Meerut Institute of Engineering and Technology, Meerut

Statements of Course Outcomes (COs) and Mapping with Program Outcomes (POs) and Program Specific Outcomes (PSOs) : Dept. of CS & IT : 2023-24

(Session-wise; First Year to Final Year) BKL # K1 – Remember, K2 – Understand, K3 – Apply, K4 – Analyze, K5 – Evaluate, K6 – Create

S. No.	Sub Code	Sem	COx	Statement of Course Outcomes (COs) Upon completion of topic concerned, students will be able to :	Kx (Blooms Knowledge Level)	PO1 Engineering knowledge	PO2 Problem Analysis	PO3 Design/development of solutions	PO4 Conduct investigations of complex problems	PO5 Modern tool usage	PO6 The Engineer and Society	PO7 Environment & sustainability	PO8 Ethics	PO9 Individual and team work	PO10 Communications	PO11 Project management and finance	PO12 Life Long Learning	PSO 1	PSO 2	PSO 3	PSO 4
1	BAS301	III SEM	CO-1	Students will be able to UNDERSTAND the nature and objective of Technical Communication relevant for the work place as Engineers.	K2	1			1	2		3			3		3	2		2	
			CO-2	Students will be able to DEVELOP an understanding of key concepts of writing, designing and speaking.	K3	2	2	3		2							3	2	2		
			CO-3	Students will be able to UTILIZE the technical writing skills for the purposes of Technical Communication and its exposure in various dimension	K2	3		1		2	3				3		3	2	2	3	
			CO-4	Students will be able BUILD UP interpersonal communication traits that will make the transition from institution to workplace sm	K6	3	2	3		2		2			3		3	2	1	2	
			CO-5	Students will be able to APPLY technical communication to build their personal brand and handle crisis communication.	K2	3				2	3	-			3		3	2		2	
			Technical Communication			2.4	2	2.3		1.8	2.7	2	3		3		3	2	1.7	2.3	
2	BCS301	III SEM	CO-1	To understand algorithm, complexity of algorithm and linear and nonlinear data structure and implementation of array.	K2	3	1	1	1	2				1		2	2	1	3	3	
			CO-2	To understand and apply linked list and its application.	K3	3	2	1	2	2				1		2	2	1	3	3	
			CO-3	To implement the concept of stack and queue using array and linked list and use of stack to solve various problems.	K3	3	1	1	1	2				1		2	3	1	3	3	
			CO-4	To apply the concepts of searching, sorting and hashing.	K3	3	2	1	1	2				1		2	3	1	3	3	
			CO-5	To demonstrate the concepts of graphs and Tree .	K2	2	1	1	2	2				1		2	3	1	3	3	
			Data Structures			2.8	1.4	1	1.4	2				1		2	2.6	1	3	3	
3	BCS302	III SEM	CO-1	Illustrate and interpret the basic structure, operation of the computer system and apply the basic concepts to its components. (K1, K	K2	1	1	1	1	1				1	1	3	1	1	2		
			CO-2	To Apply the basic logic for arithmetic & logic unit design and summarize the floating & fixed points arithmetic operations. (K2,	K2	2	1	2	2	3				3	2	2	2	3	2		
			CO-3	To understand the control unit techniques & micro programming controls and compute different pipeline techniques. (K3)	K2	3	3	1	3	3				3	3	3	2	3	3		
			CO-4	To Understand the hierarchical memory systems and correlate the cache and virtual memory. (K2, K4)	K3	3	1	1	3	3				3	2	2	2	3	2		
			CO-5	Illustrate the diversity of communication to I/O devices with peripherals and interrupts. (K2, K4)	K3	3	2	1	2	3				3	3	3	2	3	3		
			Computer Organization & Architectures			2.4	2	1.2	2.2	2.6				2.6	2.2	2.6	1.8	2.6	2.4	
4	BCC302	III SEM	CO-1	On completion of this course, the student will be able to Understand the fundamental Python syntax and be fluent in the use of Pyt	K2	2		2									2				
			CO-2	On completion of this course, the student will be able to understand the proficiency in the handling of strings and functions.	K2	3		2	2								2	2			
			CO-3	On completion of this course, the student will be able to Understand the methods to create and manipulate Python programs by uti	K3	2		2		2							2		2	3	
			CO-4	On completion of this course, the student will be able to understand commonly used operations involving file systems and regular	K3	2	2	2									2	2			
			CO-5	On completion of this course, the student will be able to understand that how to Implements built-in packages in python programs.	K3	3		3	2	2							2	2	2	2	
			Python Programming			2.4	2	2.2	2	2							2	2	2	2.5	
