SCIENT INSTITUTE OF TECHNOLOGY

Ibrahimpatnam, RangaReddy Dist. Telangana

NAAC Accredited, Approved by AICTE and Affiliated to JNTUH

Department of Computer Science and EngineeringAcademic year 2023-2024

Course outcomes

YEAR: II **Semester: I** **Regulation: R22**

Course Name: DIGITAL ELECTRONICS **Course Code: CS301PC**

At the end of this course each student should be able to:

CO1	Demonstrate a thorough understanding of the binary number system, including conversions between number systems and binary arithmetic operations.	L2
CO2	Analyze and design digital circuits using basic and universal logic gates to solve real-world problems.	L2
CO3	Design and implement synchronous sequential circuits, including counters and flip-flops, to meet specified functional requirements.	L2
CO4	Develop and evaluate combinational logic circuits, such as multiplexers, demultiplexers, encoders, and decoders, for practical applications.	L2
CO5	Understand and apply asynchronous logic design principles, addressing challenges such as hazards and race conditions in circuit behavior.	L4

Course Name: DATA STRUCTURES **Course Code: CS302PC**

At the end of this course each student should be able to:

CO1	Ability to select the data structures that efficiently model the information in a problem.	L3
CO2	Ability to assess efficiency trade-offs among different data structure implementations or combinations.	L4
CO3	Implement and know the application of algorithms for sorting and pattern matching.	L2
CO4	Design programs using a variety of data structures, including hash tables, binary and general tree structures, search trees, tries, heaps, graphs, and AVL-trees.	L1

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Course Name: COMPUTER ORIENTED STATISTICAL METHODS

Course Code: CS303PC

At the end of this course each student should be able to:

CO1	Apply the concepts of probability and distributions to case studies.	L2
CO2	Formulate and solve problems involving random variables and apply statistical methods for analysing experimental data	L3
CO3	Apply concept of estimation and testing of hypothesis to case studies.	L4
CO4	Correlate the concepts of one unit to the concepts in other units.	L5

Course Name: COMPUTER ORGANIZATION AND ARCHITECTURE

Course Code: CS304PC

At the end of this course each student should be able to:

CO1	Understand the basics of instruction sets and their impact on processor design.	L4
CO2	Demonstrate an understanding of the design of the functional units of a digital computer system.	L2
CO3	Evaluate cost performance and design trade-offs in designing and constructing a computer processor including memory.	L2
CO4	Design a pipeline for consistent execution of instructions with minimum hazards.	L3
CO5	Recognize and manipulate representations of numbers stored in digital computers.	L2

Course Name: OBJECT ORIENTED PROGRAMMING THROUGH JAVA

Course Code: CS305PC

At the end of this course each student should be able to:

CO1	Demonstrate the behavior of programs involving the basic programming constructs like control structures, constructors, string handling and garbage collection.	L3
CO2	Demonstrate the implementation of inheritance (multilevel, hierarchical and multiple) by using extend and implement keywords	L3
CO3	Use multithreading concepts to develop inter process communication.	L4
CO4	Understand the process of graphical user interface design and implementation using AWT or swings.	L4
CO5	Develop applets that interact abundantly with the client environment and deploy on the server.	L3

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Course Name: DATA STRUCTURES LAB **Course Code: CS306PC**

At the end of this course each student should be able to:

C01	Ability to develop C programs for computing and real-life applications using basic elements like control statements, arrays, functions, pointers and strings, and data structures like stacks, queues and linked lists.	L2
C02	Ability to Implement searching and sorting algorithms.	L3

Course Name: OBJECT ORIENTED PROGRAMMING THROUGH JAVA LAB

Course Code: CS307PC

At the end of this course each student should be able to:

CO1	Able to write programs for solving real world problems using the java collection framework.	L4
CO2	Able to write programs using abstract classes.	L3
CO3	Able to write multithreaded programs.	L4
CO4	Able to write GUI programs using swing controls in Java.	L4

Course Name: DATA VISUALIZATION - R PROGRAMMING/ POWER BI

Course Code: CS308PC

At the end of this course each student should be able to:

CO1	Understand How to import data into Tableau.	L4
CO2	Understand Tableau concepts of Dimensions and Measures.	L1
CO3	Develop Programs and understand how to map Visual Layouts and Graphical Properties.	L1
CO4	Create a Dashboard that links multiple visualizations.	L4
CO5	Use graphical user interfaces to create Frames for providing solutions to real world problems.	L5

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Course Name: GENDER SENSITIZATION LAB **Course Code: *MC309 At**

the end of this course each student should be able to:

