S.V.ARTS COLLEGE::TIRUPATI

Department of Computer Science

B.Sc (MPCs,MSCs,MECs) Course Outcomes (For All Semesters)

I Year 1st Semester

Title of the Paper: **Fundamentals of Computer & Programming in C**

Course Code: **3-1-108R**

No. of Credits :3 No. of Hours per Week: 04

1. Bridge the fundamental concepts of computers with the present level of knowledge of the students.
2. Familiarise operating systems, programming languages, peripheral devices, networking, multimedia and internet.
3. Understand binary, hexadecimal and octal number systems and their arithmetic.
4. Understand how logic circuits and Boolean algebra forms as the basics of digital computer.
5. Demonstrate the building up of Sequential and combinational logic from basic gates.

I Year 2nd Semester

Title of the Paper: **Object Oriented Programming with C++**

Course Code:**3-2-120**

No. of Credits :3 No. of Hours per Week:04

1. Understand the difference between the top-down and bottom-up approach.
2. Describe the object-oriented programming approach in connection with C++
3. Apply the concepts of object-oriented programming
4. Illustrate the process of data file manipulations using C++
5. Apply virtual and pure virtual function & complex programming situations

II Year 3rd Semester

Title of the Paper: **Object Oriented Programming using JAVA**

Course Code:**3-3-108**

No. of Credits :3 No. of Hours per Week: 04

1. **Engineering knowledge**: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **Foundation of mathematical concepts:** Ability to apply the acquired knowledge of basic skills, principles of computing, mathematical foundations, algorithmic principles, modeling and design of computer- based systems in solving real world engineering Problems.
3. **Software Development and Research Ability:** Ability to understand the structure and development methodologies of software systems. Possess professional skills and knowledge of software design process. Familiarity and practical competence with a broad range of programming language and open source platforms. Use knowledge in various domains to identify research gaps and hence to provide solution to new ideas and innovations.
4. **Successful Career:** Ability to update knowledge continuously in the tools like, Computing, Communication to meet the industry requirements in creating innovative career paths for immediate employment and for higher studies.

II Year 4th Semester

Title of the Paper: **JAVA with Data structure**

Course Code:**3-4-108**

No. of Credits :3 No. of Hours per Week: 04

1. Understand the concept of Dynamic memory management, data types, algorithms, Big O notation.
2. Understand basic data structures such as arrays, linked lists, stacks and queues.
3. Describe the hash function and concepts of collision and its resolution methods
4. Solve problem involving graphs, trees and heaps
5. Apply Algorithm for solving problems like sorting, searching, insertion and deletion of data

III Year 5th Semester

Title of the Paper: **MDBMS**

Course Code:**3-5-111**

No. of Credits :3 No. of Hours per Week: 04

1. Describe DBMS architecture, physical and logical database designs, database modeling, relational, hierarchical and network models.
2. Identify basic database storage structures and access techniques such as file organizations, indexing methods including B-tree, and hashing.
3. Learn and apply Structured query language (SQL) for database definition and database manipulation.
4. Demonstrate an understanding of normalization theory and apply such knowledge to the normalization of a database.
5. Understand various transaction processing, concurrency control mechanisms and database protection mechanisms.

III Year 5th Semester

Title of the Paper: **Software Engineering**

Course Code:**3-5-112**

No. of Credits :3 No. of Hours per Week: 04

1. Plan a software engineering process life cycle , including the specification, design, implementation, and testing of software systems that meet specification, performance, maintenance and quality requirements
2. Able to elicit, analyze and specify software requirements through a productive working relationship with various stakeholders of the project
3. Analyze and translate a specification into a design, and then realize that design practically, using an appropriate software engineering methodology.
4. Know how to develop the code from the design and effectively apply relevant standards and perform testing, and quality management and practice
5. Able to use modern engineering tools necessary for software project management, time management and software reuse.

III Year 6th Semester

Title of the Paper: **Computer Networking**

Course Code:**3-6-114**

No. of Credits :3 No. of Hours per Week: 04

1. Understand computer network basics, network architecture, TCP/IP and OSI reference models.
2. Identify and understand various techniques and modes of transmission
3. Describe data link protocols, multi-channel access protocols and IEEE 802 standards for LAN
4. Describe routing and congestion in network layer with routing algorithms and classify IPV4 addressing scheme
5. Discuss the elements and protocols of transport layer
6. Understand network security and define various protocols such as FTP, HTTP, Telnet, DNS

I semester B.Sc. PROGRAMMING IN C

COURSE LEARNING OUTCOMES:

1. Understand the evolution and functionality of a Digital Computer
2. Apply logical skills to analyse a given problem
3. Develop an algorithm for solving a given problem
4. Understand 'C' language constructs like iterative statements, Array processing , Pointers, etc.,
5. Apply 'C' language constructs to the algorithms to write a 'C' language program.

II Semester DATA STRUCTURES USING C

COURSE LEARNING OUTCOMES:

1. Understand available Data Structures for data storage and processing
2. Comprehend Data Structure and their real time applications
3. Choose a suitable Data Structures for an application
4. Develop ability to implement different sorting and searching methods
5. Have knowledge on Data structures basic operations
6. Design and develop program using various data structures
7. Implement the applications of algorithms for sorting.

III Semester OBJECT ORIENTED PROGRAM THROUGH JAVA

IV Semester DATA STRUCTURES USING JAVA

V Semester SOFTWARE ENGINEERING

DATABASE MANAGEMENT SYSTEMS

VI Semester WEB TECHNOLOGIES

CLUSTER: MYSQL, PHP

JQUERY