Course Outcome

Session 2019-20

Department of Computer Science

Index

Session: 2019-20 **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

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Session: 2019-20 **Semester: 3rd**

Subject Name (Code): Technical Communication (KAS-301)

S No.	Course Outcomes	BL
Student will be able to:		
1	Students will be enabled to understand the nature and objective of Technical Communication relevant for the workplace as Engineers.	2
2	Students will utilize the technical writing for the purposes of Technical Communication and its exposure in various dimensions.	3
3	Students would imbibe inputs by presentation skills to enhance confidence in face of diverse audience.	2, 4
4	Technical communication skills will create a vast know-how of the application of the learning to promote their technical competence.	6
5	It would enable them to evaluate their efficacy as fluent & efficient communicators by learning the voice-dynamics.	5

BL-1: Remember
BL-2: Understand
BL-3: Apply
BL-4: Analyze
BL-5: Evaluate
BL-6: Create

Session: 2019-20 **Semester: 3rd**

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

S No.	Course Outcomes	BL
Student will be able to:		
1	Describe how arrays, linked lists, stacks, queues, trees, and graphs are represented in memory, used by the algorithms and their common applications.	1, 2
2	Discuss the computational efficiency of the sorting and searching algorithms.	3,4
3	Implementation of Trees and Graphs and perform various operations on these data structure.	3, 4,6
4	Understanding the concept of recursion, application of recursion and its implementation and removal of recursion.	1,2,3
5	Identify the alternative implementations of data structures with respect to its performance to solve a real world problem.	3,4,5,6

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Session: 2019-20 **Semester: 3rd**

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

S No.	Course Outcomes	BL
Student will be able to:		
1	The structure, function and characteristics of computer systems	**1, 2**
2	The design of the various functional units and components of computers.	**2,4**
3	The elements of modern instructions set and their impact on processor design.	**3**
4	The function of each element of a memory hierarchy,	**2**
5	Different methods for computer I/O and their comparisons.	**2,4**

BL-1: Remember
BL-2: Understand
BL-3: Apply
BL-4: Analyze
BL-5: Evaluate
BL-6: Create

Session: 2019-20 **Semester: 3rd**

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

S No.	Course Outcomes	BL
Student will be able to:		
1	Knowledge of logical notation to define and reason the fundamental mathematical concepts Such as sets, relations, functions, and integers.	1,2
2	Discuss various structures and properties of modern algebra.	1,2
3	Employ their logical ability such as reasoning able to setup mathematical model of real life problem by applying advanced counting and computing techniques like generating function and recurrence relation.	3,4
4	Demonstrate problems in different areas of computer science using trees and graphs.	5,6
5	Design solution with the help of induction hypotheses, simple induction proofs and recurrences.	2,3

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Session: 2019-20 **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

BL-1: Remember
BL-2: Understand
BL-3: Apply
BL-4: Analyze
BL-5: Evaluate
BL-6: Create

Session: 2019-20 **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	Calculate and analyze performance of algorithms	**3,4**
3	Choose the appropriate data structure and algorithm design method for a specified application.	**4,6**
4	Identify which algorithm or data structure to use in different scenarios.	**1,2,5**
5	Familiar with writing recursive methods	**1,3,5**

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Session: 2019-20 **Semester: 3rd**

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

S No.	Course Outcomes	BL
Student will be able to:		
1	Illustrate HALF ADDER, FULL ADDER using basic logic gates and to learn various code conversions: Binary -to -Gray, Gray -to -Binary	1, 2
2	Design 3-8-line DECODER and Implementing 4x1 and 8x1 MULTIPLEXERS.	1, 2
3	Demonstrate excitation tables of various FLIP-FLOPS and design of an 8-bit Input/ Output system with four 8-bit Internal Registers.	2, 3
4	Design of an 8-bit ARITHMETIC LOGIC UNIT.	2, 3
5	Designing of I/O using Registers, ALU and Control Unit and demonstrating the usage of Register Transfer Language (RTL)	1, 2

BL-1: Remember
BL-2: Understand
BL-3: Apply
BL-4: Analyze
BL-5: Evaluate
BL-6: Create

Session: 2019-20 **Semester: 3rd**

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

S No.	Course Outcomes	BL
Student will be able to:		
1	Knowledge of logical notation to define and reason the fundamental mathematical concepts such as sets relations, functions, and integers.	1,2
2	Discuss various structures and properties of modern algebra.	1,2
3	Employ their logical ability such as reasoning able to setup mathematical model of real life problem by applying advanced counting and computing techniques like generating function and recurrence relation.	3,4
4	Demonstrate problems in different areas of computer science using trees and graphs.	5,6
5	Design solution with the help of induction hypotheses, simple induction proofs and Recurrences.	2,3

