KIET GROUP OF INSTITUTIONS, GHAZIABAD

Department of Computer Science

Course Outcomes

Session 2021-22

Department of Computer Science

13 KM STONE, GHAZIABAD-MEERUT ROAD, GHAZIABAD – 201206

Website: www.kiet.edu

KIET GROUP OF INSTITUTIONS, GHAZIABAD

Department of Computer Science

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4	KCS 302	COMPUTER ORGANISATION AND ARCHITECTURE
5	KCS 303	DISCRETE STRUCTURES & THEORY OF LOGIC
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KIET GROUP OF INSTITUTIONS, GHAZIABAD

Department of Computer Science

CO PO and Mapping of CO PO 2nd Year

Session:- 2021-22 Semester:- 3rd

Theory

Course Outcome (Maths – IV, KAS 302)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Identify the application of partial differential equations and apply for solving Linear and nonlinear partial differential equation.	3	C, P
CO2	Understand the classification of second order partial differential equations and by using the method of separation of variables to evaluate the general solution of Heat, Wave, Laplace equations and Transmission lines.	3	C, P
CO3	Remember the concept of moments, skewness, kurtosis and moment generating function and analyze the linear and nonlinear regression.	4	C, P
CO4	To remember the concept of probability, random variable and apply for solving the problem related to discrete and continuous probability distributions..	3	C, P
CO5	Understand the statistical method of data samples, hypothesis testing and applying the study of control chart and their properties.	3	C, P

(Dr. Nutan Kumari Chauhan)

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Department of Computer Science

CO-PO-PSO Mapping (Maths – IV, KAS 302)

CO-No.	Programme-Outcome-(PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	3	2	3	2	-	2	-	-	-	-	-	-	-
CO2	3	3	3	3	2	-	1	-	-	-	1	3	-	-
CO3	3	3	3	2	3	-	1	-	-	-	1	3	-	-
CO4	3	3	-	2	3	-	2	-	-	-	2	3	-	-
CO5	3	3	-	3	3	-	1	-	-	-	1	3	-	-
PO Target	3	3	2.67	2.6	2.6	-	1.4	-	-	-	1.25	3	-	-

Nutan

(Dr. Nutan Kumari Chauhan)

KIET GROUP OF INSTITUTIONS, GHAZIABAD

Department of Computer Science

Course Outcome (Universal Human Values, KVE 301)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Understand the process of self-exploration and meaning of natural acceptance.	2	C, P
CO2	Explore the concept of harmony in the human being (in Myself) being 'I' & 'body' as separate entity.	4	C, P
CO3	Analyze the process of developing harmony in family and society.	4	C, P
CO4	Analyze the process of developing the harmony in nature and existence.	4	C, P
CO5	Apply the role of holistic understanding of harmony of professional ethics.	3	C, P

CO-PO-PSO Mapping (Universal Human Values, KVE 301)

CO-No.	Programme-Outcome-(PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	-	-	-	-	-	1	1	1	1	1	1	1	-	1
CO2	-	-	-	-	-	3	2	3	1	1	1	2	-	-
CO3	-	-	-	-	-	-	2	3	1	1	1	2	-	2
CO4	-	-	-	-	-	-	2	3	1	1	1	2	-	-
CO5	-	-	-	-	-	-	2	3	1	1	1	2	-	2
PO Target	-	-	-	-	-	2	1.8	2.6	1	1	1	1.8	-	1.67

(MINAKSHI KARNWAL)

KIET GROUP OF INSTITUTIONS, GHAZIABAD

Department of Computer Science

Course Outcome (Data Structure, KCS 301)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Implement the concepts of Array and Linked list after understanding the basics of programming, data structure and their memory representation.	3	C, P
CO2	Understand the primitive operations on various linear data structures like stack and queue along with their variants, and apply them on various applications like Expression Solving, Tower of Hanoi, String methods, etc.	3	C, P
CO3	Implementation of various searching and sorting algorithms using data structure concepts.	3	C, P
CO4	Implementation of various data structures on different applications and analyse the working in terms of time and space complexity using asymptotic notations.	3	C, P
CO5	Implementation of Non-linear data structures like Trees and Graphs; and perform various operations on these data structures.	3	C, P

CO-PO-PSO Mapping (Data Structure, KCS 301)

CO-No.	Programme-Outcome-(PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	3	2	-	-	-	-	-	-	-	-	2	3	2
CO2	3	3	2	-	-	-	-	-	-	-	-	2	3	2
CO3	3	3	1	-	-	-	-	-	-	-	-	2	3	2
CO4	3	3	1	2	-	-	-	-	-	-	-	2	3	2
CO5	3	3	1	-	-	-	-	-	-	-	-	2	3	2
PO Target	3	3	1.4	2	-	-	-	-	-	-	-	2	3	2

(Arti Sharma)

KIET GROUP OF INSTITUTIONS, GHAZIABAD

Department of Computer Science

Course Outcome
(Computer Organization and Architecture, KCS 302)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Relate the fundamental components of the basic computer system with its organization.	3	C, P
CO2	Interpret the design of ALU, fixed-floating-point representations and various multiplication, division operations on binary numbers.	3	C, P
CO3	Illustrate control unit design and concept of pipelining.	3	C, P
CO4	Apply the concept of different types of memories.	3	C, P
CO5	Relate the fundamental components of the basic computer system with its organization.	3	C, P

CO-PO-PSO Mapping
(Computer Organization and Architecture, KCS 302)

CO No.	Programme Outcome (PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	2	-	1	-	-	-	-	-	-	-	2	1	-
CO2	3	2	-	1	-	-	-	-	-	-	-	2	1	-
CO3	2	2	-	1	-	-	-	-	-	-	-	2	1	-
CO4	3	2	-	1	-	-	-	-	-	-	-	2	1	-
CO5	2	2	-	1	-	-	-	-	-	-	-	2	1	-
PO Target	2.6	2	-	1	-	-	-	-	-	-	-	2	1	-

(KALPNA SAGAR)

KIET GROUP OF INSTITUTIONS, GHAZIABAD

Department of Computer Science

Course Outcome
(Discrete Structures & Theory of Logic, KCS 303)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Illustrate basic mathematical objects such as sets, functions, relations and natural numbers and their properties .	4	C, P
CO2	Examine various structures and properties of modern algebra.	3	C, P
CO3	Substantial experience of formal and logical arguments.	3	C, P
CO4	Justify the mathematical Solve properties via the formal language of propositional and predicate logic.	4	C, P
CO5	Use graphs and trees, as tools to visualize and simplify the problems.	3	C, P

CO-PO-PSO Mapping
(Discrete Structures & Theory of Logic, KCS 303)

