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 CSE: 2023-24
BKL # K1 – Remember, K2 – Understand, K3 – Apply, K4 – Analyze, K5 – Evaluate, K6 – Create

S. No.	Sub Code	Sem	COx	*Statement of Course Outcomes (COs)*	Kx	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
				Statement of Course Outcomes (COs) Upon completion of topic concerned, students will be able to :	Blooms Knowledge Level	Engineering knowledge	Problem Analysis	Design/development of solutions	Conduct investigations of complex problems	Modern tool usage	The Engineer and Society	Environment & sustainability	Ethics	Individual and team work	Communications	Project management and finance	Life Long Learning			
1	BAS101/ 201	I/II	CO-1	*Understand the concepts of quantum mechanics.*	K2	3	2										3			
			CO-2	*Derive the expression for EM-wave using Maxwells equations.*	K3	3	3	2									3			
			CO-3	*Describe the different phenomena of light and its applications.*	K2	3	3										3			
			CO-4	*Understand the concepts and applications of fiber optics and LASER.*	K2	3	3	3									3			
			CO-5	*Understand the properties and applications of superconducting materials and nano materials.*	K2	3	2	3									3			
				BAS101/ 201		**3.00**	**2.60**	**2.67**									**3.00**			
2	BAS151/ 251	I/II	CO-1	*Make use of optical methods to determine the properties of light.*	K2	3	2						2	3			2			
			CO-2	*Assess the properties of semi conductor using electrical methods.*	K3	2		2					2	3			2			
			CO-3	*Determine specific resistance of material using Carey Foster's bridge method.*	K3	3							2	3			2			
			CO-4	*Examine the Stefan's law using electrical method.*	K2	2	2						2							
			CO-5	*Intrepret variation of magnetic field for a current carrying circular coil and ferro magnetic materials.*	K3	3		2					2							
				BAS151/ 251 (Engg. Physics Lab)		**2.60**	**2.00**	**2.00**					**2.00**	**3.00**			**2.00**			
3	BAS102/ 202	I/II	CO-1	*Understand atomic and molecular structure, chemistry of advanced Materials and green chemistry.*	K2	3											2			
			CO-2	*Apply spectroscopic techniques and stereochemistry to identify the compounds, elements etc.*	K3	3	2													
			CO-3	*Apply concepts of electrochemistry, batteries, corrosion and chemistry of engineering Materials like cement.*	K3	3	2										2			
			CO-4	*Apply concepts of impurities & hardness of water and boiler troubles used in industry & to analyse coal for its calorific values.*	K3	3	2	2			2	2					2			
			CO-5	*Understand polymers, polymerization, polymer blends, polymer composites and organometallic compounds.*	K2	3					2	2					2			
				BAS102/ 202		**3.00**	**2.00**	**2.00**			**2.00**	**2.00**					**2.00**			
4	BAS152/ 252	I/II	CO-1	*Perform experiments with different analytical instruments for chemical properties.*	K3	2					2	2		2			2			
			CO-2	*Compare molecular / system properties such as surface tension, viscosity with water.*	K3	2														
			CO-3	*Measure alkalinity, hardness and chloride content of water.*	K2	3	2	2			2	2		2			2			
			CO-4	*Determine the iron content and available chlorine in given sample.*	K3	2						2								
			CO-5	*Know the fundamental concepts of the preparation of phenol formaldehyde & urea formaldehyde resin*	K2	2	2				2	2					2			
				BAS152/ 252 (Engg. Chemistry Lab)		**2.20**	**2.00**	**2.00**			**2.00**	**2.00**		**2.00**			**2.00**			
5	BAS103	I	CO-1	*Apply the concept of matrices for solving linear simultaneous equations*	K3	3	3	3									3			
			CO-2	*Apply the concept of differentiation in successive derivatives,Lebnitz theorem,partial and total derivative.*	K3	3	3	3									3			
			CO-3	*Apply partial differentiation for evaluating extreme values, expansion of function and Jacobian, approximation of errors.*	K3	3	3	3									3			
			CO-4	*Apply the methods of multiple integral and concept of beta and gamma functions for finding area, volume and mass*	K3	3	3	3									3			
			CO-5	*Apply the concept of vector for evaluating directional derivatives, line, surface and volume integrals*	K3	3	3	3									3			
				BAS103		**3.00**	**3.00**	**3.00**									**3.00**			
1			CO-1	*Translate the algorithms to programs & perform its execution in C language.*	K3	3											3			
			CO-2	*Implement conditional branching, instructions along with operators.*	K3	3	3	3									3			

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6	BCS101/ 201	I/II	CO-3	Use looping control instructions, arrays and structures to develop programs.	K3	3	3	3									3			
			CO-4	Decompose a problem into functions and synthesize a complete program.	K3	3	3	3									3			
			CO-5	Utilize pointer, file handling, dynamic memory allocation to solve problems.	K3	3	3	3									3			
				BCS101/ 201		**3.00**	**3.00**	**3.00**									**3.00**			
7	BCS151/ 251	I/II	CO-1	Solve simple problems based on arithmetic expressions using operators.	K3	2	2	2												
			CO-2	Implement conditional branching instructions to develop programs.	K3	3	3	3												
			CO-3	Use looping control instructions and functions to solve complex problems.	K3	3	3	3									3			
			CO-4	Design solutions by using arrays and structures to develop programs.	K3	3	3	3									3			
			CO-5	Utilize pointer, file handling, dynamic memory allocation to solve problems.	K3	3	3	3									3			
				BCS151/ 251		**2.80**	**2.80**	**2.80**									**3.00**			
8	BEE101/ 201	I/II	CO-1	Apply Kirchhoff's laws in solving DC Circuits.	K3	3	3	3									2			
			CO-2	Understand the steady state behaviour of single phase and three phase AC circuits.	K2	3	3	3									2			
			CO-3	Identify the application areas of a single phase two winding transformer and calculate their efficiency.	K2	3	2	3									2			
			CO-4	Elaborate the working principle of AC and DC machines with their applications.	K2	3	2										2			
			CO-5	Explain the working of low voltage electrical installation equipment.	K2	3	2										3			
				BEE101/ 201		**3.00**	**2.40**	**3.00**									**2.20**			
9	BEE151/ 251	I/II	CO-1	PERFORM EXPERIMENT ILLUSTRATING B-H CURVE OF MAGNETIC MATERIALS.	K2	2	2	2	2											
			CO-2	APPLY KVL/KCL AND NETWORK THEOREMS IN DC CIRCUITS.	K3	2	2	2	2		2						2			
			CO-3	DEMONSTRATE THE BEHAVIOUR OF SINGLE PHASE AND THREE PHASE AC CIRCUITS.	K3	3	2	2	2		2						2			
			CO-4	CALCULATE EFFICIENCY OF TRANSFORMER AND ELECTRICAL MACHINES.	K3	3	2	2	2		2						2			
			CO-5	DETERMINE ENERGY CONSUMPTION (kWH) USING SINGLE PHASE INDUCTION TYPE ENERGY METER.	K3	3	2	2	2								2			
				BEE151/ 251 (Basic Electrical Engg. Lab)		**2.60**	**2.00**	**2.00**	**2.00**		**2.00**						**2.00**			
10	BEC101/ 201	I/II	CO-1	Apply the concept of P-N junction and devices in Electronic circuits.	K3	3		2							2		2			
			CO-2	Explain the concept of BJT, FET and MOFET.	K2	2											2			
			CO-3	Apply the concept of Operational amplifier to design linear and non-linear applications.	K3	3		2									2			
			CO-4	Perform number systems conversions, binary arithmetic and minimize logic functions.	K3	3											2			
			CO-5	Describe the fundamentals of communication technologies.	K2	2									2					
				BEC101/ 201		**2.60**		**2.00**							**2.00**		**2.00**			
11	BEC151/ 251	I/II	CO-1	Demonstrate the active & Passive components, PCBs & lab instruments.	K2	3								2	2		2			
			CO-2	Test the conditions of truth tables for logic gates.	K2	3	3							2	2		2			
			CO-3	Examine the functioning of diode application circuits.	K2	3	3	3						2	2		2			
			CO-4	Demonstrate the functioning of OP-AMP based circuits.	K2	3	3	3						2	2		2			
			CO-5	Conclude the characteristics of different semiconductor devices with their applications.	K2	3	3	3						2	2		2			
				BEC151/ 251 (Basic Electronics Engg. Lab)		**3.00**	**3.00**	**3.00**						**2.00**	**2.00**		**2.00**			
			CO-1	Apply the concept of force resolution and stress and strain to solve basic problems.	K3	3	2				2						2			
			CO-2	Understand the construction and working of internal combustion engines, electric vehicle and hybrid vehicles.	K2	3	2				2						2			

