



SRI KRISHNA INSTITUTE OF TECHNOLOGY

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#57, Hesaraghatta Main Road, Chimney Hills, Chikkabanavara Post, Bangalore- 560090

Department of Artificial Intelligence and Machine Learning

Sem: 2nd CO's (2022 Scheme)

Introduction to Mechanical Engineering (BESCK204D)

- CO1: Explain the concept of Role of Mechanical Engineering and Energy sources.
- CO2: Describe the machine tool operations and advanced Manufacturing process.
- CO3: Explain the working principle of IC engines and EV vehicles.
- CO4: Discuss the Properties of Common Engineering Materials and various Metal Processes.
- CO5: Explain the concepts of Mechatronics, Robotics and Automation in IoT

Python Programming (BPLCK205B)

- CO1: Demonstrate proficiency in handling loops and creation of functions.
- CO2: Identify the methods to create and manipulate lists, tuples and dictionaries.
- CO3: Develop programs for string processing and file organization
- CO4: Interpret the concepts of Object-Oriented Programming as used in Python.

Principles of Programming using C (BPOPS203)

- CO1: Elucidate the basic architecture and functionalities of a computer and also recognize the hardware parts.
- CO2: Apply programming constructs of C language to solve the real world problem
- CO3: Explore user-defined data structures like arrays in implementing solutions to problems like searching and sorting
- CO4: Explore user-defined data structures like structures, unions and pointers in implementing solutions.

Applied Physics for CSE Stream (BPHYS202)

- CO1: Describe the principles of LASERS and Optical Fibers and their relevant applications.
- CO2: Discuss the basic principles of the Quantum Mechanics and its application in Quantum Computing.



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CO3: Summarize the essential properties of superconductors and its applications in qubits.

CO4: Illustrate the application of physics in design and data analysis

CO5: Practice working in groups to conduct experiments in physics and perform precise and honest measurements.

Professional Writing Skills in English (BPWSK206)

CO1: To understand and identify the Common Errors in Writing and Speaking.

CO2: To Achieve better technical writing and Presentation skills.

CO3: To read technical proposals properly and make them to Write good technical reports.

CO4: Acquire Employment and Workplace communication skills.

CO5: To learn about Techniques of Information Transfer through presentation in different level.



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Sem: 3rd CO's (2022 Scheme)

Mathematics for Computer Science (BCS301)

- CO1: Explain the basic concepts of probability, random variables, probability distribution
- CO2: Apply suitable probability distribution models for the given scenario.
- CO3: Apply the notion of a discrete-time Markov chain and n-step transition probabilities to solve the given problem
- CO4: Use statistical methodology and tools in the engineering problem-solving process.
- CO5: Compute the confidence intervals for the mean of the population.
- CO6: Apply the ANOVA test related to engineering problems.

Digital Design and Computer Organization (BCS302)

- CO1: Apply the K-Map techniques to simplify various Boolean expressions.
- CO2: Design different types of combinational and sequential circuits along with Verilog programs.
- CO3: Describe the fundamentals of machine instructions, addressing modes and Processor performance.
- CO4: Explain the approaches involved in achieving communication between processor and I/O devices.
- CO5: Analyze internal Organization of Memory and Impact of cache/Pipelining on Processor Performance.

OPERATING SYSTEMS (BCS303)

- CO 1: Explain the structure and functionality of operating system
- CO 2: Apply appropriate CPU scheduling algorithms for the given problem.
- CO 3: Analyse the various techniques for process synchronization and deadlock handling.
- CO 4: Apply the various techniques for memory management
- CO 5: Explain file and secondary storage management strategies.
- CO 6: Describe the need for information protection mechanisms

DATA STRUCTURES AND APPLICATIONS (BCS304)

- CO 1: Explain different data structures and their applications.
- CO 2: Apply Arrays, Stacks and Queue data structures to solve the given problems.
- CO 3: Use the concept of linked list in problem solving.



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CO 4: Develop solutions using trees and graphs to model the real-world problem.

CO 5: Explain the advanced Data Structures concepts such as Hashing Techniques and Optimal Binary Search Trees.

Object Oriented Programming with JAVA (BCS306A)

CO1: Demonstrate proficiency in writing simple programs involving branching and looping structures.

CO2: Design a class involving data members and methods for the given scenario.

CO3: Apply the concepts of inheritance and interfaces in solving real world problems.

CO4: Use the concept of packages and exception handling in solving complex problem.

CO5: Apply concepts of multithreading, autoboxing and enumerations in program development.

Social Connect & Responsibility (BSCK307)

CO1: Communicate and connect to the surrounding.

CO2: Create a responsible connection with the society.