CO No.	Programme Outcome (PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	1	-	-	1	-	-		-	-	-	-	1	-	1
CO2	2			1		-	1	-	-	-		1	-	2
CO3	3	2	1	1	2	-	1	-	-	-	1	2	-	3
CO4	3	-	3	1		-		-	-	-	1	1	1	-
CO5	2	3	-	1	2	-	1	-	-	-	2	2	2	-
PO Target	2.2	2.5	2	1	2	-	1	-	-	-	1.33	1.4	1.5	2

Harsh

(Harsh Vardhan)

KIET GROUP OF INSTITUTIONS, GHAZIABAD

Department of Computer Science

Practical

Course Outcome (DS Lab, KCS 351)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Understand the basics of programming and data structure like arrays, linked lists, with their memory representation.	2	C, P
CO2	Apply the concept to perform Stack, Queue, Tree and Graph array and Linked List Representation.	3	C, P
CO3	Make a solution for the available problem and implement them using data structure concept.	3	C, P
CO4	Analyse the working of multiple data structure and help to solve existing problem.	4	C, P

CO-PO-PSO Mapping (DS Lab, KCS 351)

CO No.	Programme Outcome (PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	2	2	2	3	-	-	-	-	-	-	1	3	3
CO2	3	3	2	2	3	-	-	-	-	-	-	2	2	2
CO3	3	3	2	2	3	-	-	-	-	-	-	3	2	2
CO4	3	3	3	2	3	-	-	-	-	-	-	3	3	3
PO Target	3	2.75	2.25	2	3	-	-	-	-	-	-	2.25	2.5	2.50

Aarti Singh

Aarti Sharma

KIET GROUP OF INSTITUTIONS, GHAZIABAD

Department of Computer Science

Course Outcome (COA Lab, KCS 352)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Build half adder and full adder using basic logic gates and solve code conversions: binary to gray and gray to binary.	3	C, P
CO2	Construct Multiplexers (4x1, 8x1) and Decoders (2x4, 3x8).	3	C, P
CO3	Make use of excitation tables of various flip flops.	3	C, P
CO4	Model 8-bit Arithmetic Logical unit.	3	C, P
CO5	Model 8-bit input output system with four-bit internal registers.	3	C, P

CO-PO-PSO Mapping (COA Lab, KCS 352)

CO No.	Programme Outcome (PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	2	1	1	-	-	-	-	-	-	-	-	1	1	
CO2	2	1	1	-	-	-	-	-	-	-	-	1	1	-
CO3	2	1	1	-	-	-	-	-	-	-	-	1	1	-
CO4	2	1	1	-	-	-	-	-	-	-	-	1	1	-
CO5	2	1	1	-	-	-	-	-	-	-	-	1	1	-
PO Target	2	1	1	-	-	-	-	-	-	-	-	1	1	-

KALPNA SAGAR

KIET GROUP OF INSTITUTIONS, GHAZIABAD

Department of Computer Science

Course Outcome (DSTL Lab, KCS 353)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Implement various operations of set, Boolean algebra, recursion, and mathematical induction.	3	C, P
CO2	Implement the concept of minimum cost spanning tree and shortest path in graphs.	3	C, P
CO3	Illustrate permutation, combination, and probability for various problems.	3	C, P

CO-PO-PSO Mapping (DSTL Lab, KCS 353)

CO No.	Programme Outcome (PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	-	-	-	3	-	-	-	2	-	-	2	2	3
CO2	3	-	-	-	3	-	-	-	2	-	-	2	2	3
CO3	3	3	-	2	3	-	-	-	2	-	-	2	2	3
PO Target	3	3	-	2	3	-	-	-	2	-	-	2	2	3

Harsh

(Harsh Vardhan)

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Department of Computer Science

Course Outcome (Mini project, KCS 354)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Identify the problem to solve and meet its requirements.	3	C
CO2	Design the solution of the problem identified by using modern tools.	6	M
CO3	Develop a project using advanced technologies.	5	M
CO4	Develop analytical thinking and professional skills to prepare for final year project.	5	M
CO5	Demonstrate the developed project and its outcome to the evaluators.	3	C

CO-PO-PSO Mapping (Mini Project, KCS 354)

CO No.	Programme Outcome (PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	3	3	3	3	2	-	-	2	2	2	3	2	2
CO2	3	3	3	3	3	-	-	-	2	-	2	3	2	3
CO3	3	3	3	3	2	1	-	-	3	-	2	2	3	2
CO4	2	3	3	3	3	2	-	2	3	2	2	3	2	2
CO5	2	-	-	-	3	-	-	2	2	3	2	3	2	2
PO Target	2.6	3	3	3	2.8	1.67	-	2	2.4	2.33	2	2.80	2.2	2.2

(Arti Sharma)

KIET GROUP OF INSTITUTIONS, GHAZIABAD

Department of Computer Science

CO PO and Mapping of CO PO 2nd Year

Session:- 2021-22 Semester:- 4th

Theory

Course Outcome (Energy Science & Engineering Course, KOE 043)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Understand the basics concepts of energy, forms of energy and its transformation to other forms.	2	C, P
CO2	Understand the concept of nuclear energy, Nuclear reactors and its safety operation.	2	C, P
CO3	Understand the use of solar energy and its generations.	2	C, P
CO4	Understand the concept of various renewable source of energy.	2	C, P
CO5	Understand the concept of Green energy, green buildings etc. and environment impact assessment.	3	C, P

CO-PO-PSO Mapping
(Energy Science & Engineering ,KOE 043)

CO-No.	Programme-Outcome-(PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	1	2	1	1	-	1	1	-	-	-	1	1	-
CO2	3	1	2	1	1	-	1	1	-	-	-	1	1	-
CO3	3	1	2	1	1	-	1	1	-	-	-	1	1	-
CO4	3	1	2	1	1	-	1	1	-	-	-	1	1	-
CO5	3	1	2	1	1	-	1	1	-	-	-	1	1	-
PO Target	3	1	2	1	1	-	1	1	-	-	-	1	1	-

Sheetal

(Sheetal)

KIET GROUP OF INSTITUTIONS, GHAZIABAD

Department of Computer Science

Course Outcome (Technical Communication, KAS 401)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Analyze the nature and objective of Technical Communication relevant for the work place as Engineers.	2,4	C
CO2	Utilize the technical writing for the purposes of Technical Communication and its exposure in various dimensions.	3	C
CO3	Imbibe presentation strategies inputs by presentation skills to enhance confidence in facing diverse audience in required situations at workplace.	3	C
CO4	Estimate the application of Technical Communication to promote their competence for various media like report generation, resume design, GD, and Interview etc.	6	C
CO5	Evaluate Voice dynamics and appropriate cues for their own efficacy as fluent and efficient communicators.	5	C

