



SWR GOVT COLLEGE (W), KALIKIRI

DEPARTMENT OF COMPUTER SCIENCE

B.SC

(Revised on 2021-2022)

COURSE OUTCOMES

Course Learning Outcomes

C1 - Problem Solving in C - Semester-I

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 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.

C2 - DATA STRUCTURES USING C - Semester-II

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. Have knowledge on Data Structures basic operations like insert, delete, search, update and traversal
6. Design and develop programs using various data structures
7. Implement the applications of algorithms for sorting, pattern matching etc

C3 - DATABASE MANAGEMENT SYSTEMS- Semester-III

Course Objective: The objective of the course is to introduce the design and development of databases with special emphasis on relational databases.

Course Learning Outcomes:

On completing the subject, students 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 database using ER Diagrams and design database schemas based on the model.
5. Create a small database using SQL.
6. Store, Retrieve data in database.

C4 - OBJECT ORIENTATED PROGRAMMING THROUGH JAVA - Semester-IV

Objectives:

To introduce the fundamental concepts of Object-Oriented programming and to design & implement object oriented programming concepts in Java.

Course Learning Outcomes: At the end of this course student will:

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

C5-OPERATING SYSTEMS - Semester-IV

Objectives:

This course aims to introduce the structure and organization of a file system. It emphasizes various functions of an operating system like memory management, process management, device management, etc.

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

COURSE6A: WEB INTERFACE DESIGNING TECHNOLOGIES - Semester-V (Skill Enhancement Course(Elective),Credits:05)

LearningOutcomes: Students after successful completion of the course will be ableto:

1. Understand and appreciate the web architecture and services.
2. Gain knowledge about various component sofa 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 pluginstouse in their websites.

Course7A:We bApplications Development using PHP & MYSQL - Semester-V (Skill Enhancement Course(Elective),Credits:05)

Learning Outcomes: Students after successful completion of the course will be ableto:

1. Writes impleprograms in PHP.
2. Understand how to use regular expressions, handle exceptions, and validate data using PHP.
3. ApplyIn-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 webpages.

Course 6B: INTERNET OF THINGS (Skill Enhancement Course (Elective),Credits:05)

Learning Outcomes:Students after successful completion of the course will be ableto:

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.

Course 7B : APPLICATION DEVELOPMENT USING PYTHON
(Skill Enhancement Course (Elective),Credits:05)

Learning Out comes: Students after successful completion of the course 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 datastructures 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.

COURSE 6C : DATA SCIENCE
(Skill Enhancement Course(Elective),Credits:05)

Learning Out comes: Students after successful completion of the course 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 the sesolutions effectively

COURSE 7C : PYTHON FOR DATA SCIENCE
(Skill Enhancement Course (Elective), Credits:05)

Learning Out comes: Students after successful completion of the course will be able to:

1. Identify the need for data science and solve basic problems using Python built-in data types and the ir methods.
2. Design anapplication 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