Visvodaya Govt. Degree College, Venkatagiri
SPSR Nellore (District) 524 132

Department of Computer Science

B.Sc (Computer Science)
1 SEMESTER

Paper-I : Computer Fundamentals & Photoshop

CO1: Design layouts for web pages, Paper Adverts, Brouchers, CD Covers, Package Designing
CO2 : Event and Exhibition stall Designs, Pop Ups
CO3: Touch Ups
CO4: Color corrections
CO5 : Paintings, Drawings
CO6 : Converting black and white photo to color

II SEMESTER
Paper-II : PROGRAMMING IN C

.Upon successful completion of the course, a student will be able to:

CO1: Appreciate and understand the working of a digital computer
CO2: Analyze a given problem and develop an algorithm to solve the problem
CO3: Improve upon a solution to a problem
CO4: Use the 'C' language constructs in the right way
CO5: Design, develop and test programs written in 'C'

III SEMESTER
Paper-III : OBJECT ORIENTED PROGRAMMING USING JAVA

CO1: Understand the concept and underlying principles of Object-Oriented   programming
CO2: Understand how object-oriented concepts are incorporated into the Java rogramming language
CO3: Develop problem-solving and programming skills using OOP concept
CO4: Understand the benefits of a well structured program
CO5: Develop the ability to solve real-world problems through software development in   high-level
        programming language like Java
CO6: Develop efficient Java applets and applications using OOP concept
CO7: Become familiar with the fundamentals and acquire programing skills in the Java language.

IV SEMESTER
Paper-IV : DATA STRUCTURES

After completing this course satisfactorily, a student will be able to:
CO1: Describe how arrays, records, linked structures, stacks, queues, trees, and graphs are represented
        in memory and used by algorithms
CO2: Describe common applications for arrays, records, linked structures, stacks, queues, trees, and
        graphs.
CO3: Write programs that use arrays, records, linked structures, stacks, queues, trees, and graphs

CO4: Demonstrate different methods for traversing trees
CO5: Compare alternative implementations of data structures with respect to performance
CO6: Compare and contrast the benefits of dynamic and static data structures implementations
CO7:Describe the concept of recursion, give examples of its use, describe how it can be implemented using a stack .
CO8: Discuss the computational efficiency of the principal algorithms for sorting, searching, and hashing.

V SEMESTER
Paper-V: Data Base Management System

On completing the subject, students will be able to:

CO1: Demonstrate the basic concepts and explore the classifications, objectives and evaluation of Database systems.
CO2: Understand the concept of file based system and political database model.
CO3: Learn entity relationship models and normalization
CO4: Identify the basic issues of SQL, Aggregate functions and set operators.
CO5: Expose in Pl/SQL program and control structures.

V SEMESTER
Paper VI : Software Engineering
CO1: Able to understand the Role of Software, Myths and risk management process that is risk strategies.
CO2: Become familiar with software process models.
CO3: Ability to gather and specify requirements of the software projects and analyze the analysis model.
CO4: Able to design Architectural styles and patterns & analyze.
CO5: Describe technical issues related to software quality and testing and ability to work in a term as well as independent of projects.

VI SEMESTER
Paper-VII: Elective-A
Operating Systems
CO1: Analyze the concepts of processes in operating system and illustration of scheduling of processor for a given problem instance.
CO2: Identify the dead lock situation and provide appropriate solution so that protection and security of the operating system is also maintained.
CO3: Analyze memory management techniques, concepts of virtual memory and disk scheduling.
CO4 : Understand the implementation of file systems and directories along with the interfacing of IO devices with the operating system.

VI SEMESTER
Paper-VII: Elective-B
COMPUTER NETWORKS

After this course, the student will be able to
CO1: Identify the different components in a Communication System and their respective roles.
CO2: Describe the technical issues related to the local Area Networks
CO3: Identify the common technologies available in establishing LAN infrastructure

VI SEMESTER

Paper-VII : Elective-C
Web Technologies

To understand the web architecture and web services.

CO1: To practice latest web technologies and tools by conducting experiments.
CO2: To design interactive web pages using HTML and Style sheets.
CO3: To study the framework and building blocks of .NET Integrated Development Environment.
CO4: To provide solutions by identifying and formulating IT related problems.

VI SEMESTER
(Cluster 1) Paper-VIII: Elective –A-1
Foundations of Data Science

CO1: Able to apply fundamental algorithmic ideas to process data.
CO2: Learn to apply hypotheses and data into actionable predictions.
CO3: Document and transfer the results and effectively communicate the findings using visualization
      techniques.

VI SEMESTER
(Cluster 1) Paper-VIII : Elective –A-2
BIG DATA TECHNOLOGY

CO1: Learn tips and tricks for Big Data use cases and solutions.
CO2: Learn to build and maintain reliable, scalable, distributed systems with Apache Hadoop.
CO3: Able to apply Hadoop ecosystem components.

VI SEMESTER
(Cluster 1 Paper-VIII : Elective –A-3)
COMPUTING FOR DATA ANALYTICS

CO1: Learn the Big Data in Technology Perspective.
CO2: Understanding of the statistical procedures most often used by practicing engineers
CO3: Understand Forecasting methods and apply for business applications

VI SEMESTER
(Cluster 2) Paper-VIII : Elective –B-1
Distributed Systems

CO1: Create models for distributed systems.
CO1: Apply different techniques learned in the distributed system.

VI SEMESTER
(Cluster 2) Paper-VIII : Elective –B-2
Cloud Computing

CO1: Compare the strengths and limitations of cloud computing
CO2: Identify the architecture, infrastructure and delivery models of cloud computing
CO3 : Apply suitable virtualization concept.
CO4 : Choose the appropriate cloud player , Programming Models and approach.
CO5 : Address the core issues of cloud computing such as security, privacy and interoperability

CO6 : Design Cloud Services and Set a private cloud

VI SEMESTER
(Cluster 2) Paper-VIII : Elective –B-3
Grid Computing

CO1: Compare the strengths and limitations of Grid computing
CO2 : Identify the architecture, infrastructure and delivery models of Grid computing
CO3 : Apply suitable virtualization concept.
CO4 : Address the core issues of Grid computing such as security, privacy and interoperability

PROJECT & VIVA-VOCE

The objective of the project is to motivate them to work in emerging/latest technologies, help the students to develop ability, to apply theoretical and practical tools/techniques to solve real life problems related to industry, academic institutions and research laboratories.

The project is of 2 hours/week for one (semester VI) semester duration and a student is expected to do planning, analyzing, designing, coding, and implementing the project. The initiation of project should be with the project proposal. The synopsis approval will be given by the project guides. The project proposal should include the following:

 Title
 Objectives
 Input and output
 Details of modules and process logic
 Limitations of the project
 Tools/platforms, Languages to be used
 Scope of future application

The Project work should be either an individual one or a group of not more than three members and submit a project report at the end of the semester. The students shall defend their dissertation in front of experts during viva-voce examinations.