CO-PO-PSO Mapping (Technical Communication, KAS 401)

CO-No.	Programme-Outcome-(PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	-	-	-	-	-	-	1	1	-	3	-	3	-	-
CO2	-	-	-	-	-	-	1	1	-	3	-	3	-	-
CO3	-	-	-	-	-	-	1	1		3	-	3	-	-
CO4	-	-	-	-	-	-	1	1	2	3	-	3	-	-
CO5	-	-	-	-	-	-	1	1	2	3	-	3	-	-
PO Target	-	-	-	-	-	-	1	1	2	3	-	3	-	-

Sonia Grover

KIET GROUP OF INSTITUTIONS, GHAZIABAD

Department of Computer Science

Course Outcome (Operating System, KCS 401)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Acquire knowledge of the operating system and its functionalities, components, and terminologies used in the subject.	4	C
CO2	Analyze the role of process synchronization and the concept of concurrent processes in the operating system.	3	C
CO3	Evaluate the process scheduling scenarios based on the existing methods and techniques used in the operating system.	3	C
CO4	Analyze the memory management mechanism used in the operating system and how the operating system optimizes memory usage.	4	C
CO5	Analyze the working of input and output management; and how the operating system performs the disk management.	5	C

CO-PO-PSO Mapping (Operating System, KCS 401)

CO-No.	Programme-Outcome-(PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	1	1	1	1	-	-	-	-	1	-	1	1	-
CO2	3	1	1	1	1	-	-	-	-	1	-	1	1	-
CO3	3	1	1	1	1	-	-	-	-	1	-	1	1	-
CO4	3	1	1	1	1	-	-	-	-	1	-	1	1	-
CO5	3	1	1	1	1	-	-	-	-	1	-	1	1	-
PO Target	3	1	1	1	1	-	-	-	-	1	-	1	1	-

Asst Prof
(Arti Sharma)

KIET GROUP OF INSTITUTIONS, GHAZIABAD

Department of Computer Science

Course Outcome
(Theory of Automata & Formal Language, KCS 402)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Understand basic concepts of automata theory and formal languages.	4	C
CO2	Construct finite automata and regular expressions for regular languages.	3	C
CO3	Construct regular and context-free grammar for formal languages.	4	C
CO4	Construct the pushdown automata for context-free languages.	3	C
CO5	Construct various Turing Machine for different problems and introduction of Recursive Function Theory.	4	C

CO-PO-PSO Mapping
(Theory of Automata & Formal Language, KCS 402)

CO-No.	Programme-Outcome-(PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	2	-	-	1	–	–	1	–	–	–	1	1	1	–
CO2	3	2	2	1	-	-	1	-	-	-	1	2	1	-
CO3	3	2	2	1	-	-	1	-	-	-	1	2	1	-
CO4	3	2	2	1	-	-	1	-	-	-	1	2	1	-
CO5	3	2	2	1	-	-	1	-	-	-	1	2	1	-
PO Target	2.8	2	2	1	–	–	1	–	–	–	1	1.80	1	–

Raj Kumar

KIET GROUP OF INSTITUTIONS, GHAZIABAD

Department of Computer Science

Course Outcome (Microprocessor, KCS 403)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Understand how the knowledge of mathematics, computer science & engineering are applied to microprocessor based personal computer system.	3	C, P
CO2	Analyze software problems after studying instruction set of 8085 and programming techniques.	3	C, P
CO3	Formulate and solve hardware and software problems after studying instruction set of 8086 and programming techniques.	3	C, P
CO4	Automate real life problems after generating time delays and learning the advanced subroutine concepts in assembly language programming.	3	C, P
CO5	Understand techniques, skills and hardware tools necessary for computer engineering practice after studying 8237 DMA, 8255 PPI,8254 programmable interval timer and 8259A programmable interrupt controller.	4	C, P

CO-PO-PSO Mapping (Microprocessor, KCS 403)

CO-No.	Programme-Outcome-(PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	2	-	1	1	-	-	-	1	-	-	2	1	-
CO2	1	3	-	1	1	1	-	-	1	-	-	-	1	-
CO3	2	1	-	1	1	-	-	-	1	-	-	2	1	-
CO4	2	2	-	1	1	-	-	-	1	-	-	-	1	-
CO5	1	1	-	1	1	1	-	1	1	-	-	2	1	-
PO Target	1.8	1.8	-	1	1	1	-	1	1	-	-	2	1	-

(KAKLINA SAGAR)

KIET GROUP OF INSTITUTIONS, GHAZIABAD

Department of Computer Science

Practical

Course Outcome (Operating System Lab, KCS 451)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Acquire knowledge of the operating system structure and system calls and process, threads.	3	C, P
CO2	Analyze the role of process and its scheduling types.	3	C, P
CO3	Evaluate the process memory requirement and its fragmentation.	3	C, P
CO4	Analyze the safe state and deadlock mechanism.	4	C, P
CO5	Analyze the performance of the disk scheduling algorithms.	4	C, P

CO-PO-PSO Mapping (Operating System Lab, KCS 451)

CO-No.	Programme-Outcome-(PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	3	3	3	3	-	-	-	-	2	3	3	3	3
CO2	3	3	3	3	3	-	-	-	-	2	3	3	3	3
CO3	3	3	3	3	3	-	-	-	-	2	3	3	3	3
CO4	3	3	3	3	3	-	-	-	-	2	3	3	3	3
CO5	3	3	3	3	3	-	-	-	-	2	3	3	3	3
PO Target	3	3	3	3	3	-	-	-	-	2	3	3	3	3

CArti Sharma

KIET GROUP OF INSTITUTIONS, GHAZIABAD

Department of Computer Science

Course Outcome (MP Lab, KCS 452)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Model basic arithmetic operations assembly language programs on 8085 microprocessor.	2	C, P
CO2	Build advanced arithmetic operations assembly language programs on 8085 microprocessor.	6	C, P
CO3	Model basic arithmetic operations assembly language programs on 8086 microprocessor.	6	C, P
CO4	Build advanced arithmetic operations assembly language programs on 8086 microprocessor.	6	C, P
CO5	Design interfacing circuits with microprocessor.	5	C, P

CO-PO-PSO Mapping (MP Lab, KCS 452)

CO-No.	Programme-Outcome-(PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	2	2	3	2	-	-	-	-	-	-	2	-	-
CO2	3	2	2	2	2	-	-	-	-	-	-	2	-	-
CO3	2	2	3	3	2	-	-	-	-	-	-	2	-	-
CO4	3	2	3	2	2	-	-	-	-	2	-	2	-	-
CO5	2	2	3	2	2	-	-	-	-	-	-	2	-	-
PO Target	2.6	2	2.6	2.4	2	-	-	-	-	2	-	2	-	-