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12	BME101/ 201	I/II	CO-3	Explain the construction and working of refrigerator, heat pump and air conditioner.	K2	3	2				2						2			
			CO-4	Understand fluid properties, conservation laws and hydraulic machinery used in real life.	K2	3	2				2						2			
			CO-5	Understand the working principle of different measuring instrument and mechatronics with their advantages, scope and Industrial application.	K2	3	2			2	2						2			
				BME101/ 201		3.00	2.00			2.00	2.00						2.00			
13	BWS151/ 251	I/II	CO-1	Use various engineering materials, tools, machines and measuring equipments.	K3	2					2		2	2			2			
			CO-2	Perform machine operations in lathe and CNC machine.	K3	3				2	2		2	3			2			
			CO-3	Perform manufacturing operations on components in fitting and carpentry shop.	K3	2					2		2	2			2			
			CO-4	Perform operations in welding, moulding and casting	K3	3					2	2	2	2			2			
			CO-5	Fabricate a job by 3D printing manufacturing technique.	K3	2				2	2		2	3			2			
				BWS151/ 251		2.40				2.00	2.00	2.00	2.00	2.40			2.00			
14	BCE151/ 251	I/II	CO-1	Use scales and draw projections of objects.	K2	3									2					
			CO-2	Explain views of solids and their sectional surfaces.	K2	3	2								2					
			CO-3	Analyze and draw isometric projections of objects.	K3	3									2					
			CO-4	Demonstrate orthographic representation of perspective views using modern tools.	K2	3		2		3				2	2					
			CO-5	Apply AutoCAD software for creation of engineering drawing and models.	K3	3		2		3				2	2		2			
				BCE151/ 251		3.00	2.00	2.00		3.00				2.00	2.00		2.00			
15	BAS203	II	CO-1	Apply the mathematical concepts for solving differential equations.	K3	3	3	3									3			
			CO-2	Apply the concept of Laplace Transform to solve differential equations .	K3	3	3	3									3			
			CO-3	Apply the concept of convergence in sequence, series and expansion of the function by Fourier series.	K3	3	3	3									3			
			CO-4	Apply the working methods of complex functions to find analytic functions.	K3	3	3	3									3			
			CO-5	Apply the concept of Taylor's series and Laurent's series for complex function and evaluation of integrals.	K3	3	3	3									3			
				BAS203		3.00	3.00	3.00									3.00			
16	BVA251	II	CO-1	To maintain mental and physical wellness upright.	K3						1.00		2.00							
			CO-2	To develop ability to cope with the stress arising in life.	K3						2.00		1.00							
			CO-3	To create space in the curriculum to nurture the potential of the students in sports, games, yoga, etc.	K3						2.00									
			CO-4	To take forward the previous course on the topic to the next advance level in terms of practice.	K3												2.00			
			CO-5	To enhance specialization in the subject matter.	K3					1.00										
				BVA251: Sports and Yoga						1.00	2.50		1.50				2.00			
17	BAS105/205	I/II	CO-1	Understand the concept of sentence formation and usefulness of enriched vocabulary.	K2				2		2				3		3			
			CO-2	Apply the skills of active listening and speaking on professional grounds.	K3						2		2		3		3			
			CO-3	Read as well as write clear and well structured official and business documents.	K3			2			2			2	3		3			
			CO-4	Acquire the skills necessary to deliver impactful presentations.	K3											2	3			
			CO-5	Equip themselves with work-place skills necessary to be a successful professional.	K3									2		3	3			
				BAS105/205 (Soft skills)				2.00	2.00		2.00		2.00	2.00	3.00	2.50	3.00			
			CO-1	Make use of converstional skills for effective group talks and interviews.	K3									2	2		2			
			CO-2	Develop communication and presentation skills for technical papers/project reports/proposals in seminars/conferences/workshops/theme presentations.	K2										2		2			

