Course Outcome

Session 2020-21

Department of Computer Science & Engineering

Index

Session: 2020-21 **Semester: 3rd**

Subject Name (Code): Maths IV (KAS-302)

S No.	Course Outcomes	BL
Student will be able to:		
1	Identify the application of partial differential equations and apply for solving Linear and non-linear partial differential equation.	1,3
2	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.	1,3
3	Remember the concept of moments, skewness, kurtosis and moment generating function and analyze the linear and nonlinear regression.	1,4
4	To remember the concept of probability, random variable and apply for solving the problem related to discrete and continuous probability distributions.	1,3
5	Understand the statistical method of data samples, hypothesis testing and applying the study of control chart and their properties.	2,3

CO \ PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	3	3	2	3	2	3	2						-	-
CO-2	3	3	3	3	2	3	1	-	-	-	1	3	-	-
CO-3	3	3	2	2	3	3	1	-	-	-	1	3	-	-
CO-4	3	3	3	2	3	3	2	-	-	-	2	3	-	-
CO-5	3	3	3	3	3	3	1	-	-	-	1	3	-	-

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Session: 2020-21 **Semester: 3rd**

Subject Name (Code): Universal Human Value (KVE-301)

S No.	Course Outcomes	BL
Student will be able to:		
1	Understanding human aspirations, goals, activities, and purpose of life.	2, 3
2	Understanding human being & its expansion	1, 2
3	Understanding the activities in the self.	1, 2
4	Understanding the harmony in nature/existence and participation of human being in the nature /existence.	2,4
5	Understanding of human tradition and its various components.	2,3

Subject Name (Code): Understanding the Human Being Comprehensively – Human Aspirations and its Fulfillment (ROE-074)														
CO/PO	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**	**PO12**	**PSO1**	**PSO2**
CO-1	1	2	2	2	1	3	3	3	3	2	2	3	NA	1
CO-2	1	1	1	1	1	3	3	3	3	2	1	3	NA	1
CO-3	1	2	2	2	1	3	3	3	3	2	2	3	NA	1
CO-4	2	2	2	2	1	3	3	3	3	2	2	3	NA	2
CO-5	1	2	2	1	1	3	3	3	3	2	2	3	NA	2

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Session: 2020-21 **Semester: 3rd**

Subject Name (Code): Data Structures (KCS-301)

S No.	Course Outcomes	BL
Student will be able to:		
1	Apply the knowledge of data structure concepts and the various algorithms while designing and developing software and some hardware.	1, 2
2	Analyze the complexity and correctness of the new algorithms.	3,4
3	Choose the appropriate data structure and algorithm design method for a specified application.	3, 4,6
4	Apply and implement learned algorithm design techniques and data structures to solve problems.	1,2,3
5	Understand and apply fundamental algorithmic problems including Tree traversals, Graph traversals, and shortest paths.	3,4,5,6

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	3	2	3	3			1				1	2		
CO-2	2	3	2	2	1		1				1	2		
CO-3	2	2	3	3	1		1				1	2		
CO-4	2	3	3	2	1		1				1	2		
CO-5	3	3	3	3	2		1				1	2		

Session: 2020-21 **Semester: 3rd**

Subject Name (Code): Computer Organization and Architecture (KCS-302)

S No.	Course Outcomes	BL
Student will be able to:		
1	Describe the basic structure and operation of a digital computer system.	1, 2
2	Analyze of the design of arithmetic & logic unit and compute the fixed point and floating-point arithmetic operations.	2,4
3	Implement of control unit techniques and the concept of Pipelining	3
4	Describe the hierarchical memory system, cache memories and virtual memory	2
5	Describe the different ways of communicating with I/O devices and standard I/O interfaces	2,4

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	3	3	2	1	2	1	1	1	1	1	1	1	-	-
CO-2	3	3	3	1	3	1	1	1	1	1	1	1	-	-
CO-3	2	2	2	1	3	1	1	1	1	1	1	1	-	-
CO-4	2	2	2	1	1	1	1	1	1	1	1	1	-	-
CO-5	2	2	2	1	1	1	1	1	1	1	1	1	-	-

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Session: 2020-21 **Semester: 3rd**

Subject Name (Code): Discrete Structure and Theory of Logic (KCS-303)

S No.	Course Outcomes	BL
Student will be able to:		
1	Write an argument using logical notation and determine if the argument is or is not valid	1, 2,3
2	Understand the basic principles of sets and operations in sets	1,2
3	Demonstrate an understanding of relations and functions and be able to determine their properties	3, 4
4	Demonstrate different traversal methods for trees and graphs	3, 4, 5
5	Model problems in Computer Science using graphs and trees	5, 6

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	3		3		2						2		3	2
CO-2	3	3			2			2			2		3	2
CO-3		3	3	2	2		2						3	2
CO-4		3		2	3	2					1		3	2
CO-5		3	3		3		2	2					3	2

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Session: 2020-21 **Semester: 3rd**

Subject Name (Code): Computer System Security (KNC-301)

S No.	Course Outcomes	BL
Student will be able to:		
1	To discover software bugs that pose cyber security threats and to explain how to fix the bugs to mitigate such threats.	1, 2
2	To discover cyber-attack scenarios to web browsers and web servers and to explain how to mitigate such threats.	2
3	To discover and explain mobile software bugs posing cyber security threats, explain and recreate exploits, and to explain mitigation techniques.	3
4	To articulate the urgent need for cyber security in critical computer systems, networks, and world wide web, and to explain various threat scenarios.	4
5	To articulate the well-known cyber-attack incidents, explain the attack scenarios, and explain mitigation techniques.	5,6

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	3		3		2						2		3	2
CO-2	3	3			2			2			2		3	2
CO-3		3	3	2	2		2						3	2
CO-4		3		2	3	2					1		3	2
CO-5		3	3		3		2	2					3	2

Session: 2020-21 **Semester: 3rd**

Subject Name (Code): Data Structures Using C Lab (KCS-351)

S No.	Course Outcomes	BL
Student will be able to:		
1	Demonstrate familiarity with major algorithms and data structures.	1, 2,3
2	Choose the appropriate data structure and algorithm design method for a specified application.	3,4
3	Identify which algorithm or data structure to use in different scenarios.	4,6
4	Familiar with writing recursive methods.	1,2,5
5	Implement indexing and hashing techniques used in several other fields of computer science eg Database, Networks etc.	1,3,5