Kalpna (KALPNA SAGAR)

KIET GROUP OF INSTITUTIONS, GHAZIABAD

Department of Computer Science

Course Outcome (Python Programming Lab, KCS 453)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	To read and write simple Python programs.	2	C, P
CO2	To develop Python programs with conditionals and loops.	4	C, P
CO3	To define Python functions and to use Python data structures –- lists, tuples, dictionaries.	3	C, P
CO4	To do input/output with files in Python.	3	C, P
CO5	To do searching, sorting, and merging in Python.	2	C, P

CO-PO-PSO Mapping (Python Programming Lab, KCS 453)

CO No.	Programme Outcome (PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	1	1	2	2	3	3	1	1	2	2	1	1	3	2
CO2	3	2	1	2	2	2	2	1	3	2	2	2	1	3
CO3	2	2	3	2	2	2	1	1	1	3	3	2	2	2
CO4	2	1	2	2	2	3	3	2	2	3	3	3	3	2
CO5	3	2	3	3	2	2	2	2	2	3	3	2	1	3
PO Target	2.2	1.6	2.2	2.2	2.2	2.4	1.8	1.4	2	2.6	2.4	2	2	2.4

Harsh

(Harsh Vardhan)

KIET GROUP OF INSTITUTIONS, GHAZIABAD

Department of Computer Science

CO PO and Mapping of CO PO 3rd Year

Session:- 2021-22 Semester:- 5th

Theory

Course Outcome (Database Management System, KCS 501)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Illustrate the knowledge of database concepts along with design of database for real world problem.	3	C, P
CO2	Apply query processing techniques (relational algebra and relational calculus expressions) with knowledge of relational model and query languages.	3	C, P
CO3	Analyze the database redundancy problem using normalization techniques for good database design.	3	C, P
CO4	Implement the database transactions processing concepts and study the broad range of database management issues in concurrent environment.	3	C, P
CO5	Apply the different concurrency control techniques on transactions and study of database recovery methods.	3	C, P

(Akanksha)

KIET GROUP OF INSTITUTIONS, GHAZIABAD

Department of Computer Science

CO-PO-PSO Mapping
(Database Management System, KCS 501)

CO No.	Programme Outcome (PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	2	2	-	1	-	-	1	-	1	-	-	1	1	-
CO2	3	3	-	1	1	-	-	-	1	-	-	1	1	-
CO3	3	3	-	1	1	-	-	-	1	-	-	1	1	-
CO4	3	3	-	1	-	-	-	-	1	-	-	1	1	-
CO5	3	3	-	1	-	-	-	-	1	-	-	1	1	-
PO Target	2.80	2.80	-	1	1	-	1	-	1	-	-	1	1	-

P

(Akanksha)

KIET GROUP OF INSTITUTIONS, GHAZIABAD

Department of Computer Science

Course Outcome (Compiler Design, KCS 502)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Acquire knowledge of different phases and passes of compiler along with LEX and YACC tool.	2	C
CO2	Illustrate various parsing techniques i.e. Top-Down and Bottom-up parsers using LL, SLR, CLR, and LALR parsing table.	3	C, P
CO3	Describe the Intermediate code representation using Syntax Tree, DAG as well as use this knowledge to generate the intermediate code in the form of 3-address code.	3	C, P
CO4	Discuss data structures used for Symbol Table, Run time organization and error in phases of compiler.	2	C
CO5	Apply code optimization and Generation techniques resulting in Target Code.	3	C, P

CO-PO-PSO Mapping (Compiler Design,KCS 502)

CO-No.	Programme-Outcome-(PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	2	1	1	-	-	-	-	-	-	-	1	1	-
CO2	3	3	1	1	-	-	-	-	-	-	-	-	1	-
CO3	3	3	1	1	-	-	-	-	-	-	-	2	1	-
CO4	3	1	-	1	-	-	-	-	-	-	-	-	1	-
CO5	3	3	2	1	-	-	-	-	-	-	-	1	1	-
PO Target	3	2.4	1.25	1	-	-	-	-	-	-	-	1.33	1	-

A.P.Shukla

(Dr. A. P. Shukla)

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Department of Computer Science

Course Outcome
(Design and Analysis of Algorithm, KCS 503)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Apply principles and concepts to algorithm.	3	C
CO2	Analyze the efficiency of algorithms using time and space complexity theory.	3	C, P
CO3	Decide efficient algorithms for simple computational tasks.	3	C
CO4	Apply algorithms in complex problems.	3	C, P

CO-PO-PSO Mapping
(Design and Analysis of Algorithm, KCS 503)

CO No.	Programme Outcome (PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	3	3	-	-	-	-	-	-	-	2	2	-	-
CO2	3	3	3	3	-	-	-	-	-	-	2	2	-	-
CO3	3	3	3	3	-	-	-	-	-	-	3	2	-	-
CO4	3	3	3	3	-	-	-	-	-	-	3	2	-	-
PO Target	3	3	3	3	-	-	-	-	-	-	2.75	2	-	-

Raj Kumar

KIET GROUP OF INSTITUTIONS, GHAZIABAD

Department of Computer Science

Course Outcome (Web Designing, KCS 052)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Understand the principles of web design and different types of websites.	2	C
CO2	Apply the concepts of HTML & elements and in designing and development of web pages.	3	C, P
CO3	Implement the properties of Cascading Style Sheet (CSS) in designing web pages.	3	C, P
CO4	Apply the concepts of JavaScript to validate the website and to make it interactive.	3	C, P
CO5	Utilize the concept of Web Hosting and SEO for the quick response of websites.	3	C, P

CO-PO-PSO Mapping (Web Designing, KCS 052)

CO-No.	Programme-Outcome-(PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	1	2	2	1	-	-	-	1	1	-	-	-	1	-
CO2	2	2	3	1	-	-	-	1	1	-	-	-	2	-
CO3	2	2	3	1	-	-	-	1	1	-	-	-	2	-
CO4	2	2	3	1	-	-	-	1	1	-	-	-	3	-
CO5	2	3	3	1	3	-	-	1	1	-	-	-	3	-
PO Target	1.8	2.2	2.8	1	3	-	-	1	1	-	-	-	2.2	-

Shivani

Ms. Shivani

KIET GROUP OF INSTITUTIONS, GHAZIABAD

Department of Computer Science

Course Outcome
(Applications of Soft Computing , KCS 056)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Recognize the feasibility of applying various soft computing methodologies for engineering problems.	2	C
CO2	Apply neural network for classification and clustering problems for real world and soft computing problems.	3	C
CO3	Apply fuzzy logic and reasoning to handle uncertainty and solve engineering problems.	2	C
CO4	Apply fuzzy logic and fuzzy inference engines to handle uncertainty and solve engineering problems.	3	C, P
CO5	Apply genetic algorithms to combinatorial optimization problems.	3	C, P

