

Dr V S Krishna Government Degree College (A), Visakhapatnam

Department of Computer Science

Course Outcomes

(2018-19, 2019-20)

Paper 1: Computer Fundamentals and Photoshop

Course Outcomes:

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

1. To explore basic knowledge on computers
2. To acquire knowledge on working of I/O devices, memories
3. To explore knowledge on Adobe Photoshop
4. To work with Adobe Photoshop tool box.
5. To create basic designs using Adobe Photoshop

Paper 2: Programming in C

Course Outcomes:

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

1. Appreciate and understand the working of a digital computer
2. Analyse a given problem and develop an algorithm to solve the problem
3. Improve upon a solution to a problem
4. Use the 'C' language constructs in the right way
5. Design, develop and test programs written in 'C'

Paper 3: Data Structures

Course Outcomes:

1. Describe how arrays, linked structures, stacks, queues, trees, and graphs are represented in memory and used by algorithms
2. Describe common applications for arrays, linked structures, stacks, queues, trees, and graphs.
3. Write programs that use arrays, linked structures, stacks, queues, trees, and graphs
4. Demonstrate different methods for traversing trees.
5. Compare alternative implementations of data structures with respect to performance

6. Compare and contrast the benefits of dynamic and static data structures implementations
7. Describe the concept of recursion, give examples of its use, describe how it can be implemented using a stack.
8. Discuss the computational efficiency of the principal algorithms for sorting, searching.

Paper 4: Object Oriented Programming Using JAVA

Course Outcomes:

At the end of this course student will:

1. Understand the concept and underlying principles of Object-Oriented Programming
2. Understand how object-oriented concepts are incorporated into the Java programming language
3. Develop problem-solving and programming skills using OOP concept
4. Understand the benefits of a well-structured program
5. Develop the ability to solve real-world problems through software development in high-level programming language like Java
6. Develop efficient Java applets and applications using OOP concept
7. Become familiar with the fundamentals and acquire programming skills in the Java language.

Paper 5: Database Management Systems

Course Outcomes:

On completing the subject, students will be able to:

1. Design and model of data in database.
2. Store, Retrieve data in database.
3. To explore knowledge on Relational Model
4. To write queries using SQL
5. To write programs using PL/SQL

Paper 6: Software Engineering

Course outcomes:

1. Ability to gather and specify requirements of the software projects.
2. Ability to analyse software requirements with existing tools
3. Able to differentiate different testing methodologies
4. Able to understand and apply the basic project management practices in real life projects
5. Ability to work in a team as well as independently on software projects

Paper 7A: Operating Systems (Elective)

Course Learning Outcomes:

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

1. Analyze the concepts of processes in operating system and illustration of the scheduling of processes for a given problem instance.
2. identify the deadlock situation and provide appropriate solution so that protection and security of the operating system is also maintained.
3. Analyze memory management techniques, concepts of virtual memory and disk scheduling.
4. Understand the implementation of file systems and directories along with the interfacing of IO devices with the operating system.

Paper 7B: Computer Networks (Elective)

Course Learning Outcomes:

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

1. Identify the different components in a communication system and their respective roles.
2. Describe the technical issues related to Local Area Networks.
3. Identify the common technologies available in establishing LAN infrastructure.

Paper 7C : Web Technologies (Elective)

Course Outcomes:

1. To understand the web architecture and web services.
2. To practice latest web technologies and tools by conducting experiments.
3. To design interactive web pages using HTML and Style sheets.
4. To study the framework and building blocks of .NET Integrated Development Environment.
5. To provide solutions by identifying and formulating IT related problems

Paper 8A1: Foundations of Data Science (Cluster Elective)

Course Outcomes:

1. Able to apply fundamental algorithmic ideas to process data.
2. Learn to apply hypotheses and data into actionable predictions.
3. Document and transfer the results and effectively communicate the findings using visualization techniques.

Paper 8A2: Big Data Technology (Cluster Elective)

Course Outcomes:

1. Learn tips and tricks for Big Data use cases and solutions.
2. Learn to build and maintain reliable, scalable, distributed systems with Apache Hadoop.
3. Able to apply Hadoop ecosystem components.

Paper 8A3: Computing for Data Analytics (Cluster Elective),

Course Learning Outcomes:

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

1. Learn the Big Data in Technology Perspective.
2. Understanding of the statistical procedures most often used by practicing applications.
3. Understand forecasting methods and apply for business applications.

Paper: 8B1 : Distributed Systems (Cluster Elective)

Course Learning Outcomes:

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

1. Create models for distributed systems.
2. Apply different techniques learned in the distributed systems

Paper 8B2: Cloud Computing (Cluster Elective)

Course Learning Outcomes:

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

1. Compare the strengths and limitations of cloud computing.
2. Identify the architecture, infrastructure and delivery models of cloud computing.
3. Apply suitable virtualization concept.
4. Choose the appropriate cloud player, Programming Models and approach.
5. Address the core issues of cloud computing such as security, privacy and interoperability.
6. Design Cloud Services and Set a private cloud.