Data Structures Using C Lab (KCS-351)													
CO/PO	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PO8**	**PO9**	**PO10**	**PO11**	**PO12**	**PSO1**	**PSO2**
CO-1	2	2	2	2	2		1				1	1	-	-
CO-2	2	3	3	3	2		1				1	2	-	-
CO-3	2	2	2	3	2		1				1	2	-	-
CO-4	2	3	2	2	2		1				1	2	-	-
CO-5	2	2	3	2	2		1				1	2	-	-

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Session: 2020-21 **Semester: 3rd**

Subject Name (Code): Computer Organization Lab (KCS-352)

S No.	Course Outcomes	BL
Student will be able to:		
1	Implement the basic logic gates.	1, 2
2	Design various combinational circuits such as adders, code converter, multiplier decoder, and multiplexer using logic gates and verify their working.	1, 2
3	Implement the basic building block of the sequential circuits (i.e. Flip Flop).	2, 3
4	Design the 8-bit Arithmetic Logic Unit.	2, 3
5	Design of data path and control unit of the computer.	1, 2

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	3	2	2	1	3	2	1	1	1	1	1	1		
CO-2	3	2	3	1	3	2	1	1	1	1	1	1		
CO-3	2	2	1	1	3	1	1	1	1	1	1	1		
CO-4	2	2	2	1	2	1	1	1	1	1	1	1		
CO-5	1	1	1	1	2	1	1	1	1	1	1	1		

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Session: 2020-21 **Semester: 3rd**

Subject Name (Code): Discrete Structure & Logic Lab (KCS-353)

S No.	Course Outcomes	BL
Student will be able to:		
1	Able to understand and write programs on set operations	2,3
2	Able to understand the concepts of GATES and able to program them.	2,3,4
3	Able to understand the concept of trees and able to implement it through codes.	2,4,5
4	Able to understand the concept of graph and able to implement it through codes.	3, 4, 5
5	Able to work on mathematical computational tool like maple.	2,5, 6

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	2	2	2	1		1	1	1	1		1		1	2
CO-2	2	2	2	1		1	2	1	2		2		2	2
CO-3	3	3	3	3		2	2	1	2		2		2	2
CO-4	3	3	3	3		1	2	1	2		2		3	3
CO-5	2	2	2	2	3	2	2	2	2		2	1	3	3

Session: 2020-21 **Semester: 3rd**

Subject Name (Code): Mini Project or Internship Assessment (KCS-354)

S No.	Course Outcomes	BL
Student will be able to:		
1	Discover potential research areas in the field of IT	1, 2
2	Compare and contrast the several existing solutions for research challenge	3,4,5
3	Demonstrate an ability to work in teams and manage the conduct of the research study	3,4,6
4	Formulate and propose a plan for creating a solution for the research plan identified	1,2,5
5	To report and present the findings of the study conducted in the preferred domain	1,3,4,5

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	3	3	3	3	3	2	-	-	2	2	2	3	2	2
CO-2	3	3	3	3	3	-	-	-	2	-	2	3	2	3
CO-3	3	3	3	3	3	1	-	-	3	-	2	2	3	2
CO-4	3	3	3	3	3	2	-	-	3	-	2	3	2	2
CO-5	2	-	-	-	-	-	-	-	2	-	2	-	-	-

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Session: 2020-21 **Semester: 4th**

Subject Name (Code): Electronics Engineering (KOE-048)

S No.	Course Outcomes	BL
Student will be able to:		
1	Understand the concept of PN junction and special purpose diodes.	1, 2
2	Study the application of conventional diode and semiconductor diode.	1,2,3
3	Analyse the I-V characteristics of BJT and FET.	2,3,1
4	Analyze the of Op-Amp, amplifiers, integrator, and differentiator.	1, 2
5	Understand the concept of digital storage oscilloscope and compare of DSO with analog oscilloscope	1,3

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	3	3	2	-	3	-	1	-	-	-	-	1		
CO-2	3	3	2	-	3	-	1	-	-	-	-	1		
CO-3	3	3	2	-	3	-	1	-	-	-	-	1		
CO-4	3	3	2	-	3	-	1	-	-	-	-	1		
CO-5	3	3	2	-	3	-	1	-	-	-	-	1		

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Session: 2020-21 **Semester: 4th**

Subject Name (Code): Technical Communication (KAS-401)

S No.	Course Outcomes	BL
Student will be able to:		
1	Understand and analyze the nature and objective of Technical Communication relevant for the work place as Engineers.	2,4
2	Utilize the technical writing for the purposes of Technical Communication and its exposure in various dimensions.	3
3	Imbibe presentation strategies inputs by presentation skills to enhance confidence in facing diverse audience in required situations at workplace.	3
4	Create a vast know-how of the application of the technical learning to promote their communication competence.	6
5	Evaluate student's efficacy as fluent & efficient communicators by learning the voice-dynamics.	5

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1						1			2	3	1	2		
CO-2						1			2	3	1	2		
CO-3						1		1	2	3	1	2		
CO-4						1			2	3	1	2		
CO-5						1			2	3	1	2		

Session: 2020-21 **Semester: 4th**

Subject Name (Code): Operating Systems (KCS-401)

S No.	Course Outcomes	BL
Student will be able to:		
1	Gain in depth knowledge about the structures of the operating system, different types of operating system and functions performed by modern operating system.	1, 2
2	Identify and apply knowledge of various software and hardware synchronization tools for solving critical section problem in concurrent processes.	3
3	Learn about Processes, Threads, and gain knowledge of various scheduling algorithm designs	3, 4
4	Understand and apply process management and memory management concepts to solve various hardware and software problems.	4, 5
5	Identify various file management and security mechanisms in order to design efficient software system by using various access control techniques.	6

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	3	2	1	1	1	1	2	1	1	1	1	1	3	2
CO-2	3	3	2	2	3	1	1	2	1	1	1	2	3	2
CO-3	3	3	1	1	3	1	1	1	1	1	1	2	3	2
CO-4	3	3	3	3	3	3	1	1	1	1	1	3	3	2
CO-5	3	2	3	2	3	1	2	1	1	1	1	2	3	2