CO-PO-PSO Mapping
(Applications of Soft Computing , KCS 058)

CO No.	Programme Outcome (PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	2	2	2	2	2	2	1	-	-	-	-	-	1	1
CO2	2	2	3	1	2	2	1	-	1	1	-	-	1	1
CO3	2	2	2	2	3	3	1	-	-	-	-	-	1	1
CO4	2	2	3	1	3	3	1	-	1	1	3	-	1	1
CO5	2	2	3	2	2	2	1	-	1	1	-	-	1	1
PO Target	2	2	2.6	1.6	2.4	2.4	1	-	1	1	3	-	1	1

Mahwish

(Mahwish)

KIET GROUP OF INSTITUTIONS, GHAZIABAD

Department of Computer Science

Practical

Course Outcome (DBMS Lab, KCS 551)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Implement the concepts of table creation, views, indexes and other database objects using Oracle 10g express edition.	3	P
CO2	Solve simple and complex queries using DDL, DML, DCL and TCL.	3	P
CO3	Utilize entity integrity, referential integrity, key constraints and domain constraints on database.	3	P
CO4	Implement the PL/SQL blocks, procedure functions, packages and triggers, cursors.	3	P
CO5	Design a database schema for a real-world problem like Hospital management system.	3	P

CO-PO-PSO Mapping (DBMS Lab, KCS 551)

CO No.	Programme Outcome (PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	3	-	1	3	-	-	-	-	-	2	2	-	-
CO2	3	3	-	3	-	-	-	-	-	-	2	2	-	-
CO3	3	3	-	3	-	-	-	-	-	-	2	2	-	-
CO4	3	3	-	3	-	-	-	-	-	-	2	2	-	-
CO5	3	3	2	3	-	-	-	-	-	-	3	3	2	3
PO Target	3	3	2	2.6	3	-	-	-	-	-	2.2	2.2	2	3

(Akanksha)

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Department of Computer Science

Course Outcome (CD LAB, KCS 552)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Implement the Lexical Analyzer using C language.	3	C, P
CO2	Utilize the LINUX utility LEX tool for Lexical Analysis.	3	C, P
CO3	Experiment with the knowledge of different parsers (Operator precedence, shift reduce etc.) using C language.	3	C, P
CO4	Implement Intermediate code generation and optimization for various expressions.	3	C, P

CO-PO-PSO Mapping (CD LAB, KCS 552)

CO-No.	Programme-Outcome-(PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	3	-	-	-	-	-	-	1	-	-	1	-	-
CO2	3	3	-	-	2	-	-	-	1	-	-	1	-	-
CO3	3	3	-	-	-	-	-	-	1	-	-	1	-	-
CO4	3	3	-	-	-	-	-	-	1	-	-	1	-	-
PO Target	3	3	-	-	2		-	-	1	-	-	1	-	-

Dr. A.P. Shukla

KIET GROUP OF INSTITUTIONS, GHAZIABAD

Department of Computer Science

Course Outcome (DAA LAB, KCS 553)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Implement algorithms to solve problems by iterative approach.	3	C
CO2	Implement algorithm to solve problems by divide and conquer approach.	3	C, P
CO3	Implement algorithms to solve problems by the Greedy algorithm approach.	3	C, P
CO4	Implement algorithms to solve problems by Dynamic programming, backtracking, branch and bound approach.	3	C, P

CO-PO-PSO Mapping (DAA LAB, KCS 553)

CO-No.	Programme-Outcome-(PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	2	1	2	2	-	-	-	-	-	-	1	3	-
CO2	3	2	1	2	2	-	-	-	-	-	-	1	3	-
CO3	3	2	1	2	2	-	-	-	-	-	-	1	3	-
CO4	3	2	1	2	3	-	-	-	-	-	-	1	3	-
PO Target	3	2	1	2	2.25	-	-	-	-	-	-	1	3	-

Raj Kumar

KIET GROUP OF INSTITUTIONS, GHAZIABAD

Department of Computer Science

Course Outcome (Mini Project, KCS 554)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Identify a problem and gather its requirements.	3	C
CO2	Design a solution of the problem using latest tools & techniques.	6	M
CO3	Develop a project using latest technology.	5	M
CO4	Develop professional skills and critical thinking to prepare for major project.	5	M
CO5	Demonstrate an ability to present project works to the evaluators.	3	C

CO-PO-PSO Mapping (Mini Project, KCS 554)

CO-No.	Programme-Outcome-(PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	3	3	3	3	2	-	-	2	2	2	3	2	2
CO2	3	3	3	3	3	-	-	-	2	-	2	3	2	3
CO3	3	3	3	3	3	1	-	-	3	-	2	2	3	2
CO4	3	3	3	3	3	2	-	2	3	2	2	3	2	2
CO5	2	-	-	-	3	-	-	2	2	3	2	3	2	2
PO Target	2.8	3	3	3	3	1.67	-	2	2.4	2.33	2	2.8	2.2	2.2

(Arti Sharma)

KIET GROUP OF INSTITUTIONS, GHAZIABAD

Department of Computer Science

Session:- 2021-22 Semester:- 6th

Theory

Course Outcome (Software Engineering, KCS 601)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Learn about generic models of software development process.	2	C
CO2	Understand fundamental concepts of requirements engineering and analysis modeling.	2	C
CO3	Understand the different design techniques and their implementation.	3	C
CO4	Learn various testing measures.	2	C
CO5	Learn various maintenance and project management techniques.	2	C

CO-PO-PSO Mapping (Software Engineering, KCS 601)

CO No.	Programme Outcome (PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	2	2	2	-	-	1	2	-	1	-	1	1	-
CO2	3	2	2	2	-	-	1	2	-	1	-	1	1	-
CO3	3	2	-	2	-	-	1	2	-	1	-	1	1	-
CO4	3	-	-	2	-	-	1	2	-	1	-	1	1	-
CO5	3	2	-	2	-	-	1	2	-	1	-	1	1	-
PO Target	3	2	2	2	-	-	1	2	-	1	-	1	1	-

(Asti Sharma)

KIET GROUP OF INSTITUTIONS, GHAZIABAD

Department of Computer Science

Course Outcome (Web Technology, KCS 602)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Explain web development Strategies and Protocols governing Web. Develop Java programs for window/web-based applications.	3	C, P
CO2	Analyze and develop static interactive web pages using HTML, CSS and XML.	3	C, P
CO3	Design web pages using JavaScript, AJAX. Creation of client-server environment using socket programming.	3	C, P
CO4	Building enterprise level applications and manipulate web databases using JDBC.	3	C, P
CO5	Design interactive web applications using Servlets and JSP.	4	C, P