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18	BAS155/ 25	I/II	CO-3	Build conversational skills for public/individual speaking /conferencing/role play/JAM /arguementation.	K2										2		2			
			CO-4	Make use of comprehension skills based on reading and listening practical's on model audio.	K3										2		2			
			CO-5	Execution social skills for a given work station.	K3										2		2			
				BAS155/ 255										2.00	2.00		2.00			
19	BAS104/ 204	I/II	CO-1	Understand basic concepts related to ecosystem, EIA and the need of sustainable development.	K2						2	3	3							
			CO-2	Understand about natural resources and impacts of human actions on natural resources.	K2						2	3	2							
			CO-3	Develop critical thinking for environmental pollution and environmental protection.	K4						2	3	2							
			CO-4	Understand various current environmental issues and concerns of National and global importance.	K2						2	3	2	2						
			CO-5	Develop sensitive attitude to adopt sustainability as a practice in life, society and industry.	K3						2	3	3	2			2			
				BAS104/ 204							2.00	3.00	2.40	2.00			2.00			
20	BAS 303	III	CO-1	Describe basic concepts related to partial differential equation, and solve certain simple linear and nonlinear equations.	K2	1	1		2								2			
			CO-2	Apply separation of variable and Fourier transforms to solve wave, heat, and Laplace equations.	K3	1	1	1	2								2	1		
			CO-3	Compute moments, skewness, and kurtosis of a univariate data, and apply correlation and regression in problems related to curve fitting.	K2	2	1		2								2			
			CO-4	Identify use of a discrete or continuous distribution to manipulate probabilities of random variables.	K1	2	1	1	2								2	1		1
			CO-5	Apply hypothesis testing to draw statistical inferences, describe use of control charts in statistical quality control.	K2	2	2	1	2								2	1		
				BAS 303 - MATHS IV		1.60	1.20	1.00	2.00								2.00	1.00		1.00
21	BVE 301	III	CO-1	Basic human aspirations and the program of its fulfillment and do a critical appraisal of current scenario in society regarding happiness and prosperity.	K2						3	3	3	2	2		3			
			CO-2	Apply the clarity of the content of value education toinitiate a process of dialog within themselves so as to know what they really want to be in their life and profession, and also to ensure humanity at all the four levels of living and lead an ethical life.	K3						3	3	3				3			
			CO-3	To analyze about feelings in relationship in family, society and relevence of nature.	K4						3	3	3				3			
			CO-4	On completion of this course, the student will be able to get clarity of provision of harmony in nature and existence ; workout and evaluate their mutual fulfilling participation atall the four levels of living.	K5						3	3	3	2	2		3			
			CO-5	On completion of this course, the student will be able to get clarity of ethical and unethical practices in profession; develop their emotional, social and professional comppetence and start working out thestrategy to actualize a harmonious envirnment wherever they work.	K3						3	3	3				3			
				BVE 301 - UNIVERSAL HUMAN VALUES							3.00	3.00	3.00	2.00	2.00		3.00			
21	BCS 301	III	CO-1	To understand algorithm, complexity of algorithm and linear and nonlinear data structure.and implementation of array.	K2	3	2	2										1	1.00	1.00
			CO-2	To understand and apply linked list and its applications.	K3	3	3	2	1									1	1.00	1.00
			CO-3	To implement the concept of stack and queues using array and linked list and use of stacks to solve various problems	K3	3	3	2										1		1.00
			CO-4	To apply the concepts of searching, sorting and hashing.	K3	3	3	2										1		1.00
			CO-5	To demonstrate the concepts of graphs and trees.	K3	3	3	2	1									1	2.00	1.00
				BCS 301 - DATA STRUCTURE		3.00	2.80	2.00	1.00									1.00	1.33	1.00

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22	BCS 302	III	CO-1	Illustrate and interpret the basic structure, operation of the computer system and apply the basic concepts to its components.	K2	3	2	1												
			CO-2	To Apply the basic logic for arithmetic & logic unit design and summarize the floating & fixed points arithmetic operations	K2	3	2	1										1		
			CO-3	To Understand the control unit techniques & microprogramming controls and compute different pipeline techniques.	K2	3	1	1												1
			CO-4	To Understand the hierarchical memory systems and correlate the cache and virtual memory.	K3	3	2	2	1									2		
			CO-5	Illustrate the diversity of communication to I/O devices with peripherals and interrupts.	K4	3	2	1												1
				BCS 302 - COMPUTER ORGANIZATION & ARCHITECTURE		3.00	1.80	1.20	1.00									1.50		1.00
23	BCS 303	III	CO-1	Describe basic concepts related to partial differential equation, and solve certain simple linear and nonlinear equations.	K2	3	2	1										3		3
			CO-2	Apply separation of variable and Fourier transforms to solve wave, heat, and Laplace equations.	K2	3	2	2												3
			CO-3	Compute moments, skewness, and kurtosis of a univariate data, and apply correlation and regression in problems related to curve fitting.	K3	3	2	2	1											3
			CO-4	Use of a discrete or continuous distribution to manipulate probabilities of random variables.	K3	3	2	2	1									2		3
			CO-5	Apply hypothesis testing to draw statistical inferences, describe use of control charts in statistical quality control.	K4	3	2	2	1									3		3
				BCS 303 - DISCRETE STRUCTURES & THEORY OF LOGIC		3.00	2.00	1.80	1.00									2.67		3.00
24	BCS 351	III	CO-1	To Implement the Concept of Searching and Sorting	K3	3	3	3	1						1			3	2	2
			CO-2	Apply the concept of Stacks and Queues.	K3	3	3	3	1						1			3	2	2
			CO-3	To Implement the Linked Lists and Hashing Techniques.	K3	3	3	3	1						1			3	2	2
			CO-4	Apply the Concept of Trees and Graphs.	K3	3	3	3	1									3	2	2
				BCS 351 - DATA STRUCTURES LAB		3.00	3.00	3.00	1.00						1.00			3.00	2.00	2.00
25	BCS 352	III	CO-1	To implement of the basic structure and operation of a digital circuits, implement adder circuits using basic gates and understand the converter circuit using basic gates.		3	1	-	-	-	-	-	-	-	-	-	-	-	-	-
			CO-2	To understand the working of Multiplexer by usingIC74153,		2	2	3	-	-	-	-	-	-	-	-	-	1	3	-
			CO-3	To design a BCD adder, 4-bit shifter and subtractor		2	1	3	-	-	-	-	-	-	-	-	-	-	3	-
			CO-4	To verification of the excitation table of various Flip Flops using logic gates.		2	3	3	-	-	-	-	-	-	-	-	-	3	-	3
			CO-5	To understand the various circuits for ALU, data path and control units.		2	1	3	-	-	-	-	-	-	-	-	-	-	3	-
				BCS 352 - COMPUTER ORGANIZATION & ARCHITECTURE LAB		2.20	1.60	3.00												3.00
26	BCS 353	III	CO-1	Implement the Static Page Web Designs using HTML	K3	3	3	3										2		2
			CO-2	Design dynamic web pages using Cascading Style Sheets.	K3	3	3	3	2	1								2		2
			CO-3	Implement the features of Bootstrap	K3		3	3		1										
			CO-4	Implement the concepts of JavaScript in the designs of Web pages.	K3		3	3		2								2		2
				BCS 353 - WEB DESIGNING WORKSHOP		3.00	3.00	3.00	2.00	1.33								2.00		2.00
			CO-1	Understand the basic concepts of cybersecurity and cybercrimes.	K2	3	1											1		