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Session: 2020-21 **Semester: 4th**

Subject Name (Code): Theory of Automata and Formal Languages (KCS-402)

S No.	Course Outcomes	BL
Student will be able to:		
1	Understand basic properties of formal languages and analyzing and formation of different Finite Automaton.	2, 4
2	Understand basic properties and analyzing of regular language and application of finite automaton.	2, 3

3	Understand and analyzing the context free grammar, language, and their proof of correctness.	2, 4
4	Understand basic model of PDA. Analyzing and forming Push down automaton.	2, 3
5	Understand basic model of Turing Machine. Analyzing and and forming Turing Machine and its corresponding language also Understand basic properties Undecidability, Post Corresponding Problem and Recursive Function Theory.	3, 4

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	2	1	2	2	3	2	1	1	1	2	2	1	1	1
CO-2	1	2	2	1	2	1	1	2	2	2	1	2	1	2
CO-3	3	3	3	2	3	2	2	2	3	2	1	2	1	1
CO-4	2	3	3	2	2	2	2	3	3	2	3	2	2	1
CO-5	3	3	3	2	3	2	2	3	3	1	2	2	1	1

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Session: 2020-21 **Semester: 4th**

Subject Name (Code): Microprocessor (KCS-403)

S No.	Course Outcomes	BL
Student will be able to:		
1	Understand how the knowledge of mathematics, computer science & engineering are applied to microprocessor based personal computer system.	3,4
2	Analyze software problems after studying instruction set of 8085 and programming techniques.	2,4
3	Formulate and solve hardware and software problems after studying instruction set of 8086 and programming techniques.	3,
4	Automate real life problems after generating time delays and learning the advanced subroutine concepts in assembly language programming.	4
5	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.	5

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	3	2	2		2		2				2	2	2	
CO-2	1	3		2	2	1	1				2			2
CO-3	2	1	2	3	1		2		2		2	2		2
CO-4	2	2	3	1	1		2		1		1		2	2
CO-5	1	1			3			1				2	2	

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Session: 2020-21 **Semester: 4th**

Subject Name (Code): Python Programming (KNC-402)

S No.	Course Outcomes	BL
Student will be able to:		
1	To read and write simple Python programs	1, 2
2	To develop Python programs with conditionals and loops.	2, 4
3	To define Python functions and to use Python data structures –- lists, tuples, dictionaries	3
4	To do input/output with files in Python	2
5	To do searching, sorting, and merging in Python	2, 4

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	3	2	3	1	1	2	2	2	2	2	2	2	2	1
CO-2	2	2	3	3	1	2	2	3	2	2	2	2	3	2
CO-3	2	2	2	2	3	3	3	3	1	1	2	1	2	3
CO-4	1	1	2	2	2	2	2	2	3	3	3	3	2	2
CO-5	3	2	3	2	3	3	3	2	2	1	2	2	2	2

Session: 2020-21 **Semester: 4th**

Subject Name (Code): Operating Systems Lab (KCS-451)

S No.	Course Outcomes	BL
Student will be able to:		
1	Understand and apply knowledge of basic UNIX/LINUX commands to solve various software problems and to automate real time applications.	2, 3
2	Compare and contrast among various CPU scheduling algorithms and apply knowledge to identify the best scheduling algorithm as per software requirement.	2, 5
3	Understand and implement the concept of process synchronization tool like semaphore to solve mutual exclusion problem in order to coordinate concurrent processes.	2, 3
4	Apply knowledge of process management techniques to design and solve various process synchronization problems like Producer Consumer problem, Reader Writers problem and dining philosophers' problem.	3
5	Understand and apply the concepts of deadlock in operating systems to design and implement various deadlock avoidance algorithms like anker's algorithm used in banking system.	2 3

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	3	2	1	1	2	2	1	1	2	2	2	1	2	2
CO-2	3	2	1	2	2	1	1		2	2	2	1	2	2
CO-3	2	2	1	2	1	2	2	1	2	2	2	1	2	1
CO-4	3	2	1	2	3	1			2	2	2	1	2	2
CO-5	3	3	1	2	3	2	2	1	2	2	2	1	2	2

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Session: 2020-21 **Semester: 4th**

Subject Name (Code): Microprocessor Lab (KCS-452)

S No.	Course Outcomes	BL
Student will be able to:		
1	To illustrate 8085 simulator	2
2	To design various logical operations using 8085 assembly language	6
3	To design various arithmetic operations using 8085 assembly language	6
4	To design sorting mechanism using 8085 assembly language	6
5	Design and implement 8051 microcontroller-based systems	1,2,5

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	3	2	2		2		2				2	2	2	
CO-2	1	3		2	2	1	1				2			2
CO-3	2	1	2	3	1		2		2		2	2		2
CO-4	2	2	3	1	1		2		1		1		2	2
CO-5	1	1			3			1				2	2	

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Session: 2020-21 **Semester: 4th**

Subject Name (Code): Python Language Programming Lab (KCS-453)

S No.	Course Outcomes	BL
Student will be able to:		
1	To read and write simple Python programs	1, 2
2	To develop Python programs with conditionals and loops.	2,4
3	To define Python functions and to use Python data structures –- lists, tuples, dictionaries	3
4	To do input/output with files in Python	2
5	To do searching, sorting and merging in Python	2,4

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	1	1	2	2	3	3	1	1	2	2	1	1	3	2
CO-2	3	2	1	2	2	2	2	1	3	2	2	2	1	3
CO-3	2	2	3	2	2	2	1	1	1	3	3	2	2	2
CO-4	2	1	2	2	2	3	3	2	2	2	3	3	3	2
CO-5	3	2	3	3	2	2	2	2	2	3	3	2	1	3

Session: 2020-21 **Semester: 5th**

Subject Name (Code): Database Management Systems (KCS-501)