CO-PO-PSO Mapping (Web Technology, KCS 602)

CO No.	Programme Outcome (PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	2	2	1	1	3	-	1	1	-	1	-	2	2	-
CO2	2	1	1	1	3	-	1	1	-	1	-	2	2	-
CO3	2	2	1	1	3	-	1	1	-	1	-	2	2	-
CO4	3	3	1	1	3	-	1	1	-	1	-	3	3	-
CO5	3	2	1	1	3	-	1	1	-	1	-	2	3	-
PO Target	2.4	2	1	1	3	-	1	1	-	1	-	2.2	2.4	-

(Baldwya Mitra)

KIET GROUP OF INSTITUTIONS, GHAZIABAD

Department of Computer Science

Course Outcome (Computer Networks, KCS 603)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Explain basic concepts, OSI reference model, services and role of each layer of OSI model and TCP/IP, networks devices and transmission media, Analog and digital data transmission.	2	C
CO2	Apply channel allocation, framing, error and flow control techniques.	2	C
CO3	Describe the functions of Network Layer i.e. Logical addressing, subnetting & Routing Mechanism.	2	C
CO4	Explain the different Transport Layer function i.e. Port addressing, Connection Management, Error control and Flow control mechanism.	3	C
CO5	Explain the different protocols used at application layer i.e. HTTP, SNMP, SMTP, FTP, TELNET and VPN.	3	C

CO-PO-PSO Mapping (Computer Networks, KCS 603)

CO No.	Programme Outcome (PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	3	2	-	-	-	-	-	-	-	-	2	2	-
CO2	3	3	2	-	-	-	-	-	-	-	-	2	2	-
CO3	3	3	1	-	-	-	-	-	-	-	-	2	3	-
CO4	3	3	2	-	-	-	-	-	-	-	-	2	2	-
CO5	3	2		-	-	-	-	-	-	-	-	2	2	-
PO Target	3	2.80	1.75	-	-	-	-	-	-	-	-	2	2.2	-

KIET GROUP OF INSTITUTIONS, GHAZIABAD

Department of Computer Science

Course Outcome (OOPS, KOE 064)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Understand the Basic concept of Object Orientation, object identity and Encapsulation.	2	C
CO2	Illustrate the Basic concept of Basic Structural Modeling.	2	C
CO3	Understand the concept of Object oriented design, Object design.	2	C
CO4	Apply the concept of C++ Basics.	3	C
CO5	Apply the basics of object and class in C++.	3	C

CO-PO-PSO Mapping (OOPS, KOE 064))

CO No.	Programme Outcome (PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	1	2	2	1	–	-	-	-	-	-	2	1	-
CO2	3	1	2	2	1	-	-	-	-	-	-	3	1	-
CO3	3	2	2	2	1	-	-	-	-	-	-	-	1	-
CO4	3	2	2	2	1	-	-	-	-	-	-	2	1	-
CO5	3	2	2	2	1	-	-	-	-	-	-	2	1	2
PO Target	3	1.6	2	2	1	-	-	-	-	-	-	2.25	1	2

(Anshula Gupta)

KIET GROUP OF INSTITUTIONS, GHAZIABAD

Department of Computer Science

Course Outcome (Big Data, KCS 061)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Demonstrate knowledge of Big Data Analytics concepts and its applications in business.	3	C
CO2	Demonstrate functions and components of Map Reduce Framework and HDFS.	3	C
CO3	Discuss Data Management concepts in NoSQL environment.	3	C
CO4	Explain process of developing Map Reduce based distributed processing applications.	3	C
CO5	Explain process of developing applications using HBASE, Hive, Pig etc.	3	C

CO-PO-PSO Mapping (Big Data, KCS 061)

CO No.	Programme Outcome (PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	2	2	2	2	1	–	-	1	-	1	2	1	2	-
CO2	3	3	2	2	1	-	-	1	-	1	2	1	2	-
CO3	2	1	2	2	1	-	-	1	-	1	2	1	2	-
CO4	3	3	3	2	1	-	-	1	-	1	2	1	2	-
CO5	2	3	2	2	1	-	-	1	-	1	2	1	2	-
PO Target	2.4	2.4	2.2	2	1	-	-	1	-	1	2.2	1	2	-

(Neha Shukla)

KIET GROUP OF INSTITUTIONS, GHAZIABAD

Department of Computer Science

Course Outcome (Data Compression, KCS 064)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Describe the evolution and fundamental concepts of Data Compression and Coding Techniques.	3	C
CO2	Apply and compare different static coding techniques (Huffman & Arithmetic coding) for text compression.	3	C
CO3	Apply and compare different dynamic coding techniques (Dictionary Technique) for text compression.	3	C
CO4	Apply and compare the performance of predictive coding technique for Image Compression.	3	C
CO5	Apply and compare different Quantization Techniques for Image Compression.	3	C

CO-PO-PSO Mapping (Data Compression, KCS 064)

CO NO.	Programme Outcome (PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	2	2	-	1	1	-	-	1	-	1	-	1	1	-
CO2	3	3	-	1	1	-	-	1	-	1	-	1	1	2
CO3	3	3	-	1	1	-	-	1	-	1	-	1	1	2
CO4	3	2	-	1	1	-	-	2	-	1	-	1	1	-
CO5	3	2	-	1	1	-	-	2	-	1	-	1	2	-
PO Target	2.8	2.4	-	1	1	-	-	1.4	-	1	-	1	1.2	2

(Neha Shukla)

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Department of Computer Science

Practical

Course Outcome (SE LAB, KCS 651)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Identify ambiguities, inconsistencies and incompleteness from a requirements specification and state functional and non-functional requirement.	3	C
CO2	Identify different actors and use cases from a given problem statement and draw use case diagram to associate use cases with different types of relationship.	3	C
CO3	Draw a class diagram after identifying classes and association among them.	3	C
CO4	Graphically represent various UML diagrams, and associations among them and identify the logical sequence of activities undergoing in a system, and represent them pictorially.	3	C
CO5	Able to use modern engineering tools for specification, design, implementation and testing .	3	C

CO-PO-PSO Mapping (SE LAB, KCS 651)

CO NO.	Programme Outcome (PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	3	3	2	3	2	2	--	1	-	1	3	1	1
CO2	3	3	3	3	3	2	2	-	1	-	1	3	1	1
CO3	3	3	3	3	3	2	2	-	1	-	1	2	1	1
CO4	3	3	3	3	3	2	2	-	1	-	1	1	2	2
CO5	3	3	3	3	3	2	2	-	1	-	1	2	3	3
PO Target	3	3	3	2.8	3	2	2	-	1	-	1	2.2	1.6	1.6