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27	BCC301	III	CO-2	Understand the security policies and cyber laws.	K2	3	2												2	
			CO-3	Understand the tools and methods used in cyber crime	K2	3	2			2									1	
			CO-4	Understand the concepts of cyber forensic.	K2	3	3													1
			CO-5	Understand the cybersecurity policies and cyber law.	K4	3	2											3		
				BCC 301 - CYBERSECURITY		3.00	2.00			2.00								2.00	1.50	1.00
28	BCC 351	III	CO-1	Developing a technical artifact requiring new technical skills and effectively utilizing a new software tool to complete a task	K3	3	2	3	2					2	2					
			CO-2	Writing requirements documentation, Selecting appropriate technologies, identifying and creating appropriate test cases for systems.	K2	3	1	2	2					2	2					
			CO-3	Writing requirements documentation, Selecting appropriate technologies, identifying and creating appropriate test cases for systems.	K2	3	2	2	2					2	1				3	2
			CO-4	Improving problem-solving, critical thinking skills and report writing.	K3	3	3	3	2	1				2	2				2	
			CO-5	Learning professional skills like exercising leadership, behaving professionally, behaving ethically, listening effectively, participating as a member of a team, developing appropriate workplace attitudes.	K1	3	3	3	1					2	2					2
				BCC 351 - MINI PROJECT/INTERNSHIP ASSESSMENT		3.00	2.20	2.60	1.80	1.00				2.00	1.80				2.50	2.00
29	BOE 410	IV	CO-1	Apply concepts of Digital Binary System and implementation of Gates.	K3	2	1	1	1											
			CO-2	Analyze and design of Combinational logic circuits.	k4	3	2	1	2											
			CO-3	Analyze and design of Sequential logic circuits with their applications.	k4	2	3	2	2											
			CO-4	Implement the Design procedure of Synchronous & Asynchronous Sequential Circuits.	k3	2	2	1	1											
			CO-5	Apply the concept of Digital Logic Families with circuit implementation.	k3	3	2	2	2	1							2			
				BOE 410 - Digital Electronics		2.40	2.00	1.40	1.60	1.00							2.00			
30	BAS 401	IV	CO-1	Students will be able to understand the nature and objective of Technical Communication relevant for the workplace as engineers.	K2	3	3							2	3		3			
			CO-2	Students will be able to develop an understanding of key concepts of writing, designing and speaking.	K3	3	3				3				3	2	3			
			CO-3	Students will be able to utilize the technical writing skills for the purposes of Technical Communication and its exposure in various dimensions.	K2	3	3								3		3			
			CO-4	Students will be able to build up interpersonal communication traits that will make the transition from institute to workplace smoother and help them excel in their jobs.	K2	3							3	3	3		3			
			CO-5	Students will be able to apply technical communication to build their personal brand and handle crisis communication.	K3	3									3		3			
				BAS 401 - TECHNICAL COMMUNICATION		3.00	3.00						3.00	2.50	3.00	2.00	3.00			
31	S 401	IV	CO-1	To understand the operating system concepts and its layered architecture.	K3	2		2										2		
			CO-2	To understand the structure and organization of the file system and device management policies.	K2	3	2	1									2			
			CO-3	To apply various algorithms required for CPU and disk scheduling.	K2	3	2	2											2	3

Statements of Course Outcomes (COs) and Mapping with Program Outcomes (POs) and Program Specific Outcomes (PSOs) : Dept. of CSE: 2023-24
BKL # K1 – Remember, K2 – Understand, K3 – Apply, K4 – Analyze, K5 – Evaluate, K6 – Create

S. No.	Sub Code	Sem	COx	Statement of Course Outcomes (COs)	Kx	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
	BCS		CO-4	To apply process synchronization, concurrency control and deadlock in real life scenarios.	K3	3	2	1										2		
			CO-5	To apply the memory management and page replacement strategies.	K1	3	2	1									2		2	2
				BCS 401 - OPERATING SYSTEMS		2.80	2.00	1.40									2.00	2.00	2.00	2.50
32	BCS 402	IV	CO-1	Understand formal language, translation logic, essentials of translation, alphabets, language representation and apply it to design Finite Automata and its variants.	K3	3	3	2	2	1	-	-	-	-	-	-	2			
			CO-2	Construct regular expression to present regular language and understand pumping lemma for RE.	K3	3	3	2	2	1	-	-	-	-	-	-	1			
			CO-3	Design Context Free Grammars and learn to simplify the grammar.	K3	3	3	2	2	1	-	-	-	-	-	-	1			
			CO-4	Construct Pushdown Automaton model for the Context Free Language	K4	3	3	3	2	1	-	-	-	-	-	-	1			
			CO-5	Design Turing Machine for the different requirements outlined by theoretical computer science and Understand different classes of problems, classify and analyze them.	k5	3	3	3	3	1	-	-	-	-	-	-	2			
				BCS 402 - THEORY OF AUTOMATA & FORMAL LANGUAGES		3.00	3.00	2.40	2.20								1.40			
33	BCS 403	IV	CO1	learn about essential programming structures in Java, including data types, variables, operators, control flow, arrays, and strings.	k2	3	2	2	1								2	2	2	2
			CO2	apply concepts of object-oriented programming, such as classes, objects, inheritance, polymorphism, encapsulation, and abstraction and develop Java programs efficiently.	k3	3	3	3	2	2							3	1	1	2
			CO3	learn to handle exceptions effectively, understanding various types of exceptions and will gain proficiency in input/output operations.	k3	2	2	1		3							2	2	1	2
			CO4	apply multithreading concepts and Java's latest features such as functional interfaces, lambda expressions, stream API etc.	k3	2	3	2	2	2							3	1	1	1
			CO5	apply Java Collections Framework, Spring Framework and Spring Boot for building RESTful web services and web applications	k3	2	2	3		2							3	2	1	2
				BCS 403 - Objected Oriented Programming with JAVA		2.40	2.40	2.20	1.67	2.25							2.60	1.60	1.20	1.80
34	BCS 451	IV	CO-1	To Execute the basic commands in different Operating Systems and Unix system calls.	K3	3	3	3	2											
			CO-2	To implement various CPU scheduling algorithms.	K3	3	3	3	3	1										
			CO-3	To implement File and Contiguous Allocation techniques , Fragmentations and Resource Allocation Graph	K3	3	3	3	3											
			CO-4	To implement solutions to Dead Lock, Producer -Consumer and Readers_ Writers using inter process communication Techniques and Semaphore.	K3	3	3	3	3	1										
				BCS 451 - OPERATING SYSTEM LAB		3.00	3.00	3.00	2.75	1.00										
35	BCS 452	IV	CO-1	Write and execute Java Program using OOPS concepts on Different Platforms	K2	3	3	3	1									2		1
			CO-2	Implement error handling techniques using exceptions and multithreading.	K2	3	3	3											2	
			CO-3	Create and Construct Java Programs using Packages and Industry Orientd Application using Spring Boot.	K2	3	3	3	1									3		2
			CO-4	Implement Test RESTful web services and Test Frontend web appllication with Spring Boot	K2	3	3	3											3	1