S No.	Course Outcomes	BL
Student will be able to:		
1	Define database design methodology which give a good formal foundation in relational data model.	3
2	Identify and formulate information storage and derive an information model expressed in the form of ER diagram and other optional analysis forms.	3, 4
3	Apply query processing techniques to automate the real time problems of databases and will able to create relational algebra expressions for query.	2, 3
4	Identify and solve the redundancy problem in database tables using normalization.	2, 4
5	Understand the concepts of transactions, their processing and analyze the broad range of database management issues including data integrity, security and recovery.	3, 6

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	3	3	2	3	3	2	1	1	1	1	2	3	3	3
CO-2	3	3	2	3	3	2	1		1	1	3	2	3	3
CO-3	2	2	2	3	3	2	1		1	1	3	2	3	3
CO-4	2	2	2	3	3	2	1		1	1	2	2	3	3
CO-5	2	2	3	3	3	2	2	1	1	1	2	2	3	3

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Session: 2020-21 **Semester: 5th**

Subject Name (Code): Compiler Design (KCS-502)

S No.	Course Outcomes	BL
Student will be able to:		
1	Acquire knowledge of different phases and passes of the compiler and also able to use the compiler tools like LEX, YACC, etc. Students will also be able to design different types of compiler tools to meet the requirements of the realistic constraints of compilers.	3, 6
2	Understand the parser and its types i.e. Top-Down and Bottom-up parsers and construction of LL, SLR, CLR, and LALR parsing table	2, 6
3	Implement the compiler using syntax-directed translation method and get knowledge about the synthesized and inherited attributes.	4, 5

4	Acquire knowledge about run time data structure like symbol table organization and different techniques used in that.	2, 3
5	Understand the target machine's run time environment, its instruction set for code generation and techniques used for code optimization.	2, 4

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	3				2	2	1			1	2			
CO-2	3	3			1	3	1			1	2			
CO-3	2	3			2	1	3			1	3			
CO-4		3			1	2	1			1	3			
CO-5		3	1	3	1	1	1			3	1			

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Session: 2020-21 **Semester: 5th**

Subject Name (Code): Design and Analysis of Algorithm (RCS-503)

S No.	Course Outcomes	BL
Student will be able to:		
1	Analyze running time of algorithms using asymptotic methods, by applying knowledge of mathematics on different sorting algorithms.	2, 3, 4
2	Apply standard algorithms of advanced data structure like B-tree, RB tree, Binomail heaps, and Fibonacci heap.	3
3	Design and Modify greedy and dynamic approach on algorithms and analyse them to find solutions of Optimization problems related to graphs and other fields.	5, 6
4	Recognize the general principals and good algorithm design techniques dynamic programming, backtracking and branch & bound algorithm for developing efficient algorithms.	1, 2, 4
5	Use string matching algorithms as well as relate the concepts of NP Completeness for analyze and understand the complexity of real-life problems and developing solution using randomized and approximation algorithms.	2, 3

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	3				1	1	1			1	2			
CO-2	3	3			1	1	1			1	3			
CO-3	3	3			2	1	3			1	3			
CO-4		3			1	1	1			1	3			
CO-5		3	2	2	1	1	1			1	2			

Session: 2020-21 **Semester: 5th**

Subject Name (Code): Web Designing (KCS-052)

S No.	Course Outcomes	BL
Student will be able to:		
1	Understand principle of Web page design and about types of websites	3,4
2	Visualize and recognize the basic concept of HTML and application in web designing.	1,2
3	Recognize and apply the elements of Creating Style Sheet (CSS).	2,4
4	Understand the basic concept of Java Script and its application.	2,3
5	Introduce basics concept of Web Hosting and apply the concept of SEO	2,3

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1		3			2						1			
CO-2	1	2	3		2						2			
CO-3	3		2		1						1			
CO-4		2			2	1					3			
CO-5		2		3		2					2			

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Session: 2020-21 **Semester: 5th**

Subject Name (Code): Machine Learning Techniques (KCS-055)

S No.	Course Outcomes	BL
Student will be able to:		
1	Gain knowledge about basic concepts of Learning system, Learning Problems, Learning Task and mathematics behind machine learning.	2, 3
2	Understand the machine learning models and basic concepts of artificial neural network	2, 3
3	Solve the classification problem using Bayesian Learning Model.	2, 4
4	Apply the hypothesis concepts on various Learning Models.	4, 5
5	Understand the concepts of Genetic algorithm and Reinforcement Learning.	3, 4

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	3	2	1	3	3	2	2	2	1	1	2	3	2	3
CO-2	3	3	2	2	2	2	1	1	1	1	2	3	3	3
CO-3	3	3	3	3	3	2	2	2	1	1	2	3	3	3
CO-4	3	3	3	3	3	2	2	2	1	1	2	3	3	3
CO-5	3	3	3	3	3	2	2	2	1	1	2	3	3	3

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Session: 2020-21 **Semester: 5th**

Subject Name (Code): Constitution of India (KNC-501)

S No.	Course Outcomes	BL
Student will be able to:		
1	Identify and explore the basic features and modalities about Indian constitution.	1,2
2	Differentiate and relate the functioning of Indian parliamentary system at the center and state level.	2,3
3	Demonstrate different aspects of Indian Legal System and its related bodies.	2, 3
4	Discover and apply different laws and regulations related to engineering practices.	1,2,3
5	Interpret and evaluate the role of engineers with different organizations and governance models	2, 5

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	1	1	1	1	1	2	2	2	1	1	1	1	1	1
CO-2	1	1	1	1	2	2	2	1	2	1	1	2	2	1
CO-3	1	1	1	2	1	1	2	1	2	1	1	2	1	1
CO-4	1	1	1	3	2	2	2	2	1	1	1	2	2	1
CO-5	1	1	1	3	2	2	2	2	2	1	1	2	2	1

Session: 2020-21 **Semester: 5th**

Subject Name (Code): Database Management Systems Lab (KCS-551)

S No.	Course Outcomes	BL
Student will be able to:		
1	Use the techniques of SQL data manipulation language to create and query a sample data	1, 2
2	Modify the database and provide different constraints by implementing techniques like PL/SQL, cursors and triggers.	2,3
3	Implement VIEWS, transactions in Database which solve the security problem in databases.	4
4	Demonstrate and understand relational algebra in Database which is helpful to design related database software components.	4, 5
5	Effectively participating in team-based activities by designing and development of a database application system.	5,6