5	BCS302	III SEM	CO-1	Apply knowledge of set theory and relations to solve problems related to posets and lattices.	K1	3	1	2	3	1	1			1			1	2			
			CO-2	Apply knowledge of functions and Boolean algebras to solve problems of logical abilities.	K3	1	1			1				1			1	2		2	
			CO-3	Apply propositional caculus, predicates, and inference rules to solve problems of theory of logic.	K4	3	2	2		1				1			1	2			
			CO-4	Explore knowledge of algebraic structures to solve advanced technological problems.	K3	3	3	3	2	1				1			1	2			
			CO-5	Illustrate the principles and concepts of graph theory for solving problems related to computer science.	K5	2	3	3	1					1			1	3	2		
			Discrete Mathematics			2.4	2	2.5	2.5	1	1			1			1	2.2	2	2	
6	BOE305	III SEM	CO-1	Apply the use of sensors for measurement of displacement, force and pressure.	K3	3	1	1							3				1		
			CO-2	Employ commonly used sensors in industry for measurement of temperature, position, accelerometer, vibration sensor, flow and le	K3	3	1	1							3			1	1		
			CO-3	Demonstrate the use of virtual instrumentation in automation industries.	K2	3	3	3	1									1	3		
			CO-4	Identify and use data acquisition methods.	K3	2		2	1						1			1	1		
			CO-5	Comprehend intelligent instrumentation in industrial automation.	K4	3									3				3		
			Sensor & Instrumentation			2.8	1.7	1.8	1						2.5			1	1.8		
7	BCS351	III SEM	CO-1	To implement the given problem using array.	K3	3	1	1	2	2		1		2	1	2	3	1	3	3	
			CO-2	To implement the given problem using link list.	K3	3	1	1	2	2		1		2	1	2	2	1	3	3	
			CO-3	To apply searching and sorting algorithms on the given data sets.	K3	3	1	1	2	2		1		2	1	2	3	1	3	3	
			Data Structures Lab			3	1	1	2	2		1		2	1	2	3	1	3	3	
8	BCS352	III SEM	CO-1	Implementing electronic circuits using basic gates.	K3	1	1							1					1		
			CO-2	Verify the excitation tables of variuos logic circuits.	K2	2	1	2	2					2		2			1	1	
			CO-3	Design the control unit of a computer using either hardwiring or microprogramming based on its register transfer language description.	K3	1		2	1	1				1	1		2		1		
			Computer Organization & Architectures Lab			1.3	1	2	1.5	1				1.3	1	2	2	1	1		
9	BCS353	III SEM	CO-1	Able to design static web page and apply style sheets to web page.	K2	2											1				
			CO-2	Able to perform client side validation and create basic bean using JAVA.	K3	3	2	2	1	2		1				1	2				
			CO-3	Able to create XML file with the help of DTD.	K2	3			3	2	2	1				1	1	1			
			Web Designing Lab			2.7	2	2	2	2	2	1				1	1.3	1			
10	BCC351	III SEM	CO-1	To understand and able to practice acquired knowledge within the chosen area of technology for project development.	K2	2	1	2			2	1		2			3	3	3		
			CO-2	Discuss and Justify the Technical aspects of the chosen project with a comprehensive and systematic approach.	K2	2	2	2	2		2	2	2	2			3	3	3	2	
			CO-3	Able to work on hands-on projects on latest technology and justify how to work with different software systems and Technologies.	K2	2	2	2	1		2	2	1	2	1		3	3	3	2	
			Mini Project			2	1.7	2	1.5		2	1.7	1.5	2	2	1	3	3	3	2	
			CO-1	To learn the concepts limit, continuity, differentiability and integration in complex number domain and also to apply these concepts in the flow	K2	3			1	1			2			2					
			CO-2	To understand the concepts of mathematical statistics e. g. correlation, regression , curve fitting etc. and to throw their applications in real life p	K2	2	3	3	2	2	1	2	2			2			3	3	

#	Code	Sem	CO	Description	K	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
11	BAS303	IV SEM	CO-3	To apply the iterative methods e. g. Newton Raphson method, Regula falsi etc to solve non linear equations.	K3	3		2	2	3		1				2		3		
			CO-4	To understand various interpolation formulae for equal time interval as well as unequal interval and to interpolate the given data. To learn vario	K2	2	3	3	2	2	1	3	2			3		3	2	
			CO-5	To understand the concept of different types of Fourier transforms and to apply these in Heat, Wave and Laplace equations.	K2	2		2	2	3			1	1	3	1	2			2
			Maths IV			**2.4**	**3**	**2.5**	**1.8**	**2.2**	**1**	**2**	**2**	**1**	**1**	**2.4**	**1**	**2.75**	**2.5**	**2**