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S. No.	Sub Code	Sem	COx	*Statement of Course Outcomes (COs)*	Kx	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
				BCS 452 - OBJECT ORIENTED PROGRAMMING WITH JAVA		3.00	3.00	3.00	1.00									2.50	2.50	1.33
36	BCS 453	IV	CO-1	Analysis of Packet using Wire Shark	K3	3	3	2	1									3		
			CO-2	Analyse network traffic and detect suspicious activity.	K3	3	3	3	2										2	
			CO-3	Analyse captured traffic to do malware traffic analysis.	K3	3	3	3	1										2	1
			CO-4	Capture and Analyse the packets for password sniffing.	K3	3	2	2											1	
			CO-5	Analyse the captured packets for ARP Poisoning Attack.	K3	3	2	2												
				BCS 453 - CYBER SECURITY WORKSHOP		3.00	2.60	2.40	1.33									3.00	1.67	1.00
37	BCC 402	IV	CO-1	apply fundamental Python programming concepts, including variables, basic operators, and Python block structures.	K3	2	2	2									1	1	1	
			CO-2	demonstrate proficiency in using conditional blocks, such as if-else statements, and implementing loop constructs like for and while loops for efficient program flow control.	K3	3	3	2		2							2	2	2	
			CO-3	manipulate complex data types in Python, including strings, lists, tuples, and dictionaries, utilizing built-in methods and operations.	K3	2	2	2	2	3							2	2	2	
			CO-4	implement file input/output operations in Python, including reading and writing files, understanding file functions, and manipulating file pointers.	K3	2	3	2	2	3							2	2	2	
			CO-5	utilize Python packages such as matplotlib, numpy, and pandas to perform data visualization and analysis, and develop graphical user interface (GUI) applications using Tkinter.	K3	2	2	3	1	2							3	2	2	
				BCC 402 - PYTHON PROGRAMMING		2.20	2.40	2.20	1.67								2.00	1.80	1.80	
38	BVE 451	IV	CO-1	To maintain mental and physical wellness upright.	K3						1.00		2.00							
			CO-2	To develop ability to cope with the stress arising in life.	K3						2.00		1.00							
			CO-3	To create space in the curriculum to nurture the potential of the students in sports, games, yoga, etc.	K3						2.00									
			CO-4	To take forward the previous course on the topic to the next advance level in terms of practice.	K3												2.00			
			CO-5	To enhance specialization in the subject matter.	K3					1.00										
				BVE 451 - SPORTS & YOGA - II						1.00	1.60		1.50				2.00			
39	KCS 501	V	CO-1	Understand the different issues involved in the design and implementation of database system.	K3	3	1											1		
			CO-2	Apply database queries in SQL, Relational algebra, tuple and domain calculus.	K2	3	1	2	1										2	
			CO-3	Apply normalization techniques.	K2	3	3	2												2
			CO-4	Examine the concepts of transaction processing and distributed database.	K3	3	3	3										2		
			CO-5	Compare the concurrency control protocols.	K1	3	3	2										0		
				KCS 501 - DATA BASE MANAGEMENT SYSTEMS		3.00	2.20	2.25	1.00									1.00	2.00	2.00
			CO-1	Acquire knowledge of different phases and passes.	K2	3	3											2		

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S. No.	Sub Code	Sem	COx	*Statement of Course Outcomes (COs)*	Kx	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
40	KCS 502	V	CO-2	Undestand the parsers and its type.	K3	3	3	3	2									1		
			CO-3	Implement the compiler using syntax directed tree.	K2	3	3	3	2											3
			CO-4	Acquire the knowledge about run time data structure.	K1	3	3	3										2	1	1
			CO-5	Understand the target machines run time envirnment.	K2	3	3	3										2		
				KCS 502 - COMPILER DESIGN		3.00	3.00	3.00	2.00									1.75	1.00	2.00
41	KCS 503	V	CO-1	Design new algorithms, prove them correct, and analyze their asymptotic and absolute runtime and memory demands.	K2	3	2											1		1
			CO-2	To analyze the performance of algorithms, find an algorithm to solve the problem (create),and prove that the algorithm solves the problem correctly.	K2	3	3	2	1									1		
			CO-3	Understand the mathematical criterion for deciding whether an algorithm is efficient, and how many practically importantproblems that do not admit any efficient algorithms.	K3	3	3	2	1										1	
			CO-4	Apply classical sorting, searching, optimization and graph algorithms.	K3	3	2	2												2
			CO-5	Understand basic techniques for designing algorithms, including the techniques of recursion, divide and conquer, and greedy.	K2	3	3	2	1									1		
				KCS 503 - DESIGN & ANALYSIS OF ALGORITHMS		3.00	2.60	2.00	1.00									1.00	1.00	1.50
42	KCS 052	V	CO-1	Understand the principle of Web page design and about types of websites.	K2	3	2											1		
			CO-2	Visualize and Recognize the basic concept of HTML and application in web designing.	K3	3	2	1												
			CO-3	Recognize and apply the elements of Creating Style Sheet (CSS).	K2	3	1	1										1		
			CO-4	Understand the basic concept of Java Script and its application.	K1	3	2												1	
			CO-5	Introduce the basics concept of Web Hosting and apply the concept of SEO	K2	3	2										1	1		
				KCS 052 - WEB DESIGNING		3.00	1.80	1.00									1.00	1.00	1.00	
43	KCS 055	V	CO-1	To understand the need for machine learning for various problem solving.	K2	3	2											1		
			CO-2	To understand a wide variety of algorithms and how to evaluate models generated from data.	K2	3	2											1		
			CO-3	To understand the latest trends in machine learning.	K3	3	2	2	1											1
			CO-4	To design appropriate machine learning algorithms and apply the algorithms to a real-world problems.	K3	3	2												1	1
			CO-5	To optimize the models learned and report on the expected accuracy that can be achieved by applying the models.	K2	3	2											1		
				KCS 055 - MACHINE LEARNING TECHNIQUES		3.00	2.00	2.00	1.00									1.00	1.00	1.00