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	3	3	3	3	3	-	-	-	-	-	2	3	3	3
CO-2	3	3	2	3	3	-	-	-	-	-	3	3	2	3
CO-3	3	3	2	3	3	-	-	-	-	-	2	3	3	3
CO-4	3	3	3	2	3	-	-	-	-	-	3	2	3	3
CO-5	3	2	3	3	3	-	-	-	-	-	3	3	3	3

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Session: 2020-21 **Semester: 5th**

Subject Name (Code): Compiler Design Lab (KCS-552)

S No.	Course Outcomes	BL
Student will be able to:		
1	Identify patterns, tokens, and regular expressions for lexical analysis	2, 4
2	Design Lexical analyzer for given language using C and LEX/YACC tools	3, 5
3	Design and analyze top-down and bottom-up parser	4, 5
4	Generate the intermediate code	4, 5
5	Generate machine code from intermediate code forms	3, 4

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	3	-	-	-	2	-	-	-	-	-	-	2	2	-
CO-2	2	-	3	2	3	-	-	-	-	3	2	-	-	3
CO-3	3	-	-	-	3	-	-	-	-	-	-	-	-	-
CO-4	2	3	-	3	-	-	-	-	-	-	-	-	-	2
CO-5	2	3	-	3	-	-	-	-	-	-	-	-	-	2

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Session: 2020-21 **Semester: 5th**

Subject Name (Code): Design and Analysis of Algorithm Lab (KCS-553)

S No.	Course Outcomes	BL
Student will be able to:		
1	Code and analyze to sort an array of integers using Heap sort, Merge sort and Quick sort.	2, 3, 4
2	Code and analyze the various graph traversal algorithms - BFS and depth-first search (DFS).	2, 3, 4
3	Code and analyze the various shortest path algorithms on graph - Prim's algorithm, Dijkstra's algorithm and Kruskal's algorithm.	2, 3, 4
4	Code and analyze to find the minimum spanning tree in a weighted, undirected graph.	2, 3, 4
5	Code and analyze to find shortest paths in a graph with arbitrary edge weights using Bellman-Ford algorithm.	2, 3, 4

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	3	2		1	1		1			2	3			
CO-2	3	2		1	1		1			1	3			
CO-3	3	2		1			1			2	3			
CO-4	3	2	2	1	1		1			1	3			
CO-5	3	2	2	1	1		1			2	3			

Session: 2020-21 **Semester: 5th**

Subject Name (Code): Mini Project Lab (KCS-554)

S No.	Course Outcomes	BL
Student will be able to:		
1	Identify a problem and gather its requirements.	3
2	Design a solution of the problem using latest tools & techniques.	6
3	Develop a project using latest technology.	6
4	Develop professional skills and critical thinking to prepare for major project.	6
5	Demonstrate an ability to present project works to the evaluators.	3

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	3	3	3	3	3	2	-	-	2	2	2	3	2	2
CO-2	3	3	3	3	3	-	-	-	2	-	2	3	2	3
CO-3	3	3	3	3	3	1	-	-	3	-	2	2	3	2
CO-4	3	3	3	3	3	2	-	2	3	2	2	3	2	2
CO-5	2	-	-	-	3	-	-	2	2	3	2	3	2	2

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Session: 2020-21 **Semester: 6th**

Subject Name (Code): Software Engineering (KCS-601)

S No.	Course Outcomes	BL
Student will be able to:		
1	To learn about generic models of software development process	2
2	To understand fundamental concepts of requirements engineering and analysis modeling.	2
3	To understand the different design techniques and their implementation	2,3
4	To learn various testing measures.	2, 4
5	To learn various maintenance and project management techniques.	2,3

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	3	2	1	2	3	1	2	2	2	1	1	1	3	2
CO-2	3	2	2	2	3	1	1	3	3	2	1	2	3	2
CO-3	3	3	3	3	3	1	2	2	3	2	1	2	2	3
CO-4	3	2	3	2	3	2	2	2	2	1	1	3	3	2
CO-5	3	2	2	2	3	1	2	2	1	1	1	2	3	2

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Session: 2020-21 **Semester: 6th**

Subject Name (Code): Web Technology (KCS-602)

S No.	Course Outcomes	BL
Student will be able to:		
1	Explain web development Strategies and Protocols governing Web. Develop Java programs for window/web-based applications.	1, 2,3
2	Analyze and develop static interactive web pages using HTML, CSS and XML	3, 4
3	Design web pages using JavaScript, AJAX. Creation of client-server environment using socket programming	2, 3
4	Building enterprise level applications and manipulate web databases using JDBC	4, 5
5	Design interactive web applications using Servlets and JSP	4, 5

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	2	2	3	3	3	1	1	1	1	1	2	2	3	2
CO-2	2	1	2	2	3	1	1	1	2	1	1	2	3	2
CO-3	2	2	3	3	3	1	1	1	1	1	2	2	3	2
CO-4	3	3	3	3	3	3	1	1	1	1	1	3	3	2
CO-5	3	2	3	2	3	1	1	1	1	1	2	2	3	2

Session: 2020-21 **Semester: 6th**

Subject Name (Code): Computer Networks (KCS-603)

S No.	Course Outcomes	BL
Student will be able to:		
1	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.	1,2
2	Apply channel allocation, framing, error and flow control techniques.	3
3	Describe the functions of Network Layer i.e. Logical addressing, subnetting & Routing Mechanism.	2,3
4	Explain the different Transport Layer function i.e. Port addressing, Connection Management, Error control and Flow control mechanism.	2,3
5	Explain the different protocols used at application layer i.e. HTTP, SNMP, SMTP, FTP, TELNET and VPN.	2

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1		3			2						1			
CO-2	1	2	3		2						2			
CO-3	3		2		1						1			
CO-4		2			2	1					3			
CO-5		2		3		2					2			

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Session: 2020-21 **Semester: 6th**

Subject Name (Code): Data Compression (KCS-064)

S No.	Course Outcomes	BL
Student will be able to:		
1	Describe the evolution and fundamental concepts of Data Compression and Coding Techniques.	1, 2
2	Apply and compare different static coding techniques (Huffman & Arithmetic coding) for text compression.	2,3
3	Apply and compare different dynamic coding techniques (Dictionary Technique) for text compression.	2,3

