

Course Outcomes & CO-PO Matrix of Various Course

KASHI INSTITUTE OF TECHNOLOGY, VARANASI DEPARTMENT OF BIOTECHNOLOGY 2021-22 ODD SEMESTER		
Course Outcomes		
Course- Biochemistry		
S. No.	Course Outcome/ Unit	BL
CO1	Understanding the structure and uses of water and Buffer	1, 2
CO2	Understanding of the structure of carbohydrates and different pathways.	1, 2
CO3	Understanding the fatty acid and lipid formation pathways.	1, 2
CO4	To able to classify the amino acids and proteins on the basis of their structures.	1, 2, 4
CO5	Understanding the de novo and salvage pathways.	1, 2, 4
Course Outcomes		
Course- Techniques in Biotechnology		
S. No.	Course Outcome/ Unit	BL
CO1	Understanding of working mechanism of different types of microscopy.	1, 2
CO2	Understanding of the principle of different types of chromatography techniques.	1, 2, 3
CO3	Understanding the processes of spectroscopy and the application in biotechnology.	1, 2, 3
CO4	Different types of separation techniques for the nucleic acid and proteins.	1, 2
CO5	Understanding the application of Biosensor in different areas.	1, 2, 3,4
Course Outcomes		
Course- Microbiology and Immunology		
S. No.	Course Outcome/ Unit	BL
CO1	To classify and explain the structure and general characteristics of microorganism.	1, 2
CO2	Understanding of the concept of viruses and virus reproduction system.	1, 2
CO3	Understanding of the concept of Human body defense system.	1, 2, 4
CO4	Regulatory mechanism of interaction between different molecules.	1, 2, 3,4
CO5	Application of microbes and understanding of the different disease.	1, 2, 4
2021-22 EVEN SEMESTER		
Course Outcomes		
Course- Enzyme Engineering		
S. No.	Course Outcome/ Unit	BL
CO1	To be able to know about enzymes and enzyme kinetics.	1, 2, 3,4, 5
CO2	To be able to differentiate enzyme inhibition processes.	1, 2, 3,4
CO3	Understanding of Downstream processing of enzymes.	1, 2
CO4	Understanding the role of enzyme immobilization.	1, 2, 4
CO5	To be able to understand the Enzyme Biosensors and Enzyme reactors.	1, 2, 4
Course Outcomes		
Course- Genetics and Molecular Biology		
S. No.	Course Outcome/ Unit	BL
CO1	Identification of gene and determination of sex chromosome.	1, 2, 4
CO2	To be able to differentiate between DNA and RNA sequences.	1, 2
CO3	Understanding of the concept of central dogma.	1, 2, 3,4
CO4	Understanding the regulatory mechanism in bacteria.	1, 2, 4
CO5	To be able to know the application of r-DNA technology.	1, 2, 3,4

Course outcomes- Bioprocess Engineering -I (KBT 401)

S.No.	COURSE OUTCOMES (CO)	Knowledge Level (Blooms Level)
CO1	Understanding of Fluid properties and their behavior and mathematical analysis	L2: Understand L3 : Applying
CO2	Understanding of principle, working and application of flow measuring equipments	L4 : Analyze L3: Applying
CO3	Understanding the principle of conduction and convection and application	L5 : Evaluate L3 : Applying
CO4	Understanding of diffusion and transient conduction.	L4 : Analyze
CO5	Understanding the principle of mass transfer in biological system and their practical applications.	L2: Understand L3 : Applying

Course Outcomes		BL
Course -Universal Human Values (KVE301)		
S.No.	Course Outcome/ Unit	
1	To acquaint the students with legacies of constitutional development in India and help those to understand the most diversified legal document of India and philosophy behind it.	K2
2	To make students aware of the theoretical and functional aspects of the Indian Parliamentary System.	K2
3	To channelize students' thinking towards basic understanding of the legal concepts and its implications for engineers.	K2
4	To acquaint students with latest intellectual property rights and innovation environment with related regulatory framework.	K2
5	To make students learn about role of engineering in business organizations and e-governance.	K3

Course Outcomes		BL
Course -Technical Communication (KAS301)		
S.No.	Course Outcome/ Unit	
Student will be able to-		
1	Understand the nature and objective of technical communication relevant for the work place as engineers.	K2
2	Utilize the technical writing for the purpose of technical communication and its exposure in various dimensions.	K1
3	Imbibe inputs by presentation skills to enhance confidence in face of diverse audience.	K4
4	Create a vast know-how of the application of the learning to promote their technical competence.	K6
5	Evaluate their efficacy as fluent & efficient communicators by learning the voice-dynamics.	K5

COURSE OUTCOME		BL
COURSE 6 - ENERGY SCIENCE AND ENGINEERING (KOE 033)		
S.NO.	COURSE OUTCOME/UNIT	
1	To Explain the basic principles of various renewable energy conversion processes and devices used therein.	3
2	To expose the student to solar thermal, solar photovoltaic	2
3	To expose the student to Geothermal Energy, Magneto-hydrodynamics (MHD) and fuel cell	2
4	To expose the student to wind, tidal and renewable energy resources, conversion technologies, processes, systems and devices, and equip the student to take up projects in those areas.	2

5	To expose the student to biomass renewable energy resources	2
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Course Outcomes		BL
Course -Math V (KAS404)		
S.No.	Course Outcome/ Unit	
Student will be able to-		
1	Understand the concept of Fourier Transform and Z- Transform to apply for solving with the help of transform problems.	K2 & K3
2	Remember the concept of Probability to evaluate Probability distribution.	K1 & K3
3	To analyze the concept of numerical techniques to evaluate the zero's of the function interpolation	K4 & K5
4	Apply the concept of hypothesis to evaluate various hypothesis testing.	K3 & K5
5	Remember the concept of design and statistical quality control to create control charts.	K1 & K6

Remember, K2 – Understand, K3 – Apply, K4 – Analyze, K5 – Evaluate, K6 – Create