12	BVE301	IV SEM	CO-1	Students will be able to understand about the need of value education and harmony in self, family, society and nature.	K2							2	3	3				3		
			CO-2	Students will be able to apply the understanding of value education to ensure harmony at all the four lelevls of living.	K3							2	3	3				3		
			CO-3	Students will be able to analyze about self, feelings in relationship, society and relevence of nature.	K4							2	3	3				3		
			CO-4	Students will be able to evaluate their participation at all the four levels of living.	K5							2	3	3				3		
			CO-5	Students will be able to improve their emotional, social and professional competence.	K4							2	3	3				3		
			Universal Human Values									**2**	**3**	**3**				**3**		
13	BCS401	IV SEM	CO-1	Understand the basic concept of Operating system.	K2	2	1	1	1	2		1		1	1	2	2	1	3	3
			CO-2	Discuss concurrent processes and their execution.	K2	3	2	1	2	2		1		1	2	2	2	2	3	3
			CO-3	Analyze the concept of process scheduling and deadlock.	K4	3	1	1	1	2		1		1	2	3	1	1	3	3
			CO-4	Select different approaches of memory management techniques.	K1	3	2	1	1	2		1		1	2	3	1	1	3	3
			CO-5	Apply the concepts of disk scheduling.	K3	2	1	1	1	2		1		1	1	3	1	1	3	3
			Operating System			**2.6**	**1.4**	**1**	**1.4**	**2**		**1**		**1**	**1**	**2**	**2.6**	**1.2**	**3**	**3**
14	BCS402	IV SEM	CO-1	able to understand and construct finite state machines	K2	2	2	1	2	1	1						2	1	1	1
			CO-2	able to prove the equivalence of languages described by finite state machines and regular expressions.	K5	2	2	1	2	1							1	1	1	1
			CO-3	able to construct pushdown automata and the equivalent context free grammars	K6	2	2	1	2	1							2	2	1	2
			CO-4	able to prove the equivalence of languages described by pushdown automata and context free grammars.	K5	3	2	2	2	1							1	2	1	2
			CO-5	able to construct Turing machines and Post machines.	K6	3	3	2	2	1	1						2	3	1	2
			Theory of Automata and Format Lanaguage			**2.4**	**2.2**	**1.4**	**2**	**1**	**1**						**1.6**	**1.8**	**1**	**1.6**
15	BCS403	IV SEM	CO-1	To introduce the fundamentals of Internet, and the principles of web design	K1	3	3	3		2					1		1	3	3	3
			CO-2	Visualize and Recognize the basic concept of HTML and application in web designing.	K3	3	3	3		3	1				2	2	2	3	3	3
			CO-3	To construct basic websites using HTML and Cascading Style Sheets.	K6	2	2	2		3	2				1		2	2	2	1
			CO-4	To build dynamic web pages with validation using Java Script objects and by applying different event handling mechanisms.	K6	2	2	2		3					2			2	2	1
			CO-5	Introduce basics concept of Web Hosting and apply the concept of SEO	K3	3	2	3		3	2				2			3	2	3
			Object Oriented Programming with JAVA			**2.6**	**2.4**	**2.6**		**2.8**	**1.7**				**1.8**	**2**		**1.3**	**2.6**	**2.4**	**2.2**
16	BCC301	IV SEM	CO-1	Develop familiarity with and understanding of hot issues in computer and network security	K6	3	2	2	2	2	1				1			1	3	2	2
			CO-2	Explain various possible exploits, recreate cyber attacks on browsers, and servers with existing bugs, and explain how to mitigate such threats.	K2	3	2	1	1						1			1	3		
			CO-3	Gain hands-on experience with attack and defence techniques	K2	3	2	2	1						1			1	3	2	1
			CO-4	Articulate the urgent need for cybersecurity in critical computer systems, networks, and the worldwide web, and explain various threat scenario	K3	3	3	3	1						1			1	3		
			CO-5	Boost Students hireability through innovative and independent learning.	K3	2	3	3	3	3					1			1	3	2	2
			Cyber Security			**2.8**	**2.4**	**2.2**	**1.6**	**2.5**	**1**				**1**			**1**	**3**	**2**	**2**
17	BCS451	IV SEM	CO-1	Implement CPU Scheduling algorithms.	K3	3	2	1	3	3		1		1	2	3	3	1	3	3
			CO-2	Imlpement the page replacement algorithms.	K3	3	2	1	3	3		1		1	2	3	3	1	3	3
			CO-3	Implement the disk scheduling algorithms.	K3	3	2	1	3	3		1		1	2	3	3	1	3	3
			Operating System Lab			**3**	**2**	**1**	**3**	**3**		**1**		**1**	**2**	**3**	**3**	**1**	**3**	**3**
18	BCS452	IV SEM	CO-1	Student will be able to recollect the concepts of HTML and JavaScript that are vital in webpage development.	K1	3	3	2	2	2	1				1			1	3	3	2