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Session: 2019-20 **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

BL-1: Remember
BL-2: Understand
BL-3: Apply
BL-4: Analyze
BL-5: Evaluate
BL-6: Create

Session: 2019-20 **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

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Session: 2019-20 **Semester: 4th**

Subject Name (Code): Universal Human Value (KVE-401)

S No.	Course Outcomes	BL
Student will be able to:		
1	Understand the significance of value inputs in a classroom, distinguish between values and skills, understand the need, basic guidelines, content and process of value education, explore the meaning of happiness and prosperity and do a correct appraisal of the current scenario in the society	1, 2
2	Distinguish between the Self and the Body, understand the meaning of Harmony in the Self the Co-existence of Self and Body	3
3	Understand the value of harmonious relationship based on trust, respect and other naturally acceptable feelings in human-human relationships and explore their role in ensuring a harmonious society	3, 4
4	Understand the harmony in nature and existence, and work out their mutually fulfilling participation in the nature.	4, 5
5	Distinguish between ethical and unethical practices, and start working out the strategy to actualize a harmonious environment wherever they work.	6

BL-1: Remember
BL-2: Understand
BL-3: Apply
BL-4: Analyze
BL-5: Evaluate
BL-6: Create

Session: 2019-20 **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

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Session: 2019-20 **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	1,2
2	Understand basic properties and analyzing of regular language and application of finite automaton	2,4,6
3	Understand and analyzing the context free grammar and Language also proof of correctness.	1,2,4
4	Understand basic model of PDA. Analyzing and forming Push down automaton.	2,4,6
5	Understand basic model of Turing Machine. Analyzing and forming Turing Machine and its corresponding language also Understand basic properties Undecidability, Post Corresponding Problem and Recursive Function Theory.	1,2,4,6

BL-1: Remember
BL-2: Understand
BL-3: Apply
BL-4: Analyze
BL-5: Evaluate
BL-6: Create

Session: 2019-20 **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.	1,2
2	Analyze software problems after studying instruction set of 8085 and programming techniques.	4,3
3	Formulate and solve hardware and software problems after studying instruction set of 8086 and programming techniques.	6,3
4	Automate real life problems after generating time delays and learning the advanced subroutine concepts in assembly language programming.	4,5
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.	1,2

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Session: 2019-20 **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 structure- 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

BL-1: Remember
BL-2: Understand
BL-3: Apply
BL-4: Analyze
BL-5: Evaluate
BL-6: Create

Session: 2019-20 **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.	1, 2
2	Understand and implement the concept of process synchronization tool like semaphore to solve mutual exclusion problem in order to coordinate concurrent process	3
3	Apply knowledge of process management techniques to design and solve various process synchronization problems like Producer Consumer problem, Reader Writer problem and dining philosopher's problem.	3, 4
4	Compare and contrast among various CPU scheduling algorithms and apply knowledge to identify the best scheduling algorithm as per software requirement.	4, 5
5	Understand and apply the concepts of deadlock in operating systems to design and implement various deadlock avoidance algorithms like Banker's algorithm used in banking system.	6
6	Understand and apply knowledge of basic UNIX/LINUX commands to solve various software problems and to automate real time applications.	1, 2

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Session: 2019-20 **Semester: 4th**

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

S No.	Course Outcomes	BL
Student will be able to:		
1	Design and implement programs on 8085 microprocessor	1,2,4
2	Design and implement programs on 8086 microprocessor	1,2,4
3	Design interfacing circuits with 8085	3,4
4	Design interfacing circuits with 8086	3,4
5	Design and implement 8051 microcontroller based systems	1,2,5

BL-1: Remember
BL-2: Understand
BL-3: Apply
BL-4: Analyze
BL-5: Evaluate
BL-6: Create

Session: 2019-20 **Semester: 4th**

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

S No.	Course Outcomes	BL
Student will be able to:		
1	Demonstrate familiarity with major algorithms and data structures.	1, 2,3
2	Calculate and analyze performance of algorithms	3,4
3	Choose the appropriate data structure and algorithm design method for a specified application.	4,6
4	Identify which algorithm or data structure to use in different scenarios.	1,2,5
5	Familiar with writing recursive methods	1,3,5

BL-1: Remember
BL-2: Understand
BL-3: Apply
BL-4: Analyze
BL-5: Evaluate
BL-6: Create