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Department of Computer Science

Course Outcome (WT LAB, KCS 652)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Develop static web pages using HTML, CSS.	3	C
CO2	Develop Java programs for window/web-based applications.	3	C
CO3	Design dynamic web pages using Javascript and XML.	3	C
CO4	Design dynamic web page using server site programming Ex. SERVLET and JSP.	3	C
CO5	Design server site applications using JDDC, ODBC and session tracking API.	3	C

CO-PO-PSO Mapping (WT LAB, KCS 652)

CO NO.	Programme Outcome (PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	2	2	3	2	1	-	-	1	1	2	2	3	1
CO2	2	2	3	3	2	1	-	-	2	1	2	3	2	2
CO3	3	2	3	3	2	1	-	-	1	2	2	2	2	1
CO4	3	2	2	2	3	2	-	-	1	1	1	3	1	1
CO5	3	2	2	3	3	1	-	-	1	2	2	2	1	2
PO Target	2.8	2	2.4	2.8	2.4	1.2	-	-	1.2	1.4	1.8	2.4	1.8	1.4

(Baldeep Mittal)

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Department of Computer Science

Course Outcome (CN LAB, KCS 653)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Simulate different network topologies.	3	C
CO2	Implement various framing methods of Data Link Layer.	3	C
CO3	Implement various Error and flow control techniques.	3	C
CO4	Implement network routing and addressing techniques.	3	C
CO5	Implement transport and security mechanisms.	3	C

CO-PO-PSO Mapping (CN LAB, KCS 653)

CO NO.	Programme Outcome (PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	3	2	2	3	2	-	-	2	2	-	2	2	3
CO2	2	2	2	-	2	2	-	-	3	2	-	3	3	3
CO3	2	2	-	3	2	2	-		3	2		3	2	2
CO4	3	-	3	3	2	2	-	-	2	3	-	2	2	2
CO5	2	3	3	3	2	2	-	-	2	3	-	2	2	3
PO Target	2.4	2.5	2.5	2.75	2.2	2	-	-	2.2	2.4	-	2.4	2.2	2.6

Mahwish

KIET GROUP OF INSTITUTIONS, GHAZIABAD

Department of Computer Science

CO PO and Mapping of CO PO 4th Year

Session:- 2021-22 Semester:- 7th

Theory

Course Outcome (Distributed System, KCS 077)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Understand the theoretical foundation of distributed system along with its applications in real world.	2	C
CO2	Analyze various methods suggested for process synchronization and deadlock handling in context of distributed environment.	4	M
CO3	Apply agreement protocols to solve various problems in distributed system.	3	C, P
CO4	Apply different mechanism developed for recovery from fault and fault tolerance.	3	C, P
CO5	Understand and solve various issues in distributed transaction.	3	C, P

CO-PO-PSO Mapping (Distributed System, KCS 077)

CO NO.	Programme Outcome (PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	2	2	-	1	-	-	-	-	-	-	-	2	1	-
CO2	3	2	-	1	-	-	-	-	-	-	-	2	1	-
CO3	3	2	-	1	-	-	-	-	-	-	-	1	1	-
CO4	3	2	-	1	-	-	-	-	-	-	-	1	1	-
CO5	3	2	-	1	-	-	-	-	-	-	-	1	1	-
PO Target	2.8	2	-	1	-	-	-	-	-	-	-	1.6	1	-

(Akanksha)

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Department of Computer Science

Course Outcome (Cloud Computing, KCS 713)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Articulate the main concepts, key technologies, strengths and limitations of cloud computing.	2	C
CO2	Understand the key and enabling technologies like virtualization in Cloud Computing.	2	C
CO3	Interpret the architecture of cloud computing, cloud storage, service and delivery models.	2	C
CO4	Understand the core issues of cloud computing such as resource management and security.	2	C
CO5	Classify cloud technologies for the next generation computing paradigm.	4	F, C, P

CO-PO-PSO Mapping (Cloud Computing, KCS 713)

CO NO.	Programme Outcome (PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	2	2	-	1	2	-	-	1	-	-	-	2	2	1
CO2	2	2	-	1	2	-	-	1	-	-	-	2	2	1
CO3	2	3	-	1	2	-	-	1	-	-	-	2	2	1
CO4	2	3	-	1	3	-	-	-	-	-	2	2	2	1
CO5	2	3	-	1	3	-	-	-	-	-	2	3	3	1
PO Target	2	2.6	-	1	2.4	-	-	1	-	-	2	2.2	2.2	1

(Pradeep Kumar Singh)

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Department of Computer Science

Course Outcome
(Project Management Entrepreneurship, KHU 702)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Understand the theories of entrepreneurship and entrepreneurial development programmes.	2	F
CO2	Explain innovative business ideas and market opportunities for business development.	2	C
CO3	Discuss the importance of project life cycle and different types of appraisal techniques.	2	C
CO4	Predict different types of project financing requirements on the basis of cash flow statements.	3	C, P
CO5	Describe social entrepreneurship opportunities and risk management techniques in social enterprises.	2	C

CO-PO-PSO Mapping
(Project Management Entrepreneurship, KHU 702)

CO NO.	Programme Outcome (PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	-	-	-	-	-	1	1	1	1	1	3	-	1	
CO2	-	-	-	-	-	1	1	1	1	1	3	-	1	1
CO3	-	-	-	-	-	2	1	1	1	1	3	-	1	-
CO4	-	-	-	-	-	1	1	1	1	1	3	-	1	-
CO5	-	-	-	-	-	3	1	1	1	1	3	-	1	2
PO Target	-	-	-	-	-	1.6	1	1	1	1	3	-	1	1.5

(Neha Shukla)

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Department of Computer Science

Course Outcome
(Value Relationship & Ethical Human Conduct , KOE 076)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Understand human aspirations, goals, activities and purpose of life.	2	C,P
CO2	Understand the importance and types of relationship with expressions.	2	C, F
CO3	Appraise the conceptual framework of undivided society as well as universal human order.	5	C, M
CO4	Plan for transition from current state to the undivided society and universal human order.	5	C, M
CO5	Understand human tradition and its various components.	2	C, F

CO-PO-PSO Mapping
(Value Relationship & Ethical Human Conduct, KOE 076)

CO-NO.	Programme-Outcome-(PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	-	-	1	-	-	3	3	3	2	2	1	-	-	-
CO2	-	-	1	-	-	3	3	3	2	2	1	-	-	-
CO3	-	-	1	-	-	3	3	3	2	2	1	-	-	-
CO4	-	-	1	-	-	3	3	3	2	2	1	-	-	-
CO5	-	-	1	-	-	3	3	3	2	2	1	-	-	-
PO Target	-	-	1	-	-	3	3	3	2	2	1	-	-	-