			CO-2	Student shall demonstrate knowledge of languages, mark up tags, and good coding practices commonly used to create web pages.	K2	3	3	2	2	2					1				3	2	2
			CO-3	Student shall analyze given assignment to select sustainable web development and design methodology and inspect user experience and usabili	K4	3	3	1	2	2					1			1	3	2	2
			Object Oriented Programming with JAVA Lab			**3**	**3**	**1.7**	**2**	**2**	**1**				**1**			**1**	**3**	**2.3**	**2**
19	BCS453	IV SEM	CO-1	Apply basic concepts of python.	K3	1	1								1						
			CO-2	Apply sorting algorithm on data sets in python.	K3	2	1	2	2						2		2			1	1
			CO-3	Apply searching algorithm in python.	K3	1		2	1	1					1		1		2		
			Cyber Security Workshop			**1.3**	**1**	**2**	**1.5**	**1**					**1.3**		**1**	**2**	**2**	**1**	**1**
20	KCS 501	V SEM	CO-1	Understand the different issues involved in the design and implementation of the database system	K2	3												3	2	
			CO-2	Understand and apply database queries in SQL, Relational algebra, E-R Diagram, tuple and domain calculus.	K3	3	2											3		2
			CO-3	Apply normalization techniques.	K3	3	2											2	2	
			CO-4	Examine the concepts of transaction processing and distributed databases.	K4	3	2	2			2	2						3		2
			CO-5	Compare the concurrency control protocols	K4	3					2	2						2		
			Database Management System			**3**	**2**	**2**			**2**	**2**						**2.8**	**1.3**	**1.3**
21	KIT 501	V SEM	CO-1	Apply the knowledge of the internet and related internet concepts that are vital in understanding web application development and	K2	3	3											3	3	2
			CO-2	Understand, analyze and apply the role of mark up languages like HTML, DHTML, and XML in the workings of the web and web	K6	3	3			3								3	2	
			CO-3	Use web application development software tools i.e. XML, Apache Tomcat etc. and identifies the environments currently available	K6	3	3											3	3	2
			CO-4	Understand the impact of web designing by database connectivity with JDBC in the current market place where everyone use to p	K6	3												3	3	2
			CO-5	Understand, analyze and build dynamic web pages using client side programming JavaScript and also develop the web application	K6	3				3								3	3	2
			Web Technology			**3**	**3**				**3**							**3**	**2.8**	**1.3**	**1.3**
22	KCS 503	V SEM	CO-1	Design new algorithms, prove them correct, & analyze their asymptotic & absolute runtime & memory demands.	K6	3	3					3	3					3	3	2
			CO-2	To analyze the DAA performance find an algorithm to solve the problem (create) & prove that the algorithm solves the problem co	K4	3	3					3	3					3	3	2
			CO-3	Understand the mathematical criterion for deciding whether an algorithm is efficient, and know many pratically important problem	K2	3	3					3	3					3	3	2
			CO-4	Apply classical sorting, searching, optimization and graph algorithms.	K3													3		2
			CO-5	Understand basic techniques for designing algorithms, including the techniques of recursion, divide-and-conquer, and greedy.	K2													3		2
			Design And Analysis of Algorithm			**3**	**3**					**3**	**3**					**3**	**3**	**1.3**	**2**
23	KCS 054	V SEM	CO-1	To Understand the application development and analyze the insights of object-oriented programming to implement application.	K2	3	2	2		2								2	2	
			CO-2	To Understand, analyze and apply the role of overall modeling concepts (i.e. System, structural).	K6	3	2	2		3								3	2	
			CO-3	To Understand, analyze and apply oops concepts (i.e. abstraction, inheritance).s	K4	3	2	3		2								2	3	
			CO-4	To know the concepts of C++ for understanding the implementation of object-oriented concepts.	K4	3	3	2		3								3	3	

#	Code	Sem	CO	Statement	Level	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
			CO-5	To understand and apply object-oriented paradigm concepts to implement real world problems.	K3	3	3	3		3						3	3			
				Object Oriented System Design		3	2.4	2.4		2.6						2.6	2.6			
24	KCS 058	V SEM	CO-1	Understand and analyze the common methods in the user-centered design process and the Appropriateness of individual methods f	K2	3														
			CO-2	Understand the classic design standards, Guidelines and patterns.	K2	3	2										2			
