



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	PROCESS EQUIPMENT AND PLANT DESIGN	CO1	Illustrate the basics of process plant design, flow sheeting, P & ID and plant Safety	Understanding(U)
			CO2	Calculate the different parameters associated with the process design of heat transfer equipment such as heat exchangers, evaporators and condensers.	Evaluate(E)
			CO3	Calculate the different parameters associated with the process design of mass transfer equipment such as distillation column and absorption column.	Evaluate(E)
			CO4	Calculate the different parameters associated with the process design of bioreactors and the mechanical design of pressure vessels.	Evaluate(E)
	2	INDUSTRIAL SAFETY ENGINEERING	CO1	Describe the theories of accident causation and preventive measures of industrial accidents	Understanding(U)
			CO2	Explain about personal protective equipment, their selection, safety performance & indicators, work permits and importance of good housekeeping.	Understanding(U)
			CO3	Explain different safety issues in construction industries and their mitigation measures.	Understanding(U)
			CO4	Describe various hazards associated with machine operations and material handling.	Understanding(U)
			CO5	Identify the hazards in various industries using different hazard identification tools on the basis of a knowledge of hazardous properties of chemical substances.	Understanding(U)
	3	GENETIC ENGINEERING	CO1	Understand the different tools in genetic engineering and strategic approaches for cloning and expression of DNA molecules	Understanding(U)
			CO2	Design and constitute DNA Cloning Vectors and methodologies involved	Applying(P)
			CO3	Apply the principles of various molecular mechanisms for the genomic and proteomic analysis	Applying(P)
			CO4	Evaluate the implementation of genetic engineering principles in gene sequencing, silencing, editing, recombinant protein production and transgenics	Evaluate(E)
	4	SEMINAR	CO1	Identify academic documents from the literature which are related to her/his areas of interest	Applying(P)
			CO2	Read and apprehend an academic document from the literature which is related to her/ his areas of interest	Analyzing(A)
			CO3	Prepare a presentation about an academic document	Create(C)
			CO4	Give a presentation about an academic document	Applying(P)
			CO5	Prepare a technical report	Create(C)
	5	PROJECT PHASE I	CO1	Model and solve real world problems by applying knowledge across domains	Applying(P)
			CO2	Develop products, processes or technologies for sustainable and socially relevant applications	Applying(P)
CO3			Function effectively as an individual and as a leader in diverse teams and to comprehend and execute designated tasks	Applying(P)	
CO4			Plan and execute tasks utilizing available resources within timelines, following ethical and professional norms	Applying(P)	
CO5			Identify technology/research gaps and propose innovative/creative solutions	Analyzing(A)	
CO6			Organize and communicate technical and scientific findings effectively in written and oral forms	Applying(P)	
			CO1	Determine the kinetics of reactions and responses of process control systems by performing experiments in the laboratory	Applying(P)

6	REACTION ENGINEERING AND PROCESS CONTROL LAB	CO2	Interpret the data collected from experimental investigation in the laboratory	Analyzing(A)
		CO3	Use modern computing tools necessary for analysis of the experimental data in the Reaction Engineering and Process Control Laboratory	Applying(P)
		CO4	Exhibit ethical principles in engineering profession by practicing ethical approaches in experimental investigation, collection and reporting of data and adhering to the safety ethics set by the laboratory	Understanding(U)
		CO5	Practice work in diverse groups and perform laboratory experiments	Understanding(U)
		CO6	Evaluate oral skills and prepare cogent reports of the experimental works conducted in laboratory	Understanding(U)
		7	BIO NANOTECHNOLOGY	CO1
CO2	Summarize the applications of various types of Nano materials in biotechnology			Understanding(U)
CO3	Understand the organization of the naturally occurring nanomaterials			Understanding(U)
CO4	Understand ethical and socioeconomic challenges of nanomaterials			Understanding(U)
8	RENEWABLE ENERGY ENGINEERING	CO1	Renewable energy sources and evaluate the implication of renewable energy	Understanding(U)
		CO2	Solar energy collectors, storages, solar cell characteristics and applications	Understanding(U)
		CO3	The different types of wind power machines and control strategies of wind turbines	Understanding(U)
		CO4	The ocean energy and conversion devices and different Geothermal sources	Remembering(R)
		CO5	Calculate the Net Present value and payback period.	Evaluate(E)