(Seema Mathey)

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Department of Computer Science

Practical

Course Outcome (Distributed System Lab, KCS 751A)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Implement Logical Clock and Vector Clock using Java or C.	3	C
CO2	Implement Distributed Mutual Exclusion using Java or C.	3	C, P
CO3	Implement file transfer mechanism across a network and accessing methods of remote systems using network protocols and socket programs with the use of Java or C.	3	C, P

CO-PO-PSO Mapping (Distributed System Lab, KCS 751A)

CO NO.	Programme Outcome (PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	2	-	1	-	-	-	-	-	-	-	-	-	-
CO2	3	1	-	1	-	-	-	-	-	-	-	-	-	-
CO3	3	1	-	1	-	-	-	-	-	-	-	-	-	-
PO Target	3	1.333	-	1	-	-	-	-	-	-	-	-	-	-

(Akanksha)

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Department of Computer Science

Course Outcome (Internship Assessment, KCS 752)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Understanding the modern tools used in the field of Computer science and engineering for product development.	2	C
CO2	Demonstrate ethical conduct and professional accountability while working in a team for the benefit of society.	4	C, P
CO3	Understand the resources requirement and planning to facilitate the project success.	2	C

CO-PO-PSO Mapping (Internship Assessment, KCS 752)

CO NO.	Programme Outcome (PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	2	2	-	-	-	-	-	-	-	-	2	1	-	-
CO2	2	2	-	-	-	-	-	-	-	-	2	2	-	-
CO3	2	2	-	-	-	-	-	-	-	-	2	2	-	-
PO Target	2	2	-	-	-	-	-	-	-	-	2	1.67	-	-

(Arti Sharma)

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Department of Computer Science

Course Outcome (Project Lab, KCS 753)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Select and Summarize all aspects of real life problem through information gathering.	2	F
CO2	Apply acquired knowledge to develop a conceptual model.	3	C, P
CO3	Analyse the outcome of each phase using various tools and techniques.	4	C, P
CO4	Justify/ Defend the validity of idea or quality of result with the previous data/result.	5	C, P
CO5	Test the working model and Integrate all the phases.	6	C, P

CO-PO-PSO Mapping (Project Lab, KCS 753)

CO NO.	Programme Outcome (PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	-	3	3	3	3	1	2	-	3	2	3	3	3	3
CO2	-	3	3	3	2	1	2	-	3	2	3	3	3	3
CO3	-	3	3	3	2	1	2	-	3	2	3	3	3	3
CO4	-	3	3	3	2	1	2	-	3	2	2	2	3	3
CO5	-	3	3	3	2	1	2	-	3	2	1	2	3	3
PO Target	-	3	3	3	2.20	1	2	-	3	2	2.40	2.60	3	3

Arti Sharma

KIET GROUP OF INSTITUTIONS, GHAZIABAD

Department of Computer Science

Course Outcome (Rural Development, KHU 801)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Students can understand the definitions, concepts and components of Rural Development.	3	C
CO2	Students will know the importance, structure, significance, resources of the Indian rural economy.	3	C
CO3	Students will have a clear idea about the area development programmes and its impact.	3	C
CO4	Students will be able to acquire knowledge about rural entrepreneurship.	3	C
CO5	Students will be able to understand about the using of different methods for human resource planning.	3	C

CO-PO-PSO Mapping (Rural Development, KHU 801)

CO NO.	Programme Outcome (PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	1	2	1	1	1	2	1	1	-	-	-	-	1	1
CO2	1	3	1	1	1	1	1	1	1	1	-	-	1	1
CO3	2	1	1	1	1	2	1	1	-	-	-	-	1	1
CO4	3	2	1	1	1	3	1	1	1	1	3	-	1	1
CO5	2	2	1	1	1	2	1	1	1	1	-	-	1	1
PO Target	1.8	2	1	1	1	2	1	1	1	1	3	-	1	1

(Baldivya Mitra)

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Department of Computer Science

Course Outcome (Big Data, KOE 097)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Understand the building blocks of Big Data.	3	C
CO2	Apply the programming aspects of map Reduce.	3	C
CO3	Analyze different ways to handle data in HDFS.	3	C
CO4	Analyze between YARN , NoSQL & Spark tools.	3	C
CO5	Apply different Hadoop ecosystem tools in different applications.	3	C

CO-PO-PSO Mapping (Big Data, KOE 097)

CO NO.	Programme Outcome (PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	1	-	1	2	1	-	-	1	-	-	-	1	1	1
CO2	2	3	3	2	1	-	-	1	-	-	-	1	1	2
CO3	1	3	3	2	1	-	-	1	-	-	-	1	1	2
CO4	1	1	3	2	1	-	-	1	-	-	-	1	1	2
CO5	1	1	2	2	1	-	-	1	-	-	-	1	1	2
PO Target	1.2	2	2.4	2	1	-	-	1	-	-	-	1	1	1.8

Neha Shukla

(Neha Shukla)

KIET GROUP OF INSTITUTIONS, GHAZIABAD

Department of Computer Science

Practical

Course Outcome (Project, KCS 851)

CO_No.	Statement of Course Outcome	Bloom's Cognitive Process Level (BL)	Knowledge Category (KC)
After completion of the course, the student will be able to			
CO1	Identify socio technical problems and their feasibility.	3	C
CO2	Apply a suitable software development model for the real-world problem.	3	C
CO3	Design engineering solutions to complex problems by utilizing a systematic approach.	3	C
CO4	Solve the real-life problems by using the various tools, techniques, and coding practices.	3	C
CO5	Take part in written and verbal communication with professional and community at large.	3	C
CO6	Analyze the stakeholder expectations to ensure successful project outcomes.	3	C

CO-PO-PSO Mapping (Project, KCS 851)

CO NO.	Programme Outcome (PO)												PSO	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
CO1	3	3	-	-	3	3	-	-	2		3	3	2	2
CO2	3	3	3	3	3	-	-	-	2	-	2	3	-	3
CO3	3	3	3	3	3	-	-	-	3	-	2	3	2	3
CO4	3	3	3	3	3	2	2	2	2	-	2	3 -	1	3
CO5	-	-	-	-	-	2	2	3	2	3	-	3 -	-	-
CO6	2 -	-	-	-	3	2	-	3	2	3	-	3 -	2	2
PO Target	2.8	3	3	3	3	2.25	2	2.67	2.17	2.33	2.25	3	1.75	2.6

Sapna

(Sapna Juneja)