(U)
			<b>CO4</b>	Outline the role of microorganisms in industries relevant to human well being	Understanding(U)
	8	<b>FLUID FLOW AND PARTICLE TECHNOLOGY</b>	<b>CO1</b>	Summarize fluid properties, principles of fluid statics and dynamics to solve problems in fluid mechanics.	Understanding(U)
			<b>CO2</b>	Understand basic momentum and energy balance equations in specific domains of boundary layer flow of incompressible fluids in pipe flow.	Understanding(U)
			<b>CO3</b>	Apply the principles of flow past immersed bodies, fluidization, flow metering and transportation of fluids in industrial bioprocessing.	Applying(P)
			<b>CO4</b>	Examine the equipment for size reduction of solids, particle size analysis methods and solid- liquid separation processes.	Applying(P)