CO3: Involve in the community in general in which they work.

CO4: Notice the needs and problems of the community and involve them in problem – solving.

CO5: Develop among themselves a sense of social & civic responsibility & utilize their knowledge in finding practical solutions to individual and community problems.

CO6: Develop competence required for group-living and sharing of responsibilities & gain skills in mobilizing community participation to acquire leadership qualities and democratic attitudes.

Data Analytics with Excel (BCS358A)

CO1: Use advanced functions and productivity tools to assist in developing worksheets.

CO2: Manipulate data lists using Outline and PivotTables.

CO3: Use Consolidation to summarise and report results from multiple worksheets.

CO4: Apply Macros and Autofilter to solve the given real world scenario.



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Sem: 4th CO's (2022 Scheme)

Analysis & Design of Algorithms (BCS401)

- CO1: Apply asymptotic notational method to analyze the performance of the algorithms in terms of time complexity.
- CO2: Demonstrate divide & conquer approaches and decrease & conquer approaches to solve computational problems.
- CO3: Make use of transform & conquer and dynamic programming design approaches to solve the given real world or complex computational problems.
- CO4: Apply greedy and input enhancement methods to solve graph & string based computational problems.
- CO5: Analyse various classes (P, NP and NP Complete) of problems. Illustrate backtracking, branch & bound and approximation methods.
- CO6: Illustrate backtracking, branch & bound and approximation methods.

Artificial Intelligence (BCS402)

- CO1: Apply knowledge of agent architecture, searching and reasoning techniques for different applications.
- CO2: Compare various Searching and Inferencing Techniques.
- CO 3: Develop knowledge base sentences using propositional logic and first order logic
- CO 4: Describe the concepts of quantifying uncertainty.
- CO5: Use the concepts of Expert Systems to build applications.

DATABASE MANAGEMENT SYSTEM (BCS403)

- CO1: Describe the basic elements of a relational database management system
- CO2: Design entity relationship for the given scenario.
- CO3: Apply various Structured Query Language (SQL) statements for database manipulation.
- CO4: Analyse various normalization forms for the given application.
- CO5: Develop database applications for the given real world problem.
- CO6: Understand the concepts related to NoSQL databases.



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Analysis & Design of Algorithms Lab (BCSL404)

- CO1: Develop programs to solve computational problems using suitable algorithm design strategy.
- CO2: Compare algorithm design strategies by developing equivalent programs and observing running times for analysis (Empirical).
- CO3: Make use of suitable integrated development tools to develop programs
- CO4: Choose appropriate algorithm design techniques to develop solution to the computational and complex problems.
- CO5: Demonstrate and present the development of program, its execution and running time(s) and record the results/inferences.

DISCRETE MATHEMATICAL STRUCTURES (BCS405A)

- CO1: Apply concepts of logical reasoning and mathematical proof techniques in proving theorems and statements.
- CO2: Demonstrate the application of discrete structures in different fields of computer science.
- CO3: Apply the basic concepts of relations, functions and partially ordered sets for computer representations.
- CO4: Solve problems involving recurrence relations and generating functions.
- CO5: Illustrate the fundamental principles of Algebraic structures with the problems related to computer science & engineering.



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Sem: 5th CO's (2022 Scheme)

Software Engineering & Project Management (BCS501)

- CO1: Differentiate process models to judge which process model has to be adopted for the given scenarios.
- CO2: Derive both functional and nonfunctional requirements from the case study.
- CO3: Analyze the importance of various software testing methods and agile methodology.
- CO4: Illustrate the role of project planning and quality management in software development.
- CO5: identify appropriate techniques to enhance software quality.

COMPUTER NETWORKS (BCS502)

- CO1: Explain the fundamentals of computer networks.
- CO2: Apply the concepts of computer networks to demonstrate the working of various layers and protocols in communication network.
- CO3: Analyze the principles of protocol layering in modern communication systems.
- CO4: Demonstrate various Routing protocols and their services using tools such as Cisco packet tracer.

THEORY OF COMPUTATION (BCS503)

- CO1: Apply the fundamentals of automata theory to write DFA, NFA, Epsilon-NFA and conversion between them.
- CO2: Prove the properties of regular languages using regular expression
- CO3: Design context-free grammars (CFGs) and pushdown automata (PDAs) for formal languages
- CO4: Design Turing machines to solve the computational problems.
- CO5: Explain the concepts of decidability and undecidability.

DATA VISUALIZATION LAB (BCSL504)

- CO1: Design the experiment to create basic charts and graphs using Tableau and Power BI.
- CO2: Develop the solution for the given real world problem.
- CO3: Analyze the results and produce substantial written documentation.