4	Apply and compare the performance of predictive coding technique for Image Compression.	2,3
5	Apply and compare different Quantization Techniques for Image Compression.	2,3

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	2	2	1	2	2	1	1	1	1	1	1	2	2	1
CO-2	3	3	2	2	2	2	1	1	1	1	1	1	1	2
CO-3	3	3	2	2	2	2	1	1	1	1	1	2	2	2
CO-4	3	2	1	2	2	1	1	2	1	1	1	2	2	2
CO-5	3	2	1	2	2	1	1	2	1	1	1	2	2	2

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Session: 2020-21 **Semester: 6th**

Subject Name (Code): Software Project Management (KCS-068)

S No.	Course Outcomes	BL
Student will be able to:		
1	Identify project planning objectives, along with various cost/effort estimation models.	3
2	Organize & schedule project activities to compute critical path for risk analysis.	3
3	Monitor and control project activities.	4, 5
4	Formulate testing objectives and test plan to ensure good software quality under SEI-CMM.	6
5	Configure changes and manage risks using project management tools.	2,4

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	3	1	3	2	2	2	2	3	3	2	1	3	2	1
CO-2	2	3	1	3	3	2	1	3	2	2	1	3	1	2
CO-3	2	2	3	2	3	2	1	3	1	3	1	3	2	3
CO-4	3	2	3	3	2	3	1	3	3	2	1	3	1	2
CO-5	3	2	2	3	3	1	2	3	3	2	1	3	3	1

Session: 2020-21 **Semester: 6th**

Subject Name (Code): Indian Tradition (KNC-602)

S No.	Course Outcomes	BL
Student will be able to:		
1	Remember and understand the roots and details of Society State and Polity in India	1, 2
2	Illustrate the importance of Indian Literature, Culture, Tradition, Practices and to apply in present system	3
3	Examine and analyze the Indian Religion, Philosophy, Practices and in shadow of Pre-Vedic and Vedic Religion, Buddhism, Jainism, Six System Indian Philosophy and to apply in present system	3, 4
4	Analyze the Science, Management and Indian Knowledge System and to assess in present system	4, 5
5	Evaluate and formulate the Indian Architect, Engineering and Architecture in Ancient India, Indian's Cultural Contribution	5, 6

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	1	1		1	1		1	1		1	1			
CO-2	1		1		1		1	1		1	1			
CO-3	1	1	1	1	1	1	1	1	1	1	1	1		
CO-4	1	1			1		1		1	1		1		
CO-5	1		1		1			1		1	1			

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Session: 2020-21 **Semester: 6th**

Subject Name (Code): Software Engineering Lab (KCS-651)

S No.	Course Outcomes	BL
Student will be able to:		
1	Identify ambiguities, inconsistencies and incompleteness from a requirements specification and state functional and non-functional requirement	2
2	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	2
3	Draw a class diagram after identifying classes and association among them	2,3
4	Graphically represent various UML diagrams, and associations among them and identify the logical sequence of activities undergoing in a system, and represent them pictorially	2, 4
5	Able to use modern engineering tools for specification, design, implementation and testing	2,3

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	3	3	2	1	2	1	1	1	1	1	1	1	1	1
CO-2	3	3	3	1	3	1	1	1	1	1	1	1	1	1
CO-3	2	2	2	1	3	2	1	1	1	1	1	1	1	1
CO-4	2	2	2	1	2	2	1	1	1	1	1	1	1	1
CO-5	2	2	2	1	2	1	1	1	1	1	1	1	1	1

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Session: 2020-21 **Semester: 6th**

Subject Name (Code): Web Technology Lab (KCS-652)

S No.	Course Outcomes	BL
Student will be able to:		
1	Develop static web pages using HTML, CSS	2, 3
2	Develop Java programs for window/web-based applications	2, 3
3	Design dynamic web pages using Javascript and XML	3, 4
4	Design dynamic web page using server site programming Ex. SERVLET and JSP	3, 4
5	Design server site applications using JDDC, ODBC and session tracking API	3, 4
6	Develop static web pages using HTML, CSS	2, 3
7	Develop Java programs for window/web-based applications	2, 3

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	3	2	2	3	2	1	1	1	1	1	2	2	2	3
CO-2	2	2	3	3	2	1	1	1	2	1	2	3	3	2
CO-3	3	2	3	3	2	1	1	1	1	2	2	2	2	3
CO-4	3	2	2	2	3	2	1	1	1	1	1	3	3	2
CO-5	3	2	2	3	3	1	1	1	1	2	2	2	2	3

Session: 2020-21 **Semester: 6th**

Subject Name (Code): Computer Networks Lab (KCS-653)

S No.	Course Outcomes	BL
Student will be able to:		
1	Develop solutions for networking and security problems, balancing business concerns, technical issues and security.	3,4
2	Describe and analyze the hardware, software, components of a network and the interrelations.	4
3	Understand the basic concepts of application layer protocol design; including client/server models, peer to peer models, and network naming.	5,6
4	Ability to apply knowledge of mathematics, probability, and statistics to model and analyze some networking protocols.	5,6
5	Analyze, specify and design the topological and routing strategies for an IP based networking infrastructure.	5,6
6	Develop solutions for networking and security problems, balancing business concerns, technical issues and security.	3,4

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	-	3	-	-	2	-	-	1	1	-	1	-	1	2
CO-2	1	2	3	-	2	-	-	-	-	-	2	-	-	-
CO-3	3	-	2	-	1	-	-	2	-	-	1	-	2	3
CO-4	-	2	-	-	2	1	-	2	3	-	3	-	2	2
CO-5	-	2	-	3	-	2	-	2	3	-	2	-	-	-

Session: 2020-21 **Semester: 7th**

Subject Name (Code): Application of Soft Computing (RCS-071)

S No.	Course Outcomes	BL
Student will be able to:		
1	Describe neural networks to pattern classification and regression problems and compare their solutions by various other soft computing approaches.	1,2
2	Acquire a working knowledge of various software tools to solve real life problems using a Soft Computing approach that will help them in industry-oriented learning.	3
3	Apply fuzzy logic and reasoning to handle uncertainty and solve engineering problem.	3,4
4	Analyze and evaluate various soft computing techniques that help in extending the capabilities of the technologies to more effective and efficient problem-solving methodology.	4,5
5	Scrutinize and identify the roles of neural network, fuzzy logic and genetic algorithms to build intelligent machines.	6