			CO-3	Understand the screen design, information retrievals, statistical graphics and interface designs.	K2	3	2													
			CO-4	Understand the selection of windows, Device based and Screen based controls with the use of icons and colors in multimedia appl	K2	3	2	2		2	2						2			
			CO-5	To Understand the concepts of pointing devices, Speech recognition and Drivers. Apply building and software tools in interface te	K2	3				2	2									
				Human Computer Interface		3	2	2		2	2						1.3			
25	KNC 501	V SEM	CO-1	On completion of this course, the student will be able to Understand the legacies of constitutional development in India and help t	K2					2	2	3		2		2	1	1	2	
			CO-2	On completion of this course, to make students aware of the theoretical and functional aspects of the Indian Parliamentary System	K4			2		2	2	3	2	2		2	2	1		
			CO-3	To differentiate different aspects of the Indian Legal system and its related bodies.	K4	2		2		2	2	3	2	2	2	2	1	1		
			CO-4	Discover and apply different laws and regulations related to engineering practices.	K3	2	2	2	2		3	3				2	2	1		
			CO-5	To understand the role of Engineers in different organisation and e- governance	K2	2		2		3	3		2	2	2	2	1			
				Constitution of India		2	2	2	2	2.4	2.4	3	2	2	2	2	1.6	1	2	
26	KCS 551	V SEM	CO-1	Design an information model expressed in the form of ER diagram.	K6	2	2	1				1	3	3	2	2	3	1	2	
			CO-2	Apply SQL queries to implement and manipulate the database and provide different constraints.	K3	2	2			1			3	2	2	2	2	1	2	
			CO-3	Apply structured query language to automate the real time problems of databases,	K3	2	1			1		1	3	2	2	2	2	1	2	
				Database Management System Lab		2	1.7	1		1		1	3	2.3	2	2	2.3	1	2	
27	KIT 551	V SEM	CO-1	Able to design static web page and apply style sheets to web page.	K6	3	3	3	2	2	1		1		1	3	3	2	2	
			CO-2	Able to perform client side validation and create basic bean using JAVA.	K6	3	3	3	2	2			1			3	2	2	2	
			CO-3	Able to create XML file with the help of DTD.	K6	3	3	3	2	1			1		1	3	2	2	2	
				Web Technology Lab		3	3	3	2	1.7	1		1		1	3	2.3	2	2	
28	KCS 553	V SEM	CO-1	Implement algorithm to solve problems by iterative approach	K6	3	3	2	2	2	1		1		1	3	3	2	2	
			CO-2	Implement algorithm to solve problems by divide and conquer approach and Greedy algorithm approach	K6	3	3	2	2	2			1			3	2	2	2	
			CO-3	Implement algorithm to solve problems by Dynamic programming,backtracking and branch and bound approach	K6	3	3	1	2	2			1		1	3	2	2	2	
				Design And Analysis of Algorithm Lab		3	3	2	2	2	1		1		1	3	2	2	2	
29	KCS 554	V SEM	CO-1	To understand and able to practice acquired knowledge within the chosen area of technology for project development.	K2	2	1	2		2	1		2			3	3	3		
			CO-2	Discuss and Justify the Technical aspects of the chosen project with a comprehensive and systematic approach.	K2	2	2	2	2	2	2	2	2			3	3	3	2	
			CO-3	To understand and able to work on hands-on projects on latest technology.	K2	2	2	2	1	2	2	1	2	1		3	3	3	2	
				Mini Project		2	1.7	2	1.5	2	1.7	1.5	2	2	1	3	3	3	2	
30	KCS 601	VI SEM	CO-1	Understand the concept of SDLC through analysis of various implemantation methods and basics of quality process involved in its devlopment	K2	3	2	1			1	1				1	1	3		
			CO-2	Apply requirments elicitation to create SRS document and their parameter specification after analysing feasibility.	K3	2	3	3	2	2	2	2	1	3	2	2	1	3	2	
			CO-3	Understand and apply the design process of software devlopment and its metrics.	K2	3	2	3	2	2	2			2	2	2		3	2	
			CO-4	Test the devloped Software while applying the different test strategies.	K3	3	2			2	1				2	2	2	3	2	
			CO-5	Application of post Implementation measure to combat cost issue while suggesting corrective measure to deal with risk.	K6	3			2	1		1		2		2		3		
				Software Engineering		2.8	2.3	2.3	2	1.8	1.7	1.3	1	2.3	2	2	1.8	1.3	3	2
31	KIT 601	VI SEM	CO-1	Understand the concept of decision making and simluation and modeling techniques.	K2	1	2	1	1	1	1	2	1	2	1	1	1	2	1	1
			CO-2	Student will able to analyze and manipulate the data and also able to learn new data analysis techniques.	K4	1	1	2	1	1	1	1		1		1	1	1	1	3
