



# SRI KRISHNA INSTITUTE OF TECHNOLOGY

(Accredited by NAAC, Approved by A.I.C.T.E. New Delhi, Recognised by Govt. of Karnataka & Affiliated to V.T U., Belgaum)  
#29, Chimney Hills, Hesaraghatta Main Road, Chikkabanavara Post, Bangalore- 560090

## DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

### Sem: 3<sup>rd</sup> CO's (21scheme)

#### Data Structures and Applications (21CS32)

- CO1: Identify different data structures and their applications.
- CO2: Apply stack and queues in solving problems.
- CO3: Demonstrate applications of linked list.
- CO4: Explore the applications of trees and graphs to model and solve the real-world problem.
- CO5: Make use of hashing techniques and resolve collisions during mapping of key value pairs.

#### Analog and Digital Electronics (21CS33)

- CO1: Design and analyze application of analog circuits using timer IC, regulated, power supply, op-amp and also explain the basic principles of A/D converter and D/A conversion circuits and develop the same
- CO2: Simplify digital circuits using Karnaugh map and Quine- McClusky Method
- CO3: Combinational circuits designs simulation using gates
- CO4: Design of sequential circuits using flip flops and develop simple HDL programs
- CO5: Designing of different data processing circuits, registers and counters and compare same (using gates and flip flops)

#### Computer Organization (21CS34)

- CO1: Explain the organization and architecture of computer systems with machine instructions and programs
- CO2: Analyze the input/output devices communicating with computer system
- CO3: Demonstrate the functions of different types of memory devices
- CO4: Apply different data types on simple arithmetic and logical unit
- CO5: Analyze the functions of basic processing unit, Parallel processing and pipelining

#### Object Oriented Programming with Java Laboratory (21CSL35)

- CO1: Use Eclipse/NetBeans IDE to design, develop, debug Java Projects.
- CO2: Analyze the necessity for Object Oriented Programming paradigm over structured programming and become familiar with the fundamental concepts in OOP.
- CO3: Demonstrate the ability to design and develop java programs, analyze, and interpret object oriented data and document results.



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CO4: Apply the concepts of multiprogramming, exception/event handling, abstraction to develop robust programs.

CO5: Develop user friendly applications using File I/O and GUI concepts.

## **SEM: 4<sup>th</sup> CO's(21scheme)**

### **Design and Analysis of Algorithms (21CS42)**

CO1: Analyze the performance of the algorithms, state the efficiency using asymptotic notations and analyze mathematically the complexity of the algorithm.

CO2: Apply divide and conquer approaches and decrease and conquer approaches in solving the problems analyze the same.

CO3: Apply the appropriate algorithmic design technique like greedy method, transform and conquer approaches and compare the efficiency of algorithms to solve the given problem.

CO4: Apply and analyze dynamic programming approaches to solve some problems and improve an algorithm time efficiency by sacrificing space.

CO5: Apply and analyze backtracking, branch and bound methods and to describe P, NP and NP-Complete problems.

### **Microcontroller and Embedded Systems (21CS43)**

CO1: Describe the ARM microcontroller's architectural features and program module

CO2: Explain C-Compilers and optimization and ARM instruction set

CO3: Apply the knowledge gained from C-Compilers and optimization for programming on ARM to different applications.

CO4: Program the basic hardware components and their application selection method

CO5: Demonstrate the need of Real Time Operating system forembedded system applications

### **Operating Systems (21CS44)**

CO1: Identify the structure of an operating system and Basics of scheduling mechanism

CO2: Demonstrate the allocation of resources for a process using scheduling and Synchronization Algorithms

CO3: Identify root causes of deadlock and provide the solution for deadlock elimination and Basics of Storage

CO4: Explore about the storage structures and File System

CO5: Analyze Storage Structures and Implement Customized Case study of Linux OS



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## **Python Programming Laboratory (21CSL46)**

CO1: Demonstrate proficiency in handling of loops and creation of functions.

CO2: Identify the methods to create and manipulate lists, tuples and dictionaries.

CO3: Discover the commonly used operations involving regular expressions and file system.

CO4: Interpret the concepts of Object-Oriented Programming as used in Python.

CO5: Determine the need for scraping websites and working with PDF, JSON and other file formats