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	2	3			2									1
CO-2	2	2			3								2	
CO-3	3	3	2		1							1		
CO-4		3		2	2								2	3
CO-5				3	2									3

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Session: 2020-21 **Semester: 7th**

Subject Name (Code): Cloud Computing (RCS-075)

S No.	Course Outcomes	BL
Student will be able to:		
1	Understand and define the Introduction and evolution of Cloud Computing in addition to the underlying principle of parallel and distributed computing	1,2
2	Understand the importance of different Cloud enabling technologies and learn how to apply them in software industries	2,3
3	Understand and analyze multi layered cloud architecture design along with their applications and challenges	2,4
4	Understand and Apply Resource management and analyze security systems in cloud	2,3
5	Analyze the components of open stack, Google Cloud platform, Hadoop, Virtual Box and Amazon web Service	4,5,6

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	-	-	-	-	1	2	2	-	-	-	-	3	-	-
CO-2	-	-	-	-	3	2	3	-	-	-	-	3	3	-
CO-3	-	-	2	-	3	2	3	-	-	-	-	3	-	-
CO-4	-	-	2	-	2	2	3	-	-	1	-	1	1	-
CO-5	-	-	-	-	3	3	1	-	-	2	-	2	1	2

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Session: 2020-21 **Semester: 7th**

Subject Name (Code): Distributed System (RCS-701)

S No.	Course Outcomes	BL
Student will be able to:		
1	Understand how to apply the knowledge to gain insight of Distributed System in solving real world problems.	1
2	Identify and formulate the broader domain areas where the concept of Distributed System can be used.	2
3	Develop various web applications and automate the real time problems.	3
4	Enhance the concept of failure recovery in Distributed System and also develop software to recover from failure.	4
5	Utilize the modern software and technical skills in order to control concurrency in distributed transactions.	5

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	3	3	3	2	2		2				1	2	1	3
CO-2	3	3	3	2	2		2				1	2	1	1
CO-3	3	3	3	2	2		2				1	2		3
CO-4	3	3	3	2	2		2				1	2	2	2
CO-5	3	3	3	2	2		2				1	2	2	1

Session: 2020-21 **Semester: 7th**

Subject Name (Code): Artificial Intelligence (RCS-702)

S No.	Course Outcomes	BL
Student will be able to:		
1	Understand the concept of artificial intelligence, intelligent agents, Computer vision, Natural Language Possessing, Uniformed and Informed search strategies, Search for games and Design principles of pattern recognition system.	1, 2
2	Apply basic principles of AI in solutions that require problem solving, inference, perception, knowledge representation, and learning.	3
3	Explain the concepts of supervised, unsupervised and reinforcement learning.	2, 4
4	Evaluate Probabilistic reasoning for uncertainty, parameter estimation methods and various classification techniques of pattern reorganization.	5
5	Analyze various searching for solutions, machine learning techniques and classification techniques.	6

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	3	3	3	3	2	3	2	2	2	2	2	3	3	3
CO-2	3	3	3	3	3	3	1		2	2	1	3	3	3
CO-3	3	3	2	3	3	3	2		2	2	1	3	3	3
CO-4	3	3	2	3	3	3	2	1	2	2	2	3	3	3
CO-5	3	3	3	3	3	3	2	1	2	2	2	3	3	3

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Session: 2020-21 **Semester: 7th**

Subject Name (Code): Understanding the human being Comprehensively Human Aspiration audits fulfillment (ROE-074)

S No.	Course Outcomes	BL
Student will be able to:		
1	Remember, understand human aspirations, goals, activities, and purpose of life.	1,2
2	Remember, understand, apply, and analyze human being & its expansion	1, 2,3,4
3	Remember, understand, apply, and evaluate the activities in the self.	1, 2,3,5
4	Remember, understand, apply and analyze the harmony in nature/existence and participation of human being in the nature /existence.	1,2,3,4
5	Remember, understand, apply and analyze of human tradition and its various components.	1,2,3,4

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	-	-	1	-	-	3	3	3	3	2	2	3	-	-
CO-2	-	-	1	-	-	3	3	3	3	2	2	3	-	-
CO-3	-	-	1	-	-	3	3	3	3	2	2	3	-	-
CO-4	-	-	1	-	-	3	3	3	3	2	2	3	-	-
CO-5	-	-	1	-	-	3	3	3	3	2	2	3	-	-

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Session: 2020-21 **Semester: 7th**

Subject Name (Code): Distributed System Lab (RCS-751)

S No.	Course Outcomes	BL
Student will be able to:		
1	Apply the basic knowledge of Lamport and vector clock to solve real world problem.	1
2	Develop various softwares in order to solve problems using socket programming	2
3	Identify and formulate the concepts of Remote method Invocation in designing Software	3
4	Enhance the mechanism of Remote Procedure Call in establishing connections.	4
5	Implement the concepts of mutual exclusion to avoid the deadlock	5

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	3	3	3	2	2		2				2	2		2
CO-2	3	3	3	2	2		2				2	2		2
CO-3	3	3	3	2	2		2				2	2		
CO-4	3	3	3	2	2		2				2	2	2	
CO-5	3	3	3	2	2		2				2	2	2	

Session: 2020-21 **Semester: 7th**

Subject Name (Code): Artificial Intelligence Lab (RCS-752)

S No.	Course Outcomes	BL
Student will be able to:		
1	Explore the features of PROLOG programming language, including basic syntax, selection and search strategies of PROLOG.	1, 2
2	Understand syntax, semantics and natural deduction proof system of propositional and predicate logic.	2
3	Implement the recursion and sequences using prolog programming.	2, 3
4	Demonstrate the PROLOG programming language skills in implementing various real-life problems.	3
5	Demonstrate LISP programming language skills by solving real life problems through AI prospect.	1,2,3