			CO-3	Student will able work with new collaboration and communication tools and technologies.	K3	1	1	2	3	2	2	1	1	2	1	1	1	3	2	3
			CO-4	Understand the term Artificial intelligence. Also able to learn and implement vaious AI concepts.Understand the idea of expert systems and thei	K2	1	1	1	3	2	1	1	1	1	1	1	2	1	1	
			CO-5	Implement the various e-commerce methods with suitable tools and techniques.	K4	2	2	3	2	3	3	2	1	3	3	2	3	3	3	3
				Data Analytics		1.2	1.4	1.8	2	1.8	1.6	1.4	1	1.8	1.5	1.3	1.4	2.2	1.6	2.2
32	KCS 603	VI SEM	CO-1	Understand the practical meaning and importance of 'Computer Networks'. Familiar with how transmission of data takes place, network topolo	K2	3	3	3	1	3	1	1	1	1	3		2	2	2	3
			CO-2	Able to grasp the significance of error control and error correction protocols, flow control, MAC protocols and sliding window protocols amon	K4	3	3	3	3	3	1				3		2	3	3	3
			CO-3	Apply the concepts of IP and other protocols in network layer for smooth functioning and maintenance of computer network. Also reveals	K3	2	3	3	2	3				2	2		3	2	3	1
			CO-4	Learn how the information is processed and managed at process to process delivery. They can also demonstrate attitudes that are beneficial to	K1	2	3	2	2	2	1				3		2	2	2	1
			CO-5	Manage to skilled with the working and practical knowledge of E-mail, FTP, Telnet, POP, DNS etc. on public and private networks.	K2	3	2	2	1	3	2				3		2	2	2	1
				Computer Networks		2.6	2.8	2.6	1.8	2.8	1.3	1	1	1.5	2.8		2.2	2.2	2.4	1.8
33	KCS 061	VI SEM	CO-1	Understand basic of Big Data, and interpret the different related issues and application areas of Big data.	K2	2	1	2	1	1	1	2	1	2	1	1	1	2	1	1
			CO-2	Explain the concept of NoSQL, analysis of distributed model	K2	1	1	2	1	1	1	1		1		1	1	1	1	3
			CO-3	Understand the Hadoop basics, its architecture and Analyze & implementation of map-reduce functions	K2	1	1	2	3	2	2	1	1	2	1	1	1	3	2	3
			CO-4	Learn, explain and the analyse the essentials of MR1 and MR2, ,hadoop task scheduling,data compression and data integrity.	K2	1	1	1	3	2	1	1	1	1	1	1	2	1	1	
			CO-5	Understand and implement Hadoop tools, including Hive, Pig, Cassandra and Hbase.	K2	2	2	3	2	3	3	2	1	3	3	2	3	3	3	3
				Big Data		1.2	1.4	1.8	2	1.8	1.6	1.4	1	1.8	1.5	1.3	1.4	2.2	1.6	2.2
34	KOE 068	VI SEM	CO-1	Differentiate between the skills and roles of functional and technical managers for software efforts and their relationship with other organizatio	K4															
			CO-2	Produce specific sections of the plan used to manage the software development and maintenance efforts	K5	2	2		2						2			2		
			CO-3	Evaluate software project management practices within an organization and recommend practical improvements based upon your evaluation.	K5	2				3					2			2		
			CO-4	Apply schedule and cost techniques to determine a Basis of Estimate..	K3		2		2	1							1		2	
			CO-5	Analyze the cost benefit analysis and risk management.	K4		2	2	2				2					1	2	
				Software Project Management		2	2	2	2	2			2			2		1	1.7	2
35	KNC 602	VI SEM	CO-1	Demonstrate intercultural understanding required to effectively negotiate a diverse global society.	K2					1	3	3	1			1				
			CO-2	Critically engage with the products of culture, through interpretation or creative expression.	K3						3	1								
			CO-3	Understand diverse communities on local, national, and/or global levels.	K2					3	2					1				
			CO-4	The students would be able to understand & evaluate Grievances and Grievance handling Procedure. Also they would be able to comprehend th	K2					3	3	3				1				
			CO-5	Examine social and political structures in contemporary India	K5					3	1	2	1							
				Indian Tradition, Culture & Society						2.3	2.3	2.8	1.5			1				
36	KCS 651	VI SEM	CO-1	Able to Plan the Software Engineering process life cycle under various requirments.	K3	1	2	2	2	1	2	1		2	2		2	3	3	2
			CO-2	Able to transform the requirments specification into a design using UML Models.	K4	2	3	3	3	3							1	2	3	

#	Code	Sem	CO	Description	K	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
36	KCS 651	VI SEM	CO-3	Able to Understand design pratically,using an appropriate software engineering methodology.	K2	2	2	1	2	2	2		2		2	1	2	2	2	2