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S. No.	Sub Code	Sem	COx	*Statement of Course Outcomes (COs)*	Kx	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
44	KCS551	V	CO-1	To apply database language commands to create & implement the database.	K3	3	3										3	3	2	2
			CO-2	To apply aggregare operators and SQL queries to retrieve records from the database.	K2	3	3	3	3								3	3	2	2
			CO-3	To apply the concepts of relational algebra, join and change it into SQL queries.	K2	3	3	3	2										2	
			CO-4	To apply PL/SQL for processing a database.	K3	3	3	3	2	2								2	0	
			CO-5	To develop software based sql.	K1	3	3	3	2	2								2	0	
				KCS551 - DATA BASE MANAGEMENT SYSTEMS LAB		3.00	3.00	3.00	2.25	2.00							3.00	2.50	1.20	2.00
45	KCS 552	V	CO-1	To understand Lexical analyzer for if statement and Arithmetic expressions	K3	3	3										3	3	1	2
			CO-2	To implement DFA and NFA	K2	3	3	3	2					2			2	2	2	3
			CO-3	To implement Shift Reduce Parser, Operator Precedence Parser and Recursive Decent Parser	K2	3	3	2	2								2	1	3	3
			CO-4	To implement Code Generator and Code Optimization Techniques	K3	3	3	2	2	2							2	1	2	2
			CO-5	To develop a application based DFA	K1	3	3	2	2	2							2	1	2	2
				KCS 552 - COMPILER DESIGN LAB		3.00	3.00	2.25	2.00	2.00				2.00			2.20	1.60	2.00	2.40
46	KCS 553	V	CO-1	Analyze various sorting techniques..	K3	3	3										3	3	2	3
			CO-2	Implement problems based on Divide and Conquer approach.	K2	3	3	3	2								3	3	2	3
			CO-3	Implement problems based on using Greedy Approach.	K2	3	3	3	2								3	3	2	3
			CO-4	Apply concepts of dynamic programming and Backtracking approach.	K3	3	3	3	2	2							3	3	2	3
			CO-5	To develop a application based on sorting.	K1	3	3	3	2	2							3	3	2	3
				KCS 553 - DESIGN & ANALYSIS OF ALGORITHMS LAB		3.00	3.00	3.00	2.00	2.00							3.00	3.00	2.00	3.00
47	KNC 501	V	CO-1	Identify and Explore the basic features and modalities about Indian Constitution	K3	3												2		
			CO-2	Differentiate and relate the functioning of Indian Parlimentary System at ethe center and state level	K4	3												3		
			CO-3	Differentiate different aspects of Indian Legal System and its related bodies	K4	3	1											3		
			CO-4	Discover and apply different laws and regulations related to engineering practices.	K3	3	1											2		
			CO-5	Correlate role of Engineers with different organizations and governance models.	K3		3											3		
				KNC 501 - Constitution of India, Law and Engineering		3.00	1.67											2.60		
48	CS 554	V	CO-1	Developing a technical artifact requiring new technical skills and effectively utilizing a new software tool to complete a task	K3	3.00	2.00	3.00	2.00					2.00	2.00		1.00			
			CO-2	Writing requirements documentation, Selecting appropriate technologies, identifying and creating appropriate test cases for systems.	K2	3.00	1.00	2.00	2.00					2.00	2.00		1.00			
			CO-3	Writing requirements documentation, Selecting appropriate technologies, identifying and creating appropriate test cases for systems.	K2	3.00	2.00	2.00	2.00					2.00	1.00					

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	K(		**CO-4**	Improving problem-solving, critical thinking skills and report writing.	**K3**	**3.00**	**3.00**	**3.00**	**2.00**	**1.00**				**2.00**	**2.00**		**1.00**			
			CO-5	Learning professional skills like exercising leadership, behaving professionally, behaving ethically, listening effectively, participating as a member of a team, developing appropriate workplace attitudes.	**K1**	**3.00**	**3.00**	**3.00**	**1.00**					**2.00**	**2.00**		**1.00**			
			KCS 554 - MINI PROJECT			**3.00**	**2.20**	**2.60**	**1.80**	**1.00**				**2.00**	**1.80**		**1.00**			
49	**KCS 601**	**VI**	**CO-1**	Understand the Software Engineering Concepts and Analyze Software Development Models.	K1,K2	3													1	
			CO-2	Design SRS and explain Software Quality Assurance policies with a quality framework.	K1,K3	3	2	1		1									1	
			CO-3	Design small software's and measure using software's metrics and techniques.	K2,K3	2	2	3											1	
			CO-4	Apply different testing strategy for Software Systems.	K3	2	2	2	1	1									1	
			CO-5	Use some Project Management Tools in applications with software techniques.	K5	2	1	1											1	
				KCS 601 - SOFTWARE ENGINEERING		**2.40**	**1.75**	**1.75**	**1.00**	**1.00**									**1.00**	
50	**KCS 602**	**VI**	**CO-1**	To understand the Basics Programming Concepts of java & apply web development Strategies.	**K3**	**3**	**3**	**2**										**2**		**1**
			CO-2	To design web pages using HTML, XML, CSS and JavaScript.	**K2**	**3**	**3**	**2**	**2**	**1**									**2**	
			CO-3	To understand networking concept & TCP/IP and apply scripting languages in program.	**K2**	**3**	**3**	**2**	**1**									**1**		
			CO-4	To Build enterprise level applications and manipulate web databases using JDBC	**K3**	**3**	**3**	**2**	**1**									**3**		
			CO-5	To design interactive web applications using Servlets and JSP.	**K1**	**3**	**3**	**2**	**1**										**1**	
				KCS 602 - WEB TECHNOLOGY		**3.00**	**3.00**	**2.00**	**1.25**	**1.00**								**2.00**	**1.50**	**1.00**
51	**KCS 603**	**VI**	**CO-1**	To understand the fundamental concepts of data transmission and Physical Layer.	**K3**	**3**	**3**											**1**		
			CO-2	To explain the Data Link Layer's functions and protocols used at this layer.	**K2**	**3**	**3**	**2**										**2**		
			CO-3	To implement various techniques and protocols used in Networks Layer and Routing Algorithms.	**K2**	**3**	**3**	**3**												**1**
			CO-4	To apply the Transport Layer Protocols. .	**K3**	**3**	**3**	**1**											**1**	**2**
			CO-5	To analyze the different protocols used at the Application Layer.	**K1**	**3**	**3**	**2**										**2**		
				KCS 603 - COMPUTER NETWORKS		**3.00**	**3.00**	**2.00**										**1.67**	**1.00**	**1.50**
52	**KCS 061H**	**VI**	CO-1	*Understand basic of Big Data, and interpret the different related issues and application areas of Big data.*	K2	1	2	1	1	1	1	2	1	2	1	1	1	2	1	1
			CO-2	*Understand the Hadoop basics, its architecture and Analyze & implementation of map-reduce functions*	K2	1	1	2	1	1	1	1		1			1	1	1	3
			CO-3	*Learn, explain and the analyse the essentials of MR1 and MR2, ,hadoop task scheduling,data comppression and data integrity*	K2	1	1	2	3	2	2	1	1	2	1	1	1	3	2	3
			CO-4	*.Explain the concept of NoSQL, analysis of distributed model*	K2	1	1	1	3	2	1	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