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	3	2	2	2	2	2	1		1	2		2	2	2
CO-2	3	3	3	3	3	2	1		1	2		2	2	2
CO-3	3	3	3	3	3	2	1		2	2	1	2	2	2
CO-4	3	3	3	3	3	3	3		2	2	2	2	3	3
CO-5	3	3	3	3	3	3	3		2	2	2	2	3	3

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Session: 2020-21 **Semester: 7th**

Subject Name (Code): Industrial Training (RCS-753)

S No.	Course Outcomes	BL
Student will be able to:		
1	To provide the learning platform to students to enhance their employ ability skills along with real corporate exposure	1
2	To enhance students' knowledge in current technology	2
3	To develop leadership ability and responsibility in student to execute the given task.	3, 4
4	To Increase self-confidence of students and helps in finding their own proficiency.	4
5	To provide students hands on practice within a real job situation.	5, 6

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	3	3	-	-	3	3			3		2	3	2	2
CO-2	3	3	3	3	3	-			2		2	3	-	3
CO-3	3	3	3	3	3	-			2		-	3	2	3
CO-4	3	3	3	3	3	2						3	1	3
CO-5	-											3	-	-

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Session: 2020-21 **Semester: 7th**

Subject Name (Code): Project (RCS-754)

S No.	Course Outcomes	BL
Student will be able to:		
1	Develop and describe the idea	6
2	Formulate clear work plan and procedures	5
3	Demonstrate skills and knowledge of state-of-the-art and technological tools and techniques	5
4	Design and apply modern tools for designing and drafting	6
5	Compose and defend report using effective written and visual communication and presentation.	5

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	3	3	-	-	3	3			3		2	3	2	2
CO-2	3	3	3	3	3	-			2		2	3	-	3
CO-3	3	3	3	3	3	-			2		-	3	2	3
CO-4	3	3	3	3	3	2						3	1	3
CO-5	-											3	-	-

Session: 2020-21 **Semester: 8th**

Subject Name (Code): Machine Learning (ROE-083)

S No.	Course Outcomes	BL
Student will be able to:		
1	Gain knowledge about basic concepts of Learning system, Learning Problems, Learning Task and mathematics behind machine learning.	2, 3
2	Understand the machine learning models and basic concepts of artificial neural network	2, 3
3	Solve the classification problem using Bayesian Learning Model.	2, 4
4	Apply the hypothesis concepts on various Learning Models.	4, 5
5	Understand the concepts of Genetic algorithm and Reinforcement Learning.	3, 4

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	3	2	1	3	3	2	2	2	1	1	2	3	2	3
CO-2	3	3	2	2	2	2	1	1	1	1	2	3	3	3
CO-3	3	3	3	3	3	2	2	2	1	1	2	3	3	3
CO-4	3	3	3	3	3	2	2	2	1	1	2	3	3	3
CO-5	3	3	3	3	3	2	2	2	1	1	2	3	3	3

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Session: 2020-21 **Semester: 8th**

Subject Name (Code): Image Processing (RCS-082)

S No.	Course Outcomes	BL
Student will be able to:		
1	Apply the knowledge of conversion of an analog image into digital form using the techniques of sampling & quantization and analyze color image processing.	1, 2
2	Identify the types of filtering techniques that are useful to enhance an image.	2,3
3	Restore the image in the presence of noise by using modern software of restoration.	4
4	Use the techniques of morphological image processing techniques in Binary images, image segmentation and edge detection in images.	4, 5
5	Apply the techniques of Image compression, feature extraction and pattern matching.	5, 6

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	3	3	3	3	2	2	2			3		2		1
CO-2	3		3	2	1	2	2		2	2	2	2	2	
CO-3	3	3		2	2		2			1	1	2		
CO-4	3		3	3	3	2	2			3		2	2	2
CO-5	3	3	3		2	3		2	2	3	3	2		2

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Session: 2020-21 **Semester: 8th**

Subject Name (Code): Data Compression (RCS-087)

S No.	Course Outcomes	BL
Student will be able to:		
1	Describe the evolution and fundamental concepts of Data Compression and Coding Techniques.	1, 2
2	Apply and compare different static coding techniques (Huffman & Arithmetic coding) for text compression.	2,3
3	Apply and compare different dynamic coding techniques (Dictionary Technique) for text compression.	2,3
4	Apply and compare the performance of predictive coding technique for Image Compression.	2,3
5	Apply and compare different Quantization Techniques for Image Compression.	2,3

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	2	2	1	2	2	1	1	1	1	1	1	2	2	1
CO-2	3	3	2	2	2	2	1	1	1	1	1	1	1	2
CO-3	3	3	2	2	2	2	1	1	1	1	1	2	2	2
CO-4	3	2	1	2	2	1	1	2	1	1	1	2	2	2
CO-5	3	2	1	2	2	1	1	2	1	1	1	2	2	2

Session: 2020-21 **Semester: 8th**

Subject Name (Code): Seminar (RCS-851)

S No.	Course Outcomes	BL
Student will be able to:		
1	Identify and analyze the real-world problems and explore them.	1, 2
2	Students will demonstrate the ability to discern the assignment's intended audience and objectives and respond appropriately.	2,3
3	Acquire awareness on latest technology and current trends	4
4	Participate in discussions for enhancement of knowledge	4, 5
5	Adapt Professional ethics.	5,6

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	3	3	-	-	3	3			3		2	3	2	2
CO-2	3	3	3	3	3	-			2		2	3	-	3
CO-3	3	3	3	3	3	-			2		-	3	2	3
CO-4	3	3	3	3	3	2						3	1	3
CO-5	-											3	-	-

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Session: 2020-21 **Semester: 8th**

Subject Name (Code): Project (RCS-852)

S No.	Course Outcomes	BL
Student will be able to:		
1	Develop and describe the idea	6
2	Formulate clear work plan and procedures	5
3	Demonstrate skills and knowledge of state-of-the-art and technological tools and techniques	5
4	Design and apply modern tools for designing and drafting	6
5	Compose and defend report using effective written and visual communication and presentation.	5

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO-1	3	3	-	-	3	3			3		2	3	2	2
CO-2	3	3	3	3	3	-			2		2	3	-	3
CO-3	3	3	3	3	3	-			2		-	3	2	3
CO-4	3	3	3	3	3	2						3	1	3
CO-5	-											3	-	-