CO1	Students will have developed a better understanding of important issues related to gender in contemporary India.	L2
CO2	Students will be sensitized to basic dimensions of the biological, sociological, psychological and legal aspects of gender. This will be achieved through discussion of materials derived from research, facts, everyday life, literature and film.	L4
CO3	Students will attain a finer grasp of how gender discrimination works in our society and how to counter it.	L5
CO4	Students will acquire insight into the gendered division of labor and its relation to politics and economics.	L4
CO5	Men and women students and professionals will be better equipped to work and live together as equals.	L2
CO6	Students will develop a sense of appreciation of women in all walks of life.	L3
CO7	Through providing accounts of studies and movements as well as the new laws that provide protection and relief to women, the textbook will empower students to understand and respond to gender violence.	L3

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YEAR: II Semester: II Regulation: R22

Course Name: DISCRETE MATHEMATICS **Course Code: CS401PC**

At the end of this course each student should be able to:

CO1	Understand and construct precise mathematical proofs	L3
CO2	Apply logic and set theory to formulate precise statements	L4
CO3	Analyze and solve counting problems on finite and discrete structures	L4
CO4	Describe and manipulate sequences	L2
CO5	Apply graph theory in solving computing problems	L3

Course Name: BUSINESS ECONOMICS AND FINANCIAL ANALYSIS

Course Code: SM402MS

At the end of this course each student should be able to:

CO1	Analyze various forms of business organizations and evaluate the impact of economic variables on business operations.	L4
CO2	Demonstrate knowledge of demand, supply, production, cost, market structures, and pricing strategies.	L4
CO3	Assess a firm's financial position through the analysis of its financial statements.	L3
CO4	Apply economic and financial insights to support business decision-making processes effectively.	L2

Course Name: OPERATING SYSTEMS **Course Code:CS403PC**

At the end of this course each student should be able to:

CO1	Will be able to control access to a computer and the files that may be shared	L4
CO2	Demonstrate the knowledge of the components of computers and their respective roles in computing.	L4
CO3	Ability to recognize and resolve user problems with standard operating environments.	L2
CO4	Gain practical knowledge of how programming languages, operating systems, and architectures interact and how to use each effectively.	L3

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Course Name: DATABASE MANAGEMENT SYSTEMS

Course Code: CS404PC

At the end of this course each student should be able to:

CO1	Gain knowledge of fundamentals of DBMS, database design and normal forms	L3
CO2	Master the basics of SQL for retrieval and management of data.	L4
CO3	Be acquainted with the basics of transaction processing and concurrency control.	L1
CO4	Familiarity with database storage structures and access techniques	L4

Course Name: SOFTWARE ENGINEERING **Course Code: CS405PC**

At the end of this course each student should be able to:

CO1	Ability to translate end-user requirements into system and software requirements, using e.g. UML, and structure the requirements in a Software Requirements Document (SRD).	L3
CO2	Identify and apply appropriate software architectures and patterns to carry out high level design of a system and be able to critically compare alternative choices.	L4
CO3	Will have experience and/or awareness of testing problems and will be able to develop a simple testing report	L2

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Course Name: OPERATING SYSTEMS LAB **Course Code: CS406PC**

At the end of this course each student should be able to:

CO1	Simulate and implement operating system concepts such as scheduling, deadlock management, file management and memory management.	L4
CO2	Able to implement C programs using Unix system calls	L3

Course Name: DATABASE MANAGEMENT SYSTEMS LAB **Course Code: CS407PC**

At the end of this course each student should be able to:

CO1	Design database schema for a given application and apply normalization	L4
CO2	Acquire skills in using SQL commands for data definition and data manipulation.	L2
CO3	Develop solutions for database applications using procedures, cursors and triggers	L3

Course Name: NODE JS/ REACT JS/ DJANGO **Course Code: CS409PC At**

the end of this course each student should be able to:

CO1	Build a custom website with HTML, CSS, and Bootstrap and little JavaScript.	L2
CO2	Demonstrate Advanced features of JavaScript and learn about JDBC	L2
CO3	Develop Server – side implementation using Java technologies like	L2
CO4	Develop the server – side implementation using Node JS.	L3
CO5	Design a Single Page Application using React.	L3

Course Name: CONSTITUTION OF INDIA **Course Code: *MC410**

At the end of this course each student should be able to:

CO1	Discuss the growth of the demand for civil rights in India for the bulk of Indians before the arrival of Gandhi in Indian politics.	L3
CO2	Discuss the intellectual origins of the framework of argument that informed the conceptualization of social reforms leading to revolution in India.	L3
CO3	Discuss the circumstances surrounding the foundation of the Congress Socialist Party [CSP] under the leadership of Jawaharlal Nehru and the eventual failure of the proposal of direct elections through adult suffrage in the Indian Constitution	L4
CO4	Discuss the passage of the Hindu Code Bill of 1956.	L4

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