Sree Chitra Thirunal College of Engineering

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Consolidated Course Outcomes Report

Batch	Slno	Subject	CO	Topic	Bloom's taxonomy level
CS 2K20	1	Logic System Design	CO1	llustrate decimal, binary, octal, hexadecimal and BCD number systems, perform conversions among them and do the operations - complementation, addition, subtraction, multiplication and division on binary numbers	Understanding(U)
			CO2	Simplify a given Boolean Function and design a combinational circuit to implement the simplified function using Digital Logic Gates	Applying(P)
			CO3	Design combinational circuits - Adders, Code Convertors, Decoders, Magnitude Comparators, Parity Generator/Checker and design the Programmable Logic Devices - ROM and PLA	Applying(P)
			CO4	Design sequential circuits - Registers, Counters and Shift Registers.	Applying(P)
			CO5	Use algorithms to perform addition and subtraction on binary, BCD and floating point numbers	Applying(P)
	2	OBJECT ORIENTED PROGRAMMING USING JAVA	CO1	Write Java programs using the object oriented concepts - classes, objects, constructors, data hiding, inheritance and polymorphism	Applying(P)
			CO2	Utilise datatypes, operators, control statements, built in packages & interfaces, Input/ Output Streams and Files in Java to develop programs	Applying(P)
			CO3	Illustrate how robust programs can be written in Java using exception handling mechanism	Understanding(U)
			CO4	Write application programs in Java using multithreading and database connectivity	Applying(P)
			CO5	Write Graphical User Interface based application programs by utilising event handling features and Swing in Java	Applying(P)
	3	DISCRETE MATHEMATICAL STRUCTURES	CO1	Apply the fundamentals of propositional logic and predicate logic to test the validity of the statements.	Applying(P)
			CO2	Apply the fundamentals of enumeration or counting techniques in counting problems.	Applying(P)
			CO3	Examine the binary relation, partial order relation and lattice.	Understanding(U)
			CO4	Solve first and second order linear recurrence relation with constant coefficient and generating functions	Applying(P)
			CO5	Illustrate the abstract algebraic system , semigroups, monoids and groups and their homomorphisms and isomorphisms.	Understanding(U)
	4	DATA STRUCTURES	CO1	Analyze the performance of the algorithm and represent it using asymptotic notations.	Analyzing(A)
			CO2	Solve real world problem using appropriate linear data structures, arrays, linked list, stack and queue.	Applying(P)
			CO3	Design algorithms for various application using nonlinear data structures trees and graphs	Applying(P)
			CO4	Select appropriate Searching and Sorting algorithms to be used in specific circumstances.	Analyzing(A)
			CO5	Compare different memory management techniques and their significance.	Understanding(U)
			CO6	Store a given dataset using an appropriate Hash Function to enable efficient access of data in the given set.	Applying(P)
	5	DATA STRUCTURES LAB	CO1	Implement linear and non-linear data structures using linked lists.	Applying(P)
			CO2	Apply data structures such as stacks, queues, trees, graphs, etc. to solve various computing problems.	Applying(P)
			CO3	Implement searching(linear search, binary search) and sorting (bubble sort, insertion sort ,selection sort , Merge sort, heap sort, Quick sort) techniques	Applying(P)
			CO1	1.Write a Java program to calculate the area of different shapes using method overloading. 2.Write a Java program for class inheritance. 3.Write a Java program to illustrate interface inheritance.	Applying(P)

6	**OBJECT ORIENTED PROGRAMMING LAB (IN JAVA)**	CO2	1.Write a Java program to reverse a given string. 2,Write a Java program to display the transpose of a given matrix. 3.Write a Java program to find the second smallest element in an array. 4,Write a Java program to check whether the given number is prime or not. 5.Write a Java program to implement Heap sort algorithm using array. 6.Write a Java program that reads a file and displays it on the screen.. 7.Write a Java program that displays the number of characters, lines and words in a text file. 8.Write a Java program to check whether a given string is palindrome or not. 9.Write a Java program to multiply two matrices.	Applying(P)
		CO3	Write a Java program that shows how to create a user defined exception	Applying(P)
		CO4	1.Write a Java program to create two threads to display odd numbers and even numbers between 1 to 100. 2.Write a Java program that shows thread priorities. 3.Write a Java program to store the data in a database using JDBC connectivity..	Applying(P)
		CO5	1.Write a Java program for handling mouse events. 2.Write a Java program for handling key events using Adapter class. 3.Write a Java program that allows the user to draw lines, rectangles and ovals. 4.Write a Java Swing program to print a wave form on the output screen. 5.Design a Traffic Light in Java. 6.Design a Calculator.	Applying(P)
7	**PROFESSIONAL ETHICS**	CO1	Understand the core values that shape the ethical behaviour of a professional.	Understanding(U)
		CO2	Develop a good character and follow an ethical life.	Applying(P)
		CO3	Explain the role and responsibility in technological development by keeping personal ethics and legal ethics.	Understanding(U)
		CO4	Solve moral and ethical problems through exploration and assessment by established experiments.	Applying(P)
		CO5	Apply the knowledge of human values and social values to contemporary ethical values and global issues.	Applying(P)
8	**SUSTAINABLE ENGINNERING**	CO1	Understand and find the relevance and concept of sustainable engineering	Understanding(U)
		CO2	Explain the different types of environment problems	Understanding(U)
		CO3	Discuss the environmental regulations and standards	Understanding(U)
		CO4	Concepts related to conventional and non conventional energy	Understanding(U)
		CO5	Demonstrate the concepts of sustainable practices by utilising engineering knowledge and practices	Understanding(U)