				Software Engineering Lab		1.5	2.3	2.3	2	2	2	1.5		2	2	2	1.3	2.3	2.7	2
37	KIT 651	VI SEM	CO-1	Apply sorting algorithms on data sets in ML.	K3	3	3	3	3	3	1		1		1	3	3	3	3	
			CO-2	Apply searching algorithm in ML.	K3	3	3	2	2	2			1			3	2	2	2	
			CO-3	Implement and evalute the performance of KNN algorithm on different datasets.	K5															
				Data Analytics Lab		3	3	2.5	2.5	2.5	1		1		1	3	2.5	2	2	
38	KCS 653	VI SEM	CO-1	Able to Plan the Software Engineering process life cycle under various requirments.	K3	1	2	2	2	1	2	1		2	2		2	3	3	2
			CO-2	Able to transform the requirments specification into a design using UML Models.	K4	2	3	3	3	3							1	2	3	
			CO-3	Able to Understand design pratically,using an appropriate software engineering methodology.	K2	2	2	1	2	2	2		2		2	1	2	2	2	2
				Computer Networks Lab		1.5	2.3	2.3	2	2	2	1.5		2	2	2	1.3	2.3	2.7	2
39	KCS 071	VII SEM	CO-1	Understand the basics of the theory and practice of Artificial Intelligence as a discipline and about intelligent agents.	K2	2	2	2	2	2		2	2	2	3	3		1	2	3
			CO-2	Understand search techniques and gaming theory.	K4	1	2	2	3	2		2		1	2	3	3	1	2	3
			CO-3	The student will learn to apply knowledge representation techniques and problem solving strategies to common AI applications.	K6	2	1	2	3	2		2		2	2	3	3	1	2	3
			CO-4	Student should be aware of techniques used for classification and clustering.	K5	2	2	2	2	1		2		2	2	3	3	1	2	3
			CO-5	Student should be aware of the basics of pattern recognition and steps required for it.	K2	3	1	1	2	1		1		1	1	2	3	1	2	3
				Artificial Intelligence		2	1.6	1.8	2.4	1.6		1.8	1.6	1.8	2.8	3	1	2	3	
40	KCS 711	VII SEM	CO-1	Explain the basic concepts of wireless network and wireless generations	K2	3						3						3		2
			CO-2	Demonstrate the difference wireless technologies such as CDMA, GSM, and GPRS etc	K2	2	2			2	3				1	2		3		2
			CO-3	Appraise the importance of adhoc networks such as MANET, VANET and Wireless Sensor Network.	K5		3	2	2	3	2							3		2
			CO-4	Describe and judge the emerging wireless technologies standards such as WLL, WLAN, WPAN, WMAN. Explain the design cons	K1		2	2	3	2		1		2	2			3		1
			CO-5	Differentiate & support the security measures, standards, Services and layer wise security considerations	K4			1	2						2			3		1
				Mobile Computing		2.5	2.3	1.7	2.3	2.3	2.5	2		2	2	1.5	2	3		1.5
41	KCS713	VII SEM	CO-1	Describe architecture and underlying principles of cloud computing.	K2	3						3						3		2
			CO-2	Explain need, types and tools of Virtualization for cloud.	K2	2	2			2	3							3		
			CO-3	Describe Services Oriented Architecture and various types of cloud services	K5		3	2	2	3	2							3		2
			CO-4	Explain Inter cloud resources management cloud storage services and their providers Assess security services and standards for clo	K1		2	2	3	2		1		2	2			3		1
			CO-5	I am able to analyze advanced cloud technologies.	K4			1	2						2			3		1
				Cloud Computing		2.5	2.3	1.7	2.3	2.3	2.5	2		2	2	2	2	3		1.5
42	KHU 702	VII SEM	CO-1	Describe the key concepts and attributes that make a successful Entrepreneur.	K2							2	2	3		2		2	1	1
			CO-2	Illustrate the function of an entrepreneur in a successful, commercial application of innovation.	K5							2	2	3	2	2		2		
			CO-3	Integrating the learning techniques for project planning and execution control.	K5							2	2	3	2	2	2	2	1	1
			CO-4	Identify the financing process of the entrepreneurial business.	K3	1	2						3	3				2		
			CO-5	Identify areas of our economy/society where social entrepreneurs work.	K3							3	3		2	2	2			
				Project Management : Enterpreneurship		1	2					2.4	2.4	3	2	2	2	2	1	1
43	KOE 074	VII SEM	CO-1	On completion of this course, the student will be able to Understand the about the different types of non-conventional energy resou	K2	3	1								1				3	
			CO-2	On completion of this course, the student will be able to understand the power of solar energy.	K3	2	1					1	1					2		3
			CO-3	On completion of this course, the student will be able to Understand the Geothermal Energy, Fuel Cell and Magneto Hydrodynami	K3	3			1			1			1	1		3	2	