Paper 8B3: Grid Computing (Cluster Elective)

Course Learning Outcomes:

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

1. Compare the strengths and limitations of Grid Computing.
2. Identify the architecture, infrastructure and delivery models of Grid Computing.
3. Apply suitable virtualization concept.
4. Address the core issues of Grid Computing such as security, privacy and interoperability

Course Outcomes

(2020-21, 2021-22, 2022-23)

Paper 1: Problem Solving Using C

Course Learning Outcomes:

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

1. Understand the evolution and functionality of a Digital Computer.
2. Apply logical skills to analyze 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

Paper 2: Data Structures using C.

Course Learning Outcomes:

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

1. Understand available Data Structures for data storage and processing.
2. Comprehend Data Structure and their real-time applications - Stack, Queue, Linked List, Trees and Graph.
3. Choose a suitable Data Structures for an application.
4. Develop ability to implement different Sorting and Search methods.
5. Design and develop programs using various data structures.

Paper 3: Database Management Systems

Course Learning Outcomes:

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

1. Gain knowledge of Database and DBMS
2. Understand the fundamental concepts of DBMS with special emphasis on relational data model.
3. Demonstrate an understanding of normalization theory and apply such knowledge to the normalization of a database.
4. Model databases using ER Diagrams and design database schemas based on the model.
5. Create a small database using SQL.

Paper 4: Object Oriented Programming using JAVA

Course Learning Outcomes:

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

1. Understand the benefits of a well-structured program.
2. Understand different computer programming paradigms.
3. Understand underlying principles of Object-Oriented Programming in Java.
4. Develop problem-solving and programming skills using OOP concepts
5. Develop the ability to solve real-world problems through software development in high-level programming language like Java.

Paper 5: Operating Systems

Course Learning Outcomes:

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

1. Know Computer system resources and the role of operating system in resource management with algorithms.
2. Understand Operating System Architectural design and its services.
3. Gain knowledge of various types of operating systems including Unix and Android.
4. Understand various process management concepts including scheduling, synchronization, and deadlocks.
5. Have a basic knowledge about multithreading.
6. Comprehend different approaches for memory management.
7. Understand and identify potential threats to operating systems and the security features design to guard against them.
8. Specify objectives of modern operating systems and describe how operating systems have evolved over time.
9. Describe the functions of a contemporary operating system

Paper 6A: Web Interface Designing Technologies

Course Learning Outcomes:

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

1. Understand and appreciate the web architecture and services.
2. Gain knowledge about various components of a website.
3. Demonstrate skills regarding creation of a static website and an interface to dynamic website.
4. Learn how to install word press and gain the knowledge of installing various plug-in to use in their websites.

Paper 7A: Web Applications Development using PHP & MySQL

Course Learning Outcomes:

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

1. Write simple programs in PHP.
2. Understand how to use regular expressions, handle exceptions, and validate data using PHP.
3. Apply In-Built functions and Create User defined functions in PHP programming.
4. Write PHP scripts to handle HTML forms.
5. Write programs to create dynamic and interactive web based applications using PHP and MYSQL.
6. Know how to use PHP with a MySQL database and can write database driven web pages.

Paper 6B: Internet of Things

Course Learning Outcomes:

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

1. Appreciate the technology for IoT
2. Understand various concepts, terminologies and architecture of IoT systems.
3. Understand various applications of IoT.
4. Learn how to use various sensors and actuators for design of IoT.
5. Learn how to connect various things to Internet.
6. Learn the skills to develop simple IOT Devices.

Paper 7B: Application Development Using Python

Course Learning Outcomes:

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

1. Understand and appreciate the web architecture and services.
2. Examine Python syntax and semantics and be fluent in the use of Python flow control and functions.
3. Demonstrate proficiency in handling Strings and File Systems.
4. Create, run and manipulate Python Programs using core data structures like Lists, Dictionaries and use Regular Expressions.
5. Interpret the concepts of Object-Oriented Programming as used in Python.
6. Apply concepts of Python programming in various fields related to IOT, Web Services and Databases in Python.

Paper 6C: Data Science

Course Learning Outcomes:

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

1. Develop relevant programming abilities.
2. Demonstrate proficiency with statistical analysis of data
3. Develop the ability to build and assess data-based models.
4. Demonstrate skill in data management.
5. Apply data science concepts and methods to solve problems in real-world contexts and will communicate these solutions effectively

Paper 7C: Python for Data Science

Course Learning Outcomes:

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

1. Identify the need for data science and solve basic problems using Python built-in data types and their methods.
2. Design an application with user-defined modules and packages using OOP concept
3. Employ efficient storage and data operations using NumPy arrays.
4. Apply powerful data manipulations using Pandas.
5. Do data pre-processing and visualization using Pandas