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				KCS 061 - BIG DATA		**1.20**	**1.40**	**1.80**	**2.00**	**1.80**	**1.60**	**1.40**	**1.00**	**1.80**	**1.50**	**1.30**	**1.40**	**2.20**	**1.60**	**2.20**
53	KOE 068	VI	CO-1	Understand project planning , Objectives, Methodologies, Activities and Project evaluation.	K2	3	2													
			CO-2	Understand project life cycle , Process Models, Efforts and Cost estimation techniques.	K2	3	3	2		1								2		1
			CO-3	Organize and schedule project activities , Compute critical path and understand risk management.	K4	3	2	1										2	2	
			CO-4	Understand Project Management,Monitoring, Tracking , Controls, Analysis and Contracts.	K2	3	2											1		2
			CO-5	Understand and manage staffing in software projects with ethical and professional concerns.	K2	3						1						1		1
				KOE 068 - SOFTWARE PROJECT MANAGEMENT		**3.00**	**2.25**	**1.50**										**1.50**		**1.33**
54	KCS 651	VI	CO-1	To Demonstrate the contents of Software Requirement Specifications and state functional and non-functional requirements.	K3	3	3	2	1									2		
			CO-2	Identify different actors and use cases from a given problem statement and draw use case diagrams to associate use cases with different types of relationships.	K2	3	3	3	2	1								2		
			CO-3	Understand the basic concept of UML design and implementation of various UML diagrams.	K2	3	3	3	2										1	
			CO-4	Understand the basic concepts of Entity-Relationship diagram and represent the relationship and cardinality with pictorial representation.	K3	3	3	3	1	1										1
			CO-5	Use modern engineering tools for specification,design, implementation and testing of software. .	K1	3	3	3	2	2								2		
				KCS 651 - SOFTWARE ENGG LAB		**3.00**	**3.00**	**2.80**	**1.60**	**1.33**								**2.00**	**1.00**	**1.00**
55	KCS 652	VI	CO-1	Able to design static/dynamic web pages using HTML/DHTML/Jscript.	K3	3	3	2	1	1								1		1
			CO-2	Able to implement programs to illustrate XML schemas and DTD.	K2	3	3	3	1										1	
			CO-3	To describe various phases of SRS documents.	K2	3	3	3	1								1	2		
			CO-4	Able to implement database applications using JDBC and ODBC.	K3	3	3	3	1	1							1			1
			CO-5	Able to implement server site web application.	K1	3	3	2	1	1								2		2
				KCS 652 - WEB TECHNOLOGY LAB		**3.00**	**3.00**	**2.60**	**1.00**	**1.00**							**1.00**	**1.67**	**1.00**	**1.33**
56	KCS 653	VI	CO-1	To understand the basic concepts of network devices and connectivity.	K2	3	3	3	1	1										1
			CO-2	Implement some important concepts of computer networks using C programming.	K3	3	3	3	1	1				2	1			2		
			CO-3	Implement in C: IPv4 addresses into binary and vice versa.	K2	3	3	3	1					2	1				2	
			CO-4	*Implement a client/server chatting program using socket programming.*	K1	3	3	3						2	1					1
			CO-5	*Design and configure a network using CISCO Packet Tracer and analyze network traffic using Wireshark Tool.*	K2	3	3	3	2								1	2		2
				KCS 653 - COMPUTER NETWORKS LAB		**3.00**	**3.00**	**3.00**	**1.25**	**1.00**				**2.00**	**1.00**		**1.00**	**2.00**	**2.00**	**1.33**
			CO-1	Identify and Explore Society state and Polity in India	K2	3					1		1	1	1		1			

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S. No.	Sub Code	Sem	COx	*Statement of Course Outcomes (COs)*	Kx	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO 1	PSO 2	PSO 3
57	KNC 602	VI	CO-2	To Understand Indian Literature, Culture and Tradition	K3	3					1		1	1		2	1			
			CO-3	To Undestand the basis of Indian religion and Philisopy	K2	3	1				1	3	1		2		1			
			CO-4	*To Undestand the basis of Science, Management and Indian Knowledge System*	K2	3	1				3	2	1	3	2	1	3			
			CO-5	*Perspective of Cultural heritage and Performing Arts*	K3		3	2	2	1	3	2	3	2		1	3			
				KNC 602 - INDIAN TRADITION CULTURE & SOCIETY		3.00	1.67	2.00	2.00	1.00	1.80	2.33	1.40	1.75	1.67	1.33	1.80			
58	KHU 702	VII	CO-1	Describe the key concepts and attributes that make a successful Entrepreneur	K2	1	2												2	
			CO-2	Illustrate the function of an entrepreneur in a successful, commercial application of innovation	K2	3	1												1	1
			CO-3	Integrating the learning techniques for project planning and execution control.	K3	3	1											1		
			CO-4	Identify the financing process of the entrepreneurial business.	K3	3	1											2		
			CO-5	Identify areas of our economy /society where social entrepreneurs work.	K2	3	1												1	1
				KHU 702 - PROJECT MANAGEMENT & ENTREPRENEURSHIP		2.60	1.20											1.50	1.33	1.00
59	KCS 071	VII	CO-1	Understand the basics of the theory and practice of Artificial Intelligence as a discipline and about inte	K3	2	2											1		1
			CO-2	Understand search techniques and gaming theory.	K2	3	2	2											1	
			CO-3	The student will learn to apply knowledge representation techniques and problem solving strategies t	K2	3	2	2		1								1		
			CO-4	Student should be aware of techniques used for classification and clustering.	K3	3	1												1	
			CO-5	Student should aware of basics of pattern recognition and steps required for it.	K1	2												1		
				KCS 071 - ARTIFICIAL INTELLIGENCE		2.60	1.75	2.00		1.00								1.00	1.00	1.00
60	KCS 077	VII	CO-1	To provide hardware and software issues in modern distributed systems.	K3	1	2	2										1		
			CO-2	To get knowledge in distributed architecture, naming, synchronization, consistency and replication, fau	K2	3	3	1											1	
			CO-3	To analyze the current popular distributed systems such as peer-to-peer (P2P) systems will also be ana	K2	3	3													1
			CO-4	To know about Shared Memory Techniques and have Sufficient knowledge about file access	K3	3	3											1	1	
			CO-5	Have knowledge of Synchronization and Deadlock.	K1	3	3											2		1
				KCS 077 - DISTRIBUTED SYSTEMS		2.60	2.80	1.50										1.33	1.00	1.00
61	KCS 713	VII	CO-1	Describe architecture and underlying principles of cloud computing.	K2	1	2											1		
			CO-2	Explain need, types and tools of Virtualization for cloud.	K3	3	3												1	
			CO-3	Describe Services Oriented Architecture and various types of cloud services	K2	3	3													1
			CO-4	Explain Inter cloud resources management cloud storage services and their providers Assess security services and standards for cloud computing.	K1	3	3											2		

