



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	INDUSTRIAL BIOPROCESS TECHNOLOGY	CO1	Outline the use of microorganisms for the production of value added commodities	Understanding(U)
			CO2	describe the key industrial bioprocesses, from the traditional to the recently evolved.	Understanding(U)
			CO3	understand the biological and engineering principles involved in the production of bioproducts and enzymes	Understanding(U)
			CO4	Summarize the market economics in the production of a bioproduct	Understanding(U)
	2	MASS TRANSFER OPERATIONS	CO1	Identify the mechanism of mass transfer and formulate rate equations.	Understanding(U)
			CO2	Understand material and energy balances for design of absorber and liquid-liquid extractor.	Understanding(U)
			CO3	Design a fractionating column and identify different types of distillation.	Applying(P)
			CO4	Develop stage calculations for leaching, adsorption and drying operations by understanding the criteria of separation.	Applying(P)
	3	MOLECULAR BIOLOGY	CO1	Apply the knowledge of the basic structure and biochemistry of nucleic acids discriminate between them	Applying(P)
			CO2	Evaluate the relation between of DNA replication, transcription and translation and explain their principle	Evaluate(E)
			CO3	Understand the basic mechanisms involved in mutagenesis	Understanding(U)
			CO4	Articulate the role of gene organization and gene regulation in prokaryotes and eukaryotes	Evaluate(E)
	4	THERMODYNAMICS AND HEAT TRANSFER	CO1	Apply the laws of thermodynamics on biochemical reactions	Applying(P)
			CO2	Comprehend the basic principles involved in the mechanism of heat transfer	Understanding(U)
			CO3	Evaluate the rate of heat transfer and area of heat transfer	Evaluate(E)
			CO4	Analyze the performance of heat exchange equipments	Analyzing(A)
	5	INDUSTRIAL ECONOMICS AND FOREIGN TRADE	CO1	Explain the problem of scarcity of resources and consumer behaviour, and to evaluate the impact of government policies on the general economic welfare.	Understanding(U)
			CO2	Take appropriate decisions regarding volume of output and to evaluate the social cost of production	Applying(P)
			CO3	Determine the functional requirement of a firm under various competitive conditions	Analyzing(A)
			CO4	Examine the overall performance of the economy, and the regulation of economic fluctuations and its impact on various sections in the society	Analyzing(A)
			CO5	Determine the impact of changes in global economic policies on the business opportunities of a firm	Analyzing(A)
	6	DISASTER MANAGEMENT	CO1	Define and use various terminologies in use in disaster management parlance and organize each of these terms in relation to the disaster management cycle	Understanding(U)
			CO2	Distinguish between hazard types and vulnerability types and do vulnerability assessment	Understanding(U)
			CO3	Identify the components and describe the process of risk assessment and apply appropriate methodologies to assess risk	Understanding(U)
CO4			Explain the core elements and phases of Disaster Risk Management and develop possible measures to reduce disaster risks across sector and community	Applying(P)	
CO5			Identify factors that determine the nature of disaster response and discuss the various disaster response actions	Understanding(U)	
CO6			Explain the various legislations and best practices for disaster management and risk reduction at national and international level	Understanding(U)	
			CO1	Development of an ability to conduct bioprocess experiments as well as to analyze and interpret data	Understanding(U)

7	BIOPROCESS ENGINEERING LAB	CO2	Calculate the kinetic parameters of enzymatic reactions	Evaluate(E)
		CO3	Development of research attitude and technical skills to secure a job (Performance, result and inference, usage of equipment's)	Applying(P)
		CO4	Exhibit ethical principles in engineering profession by practicing ethical approaches in experimental investigation, collection and reporting data and adhering to the relevant safety practices in the laboratory (Viva voice , Record)	Remembering(R)
8	MOLECULAR BIOLOGY LAB	CO1	Demonstrate knowledge and understanding of the principles behind the important techniques in molecular biology.	Understanding(U)
		CO2	Apply the knowledge in understanding the applications of the techniques in molecular biology.	Applying(P)
		CO3	Analyze and interpret the results of the laboratory experiments performed.	Analyzing(A)
		CO4	Create awareness of the hazardous chemicals and safety precautions in case of emergency.	Create(C)
9	IMMUNOTECHNOLOGY	CO1	Understand the basic concept of immune system, auto immune diseases and immune response to infection.	Understanding(U)
		CO2	Outline the various antigen-antibody interaction and its role in immune-therapy	Understanding(U)
		CO3	Summarize the various types of transplants and immunologic basis of transplantation.	Understanding(U)
		CO4	Elaborate on the various immunological techniques used in diagnosis and treatment.	Understanding(U)
10	OCCUPATIONAL HEALTH AND INDUSTRIAL HYGIENE	CO1	Identify the existence of occupational safety and health hazards in work places and explain the importance of industrial hygiene.	Understanding(U)
		CO2	Analyse and apply industrial hygiene strategies with respect to chemical, biological, and physical hazards.	Applying(P)
		CO3	Identify occupational health and industrial hygiene standards, testing systems and monitoring techniques	Understanding(U)
		CO4	Explain health-affecting agents, factors and stressors and how they relate to typical industrial processes, unit operations, and tasks.	Understanding(U)
		CO5	Apply the relevant regulatory and national consensus standards and legal threshold limit values around hazardous exposure.	Applying(P)