			CO-4	On completion of this course, the student will be able to understand the Therm-electric, Thermionic and Wind Power Plant.	K6	2						2		2	1			2	2	
			CO-5	On the completion of this course, the student will be able to understand the Bio-Mass, Ocean Thermal Energy ad Tidal Energy.	K5	1		1	1	1		1		1				3	2	
				Renewable Energy Resources		2.2	1	1	1	1		1	1.3		1.5	1	1	1.5	2.8	2.3
44	KIT 751A	VII SEM	CO-1	Understand the fundamentals of knowledge representation and inference using prolog.	K2	3	3	2	1	2			1			2	2	1	1	
			CO-2	Demonstrate working knowledge of reasoning in the presence of incomplete and/or uncertain information.	K2	3	3	1	1	1			1			1	2	2	1	2
			CO-3	Ability to apply knowledge representation, reasoning, and machine learning techniques to real world problems.	K3	3	3	1	1	1			1			1	2	2	1	2
				Artificial Intelligence Lab		3	3	1.3	1	1.3			1			1	2	2	1	2
45	KIT 753	VII SEM	CO-1	Demonstrate a sound technical knowledge regarding project problem identification and formulation.	K2	3	3	3	3	3	3	1	2	3	2	3	3	3	3	3
			CO-2	Design engineering solutions to complex problems utilizing a systems approach.	K6	3	3	3	1	3			2	3	2	2	3	3	3	3
			CO-3	Communicate the outcome and related results regarding selected project, in written an oral forms.	K3					2			2	3	3	1	1	1	1	1
				Internship Assessment		3	3	3	2	2.7	3	1	2	3	2.3	2.5	2.3	2.3	2.3	2.3
46	KIT 752	VII SEM	CO-1	Participate in the projects in industries during his or her industrial training.	K4	2	2	2	2	2		3	3	3	2		2	2	2	2
			CO-2	Describe use of advanced tools and techniques encountered during industrial training and visit.	K2	2	2	1		2	1	3	3	3	2	2	2	2	2	1
			CO-3	Interact with industrial personnel and follow engineering practices and discipline prescribed in industry.	K4	2	2	2	2	2		3	3	3	2	2		2	2	1
				PROJECT		2	2	1.7	2	2	1	3	3	3	2	2	2	2	2	1.3
47	KHU 801	VIII SEM	CO-1	Explain the concepts and importance of rural development.	K2									1						
			CO-2	Differentiate among various rural development programmes.	K4							1	1	1		1				
			CO-3	Outline the emergence and growth of Panchayati Raj Institutions in India.	K2							1	1							
			CO-4	Interpret the need and elements of human resource development in the rural sector.	K2							1	1	1						
			CO-5	Illustrate the scope of entrepreneurship in rural area.	K2							1	1	1				1		
				Rural Development								1	1	1		1	1			
48	KOE 083	VIII SEM	CO-1	Describe the concept and role of Entrepreneurship, Industrial Growth and Entrepreneurship Ecosystem	K2	2								2						
			CO-2	Demonstrate stage of Entrepreneurship Project and Functions Associated with Each Stage	K2	1	2		2	2	1			2						1
			CO-3	Articulate an Entrepreneurial Project Proposal.	K3	1	1			1				2	2	2	1			
			CO-4	Carry out Project Planning, Monitoring and Control	K3	1					1				1					
			CO-5	Assess the Project on Various Viability/Feasibility Aspects.	K4	1					2			2	1		1			
				Enterpreneurship Development Programme		1.2	1.5		2	2	1.3			2	1.5	2	1			1
49	KOE 094	VIII SEM	CO-1	Explain the key concepts related to Digital Marketing and Consumer's behavior.	K2		2				2							2		
			CO-2	Describe the role of Social Media Marketing in Digital Marketing.	K2			2		2			2	2				2		
			CO-3	Describe various tools of Digital Marketing.	K2		2			2			2	1				2		

S.No	Code	Sem	CO	Statement	K-Level	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
49	KOE 094	VIII SEM	CO-4	Differentiate the role & relationship between organizational design and digital transformation	K4		2	2		2				2						
			CO-5	Explain the Digital Trends of Past & Future	K2															
				Digital And Social Media Marketing			**2**	**2**		**2**				**2**		**2**	**2**	**1**	**2**	
50	KIT 851	VIII SEM	CO-1	Demonstrate a sound technical knowledge regarding project problem identification and formulation.	K2	3	3	3	3	3	3	1	2	3	2	3	3	3	3	3
			CO-2	Design engineering solutions to complex problems utilizing a systems approach.	K6	3	3	3	1	3			2	3	2	2	3	3	3	3
			CO-3	Communicate the outcome and related results regarding selected project, in written an oral forms.	K4					2			2	3	3		1	1	1	1
				Project		**3**	**3**	**3**	**2**	**2.7**	**3**	**1**	**2**	**3**	**2.3**	**2.5**	**2.3**	**2.3**	**2.3**	**2.3**