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			CO-5	Analyze advanced cloud technologies.	K2	3	3	1											1	2
				KCS 713 - CLOUD COMPUTING		2.60	2.80	1.00										1.50	1.00	1.50
62	KOE 074	VII	CO-1	On completion of this course, the student will be able to understand about the different types of none	K2	3	3	2					1				3			
			CO-2	On completion of this course, the student will be able to undestand the power of solar energy.	K2	3	2	2				1	1	3			3			
			CO-3	On completion of this course, the student will be able to understand the Geothermal Energy, Fuel Cell	K2	3	2	2												
			CO-4	On completion of this course, the student will be able to undestand the Thermo-electric, Thermionic a	K3	3	2	2												
			CO-5	On completion of this course, the student will be able to undestand the Bio-Mass, Ocean Thermal Ene	K2	3	3	2	2								2			
				KOE 074 - RENEWABLE ENERGY		3.00	2.40	2.00	2.00			1.00	1.00	3.00			2.67			
63	KCS 751A	VII	CO-1	To learn different logic programming languages.	K2,K3	2	2													
			CO-2	To apply and analyse various problem solving techniques on artificial intelligent problems.	K2,K3	3	3	2	1											
			CO-3	To acquire skill to identify the given problem and design the rule based systems.	K2,K3	3	3	2	1											
			CO-4	To develop better understanding to represent various real life problem domains using logic based tech	K2,K3	3	3	2	1											
			CO-5	To understand the working knowledge in Lisp and demonstrate that for solving the artificial intelligent	K2,K3	3	3	2	1	1				2	2					
				KCS 751A - ARTIFICIAL INTELLIGENCE LAB		2.80	2.80	2.00	1.00	1.00				2.00	2.00					
64	KCS 751A	VII	CO-1	To learn different logic programming languages.	K2,K3	2	2													
			CO-2	Design and implement Logical Clock and Vector Clock using Java or C .	K2,K3	3	3	2	1											
			CO-3	Design and implement Distributed Mutual Exclusion using Java or C.	K2,K3	3	3	2	1											
			CO-4	Design Distributed Chat Server, file transfer across a network and accessing methods of remote systems using network protocols and socket programs with the use of Java or C.	K2,K3	3	3	2	1											
			CO-5	Design and implement Balanced Sliding Window Protocol and CORBA mechanism using Java.	K2,K3	3	3	2	1	1				2	2					
				KCS 751A - DISTRIBUTED SYSTEMS LAB		2.80	2.80	2.00	1.00	1.00				2.00	2.00					
65	KCS 752	VII	CO-1	Developing a technical artifact requiring new technical skills and effectively utilizing a new software tool to complete a task	K3	3	2	3	2					2	2		1			
			CO-2	Writing requirements documentation, Selecting appropriate technologies, identifying and creating appropriate test cases for systems.	K2	3	1	2	2					2	2		1			
			CO-3	Writing requirements documentation, Selecting appropriate technologies, identifying and creating appropriate test cases for systems.	K2	3	2	2	2					2	1					
			CO-4	Improving problem-solving, critical thinking skills and report writing.	K3	3	3	3	2	1				2	2		1			
			CO-5	Learning professional skills like exercising leadership, behaving professionally, behaving ethically, listening effectively, participating as a member of a team, developing appropriate workplace attitudes.	K1	3	3	3	1					2	2		1			
				KCS 752 - MINI PROJECT/Internship Assessment		3.00	2.20	2.60	1.80	1.00				2.00	1.80		1.00			

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66	KCS 753	VII	CO-1	Suggest a product,research or application based project. It should be presented in clear and concise way.	K2	3	3	3	3	2	2			2	2		1			
			CO-2	Identify and summarize the related work done earlier, analyse previous researchers' work and relate them to current project.	K3	3	3	3	2	1	2						2			
			CO-3	Design and implement a project on through analysis and interpretation of data using various modern tools and techniques.	K2	3	3	3	3	2	1			2	2		1			
			CO-4	Present the project outlining, approach and expected results using good oral and written presentation skills.	K1	3	3	3	3	2	1			2	2					
			CO-5	Manage record and compile work done throughout the project.	K2	3	3	3	2	2	1			2	2		1			
				KCS 753 - PROJECT		3.00	3.00	3.00	2.60	1.80	1.40			2.00	2.00		1.25			
68	KHU 801	VIII	CO-1	The students who undergo this programme are able to understand the issues prevailing in rural areas	K2	3	2	2	3	3	2							1		1
			CO-2	Degree holders will be able to invent solutions for better rural development.	K3	3	3	2	3	3	3								2	
			CO-3	There are ample of opportunities to the Master degree holder to get employment in the Dept. of rural development and panchyatraj of both State and central	K2	3	3	2	3	3	2									1
			CO-4	The Students will understand the nature of Indian Rural Economy	K1	3	3	2	3	3	3								2	
			CO-5	The rural development programme makes students to understand the socio economic conditions of rural folk	K2	3	3	2	3	3	3							2		
				KHU 801 - Rural Development: Administration & Planning		3.00	2.80	2.00	3.00	3.00	2.60							1.50	2.00	1.00
69	KOE 083	VIII	CO-1	Students will be able to describe the concept and role of Entrepreneurship and role of Small-Scale Industries in industrial development and government policies to support SSI	K3						2			2			3		3	
			CO-2	Students will be able to assess the project on various viability/feasibility aspects.	K2						2			2		3	3		3	
			CO-3	The students will be able to prepare the financial statement and project report for economic viability and decision-making to check project output and entrepreneurial project proposal	K2						2			2		3	3		3	
			CO-4	Students will be able to carry out the project planning, monitoring and control	K3						2			2		3	3		3	
			CO-5	The students will have a clarity of laws concerning entrepreneurship in different forms of ownership and laws concerning employees in such organizations	K1						2			2			3		3	
				KOE 083 - Entrepreneurship Devlopment							2.00								3.00	
70	KOE 094	VIII	CO-1	Explain the Evolution and Landscape of Digital Marketing.	K3	1	2	1											1	
			CO-2	Analyze the Social Media Marketing Strategy for Consumer Engagement	K2	3	3	1											2	
			CO-3	Interpret the concepts of various Digital Promotion Strategies	K2	3	3	1												2
			CO-4	Evaluate the CRM and web analytics techniques	K3	3	3													
			CO-5	Use social media analytics and integrative media strategie	K1	3	3											2		1
				KOE 094 - Digital & Social Media Marketing		2.60	2.80	1.00										2.00	1.50	1.50
			CO-1	Suggest a product,research or application based project. It should be presented in clear and concise way.	K2	3				2	3			3	2	2	2	2	2	2

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71	KCS 851	VIII	CO-2	*Identify and summarize the related work done earlier, analyse previous researchers' work and relate them to current project.*	K3	3	3								2	2			1	2
			CO-3	*Design and implement a project on through analysis and interpretation of data using various modern tools and techniques.*	K2	3	3	2		3				3	2	2		2	3	3
			CO-4	*Present the project outlining, approach and expected results using good oral and written presentation skills.*	K1	3	3	2	2	3					2			1	3	2
			CO-5	*Manage record and compile work done throughout the project.*	K2	3	2	2		1				1	2				3	2
				KCS 851 - PROJECT		3.00	2.75	2.00	2.00	2.25	3.00			2.33	2.00	2.00	2.00	1.67	2.40	2.20