

SRI SARADA COLLEGE FOR WOMEN (AUTONOMOUS)

SALEM - 16

Reaccredited with B++ Grade by NAAC

(Affiliated to Periyar University)



PG & RESEARCH DEPARTMENT OF COMPUTER SCIENCE

ADVANCED DIPLOMA COURSE

in

COMPUTER PROGRAMMING

Three Year Course

Syllabi

(From 2021-22 Onwards)

I Year	Certificate Course	Office Packages
II Year	Diploma Course	'C' Programming
III Year	Advanced Diploma Course	Python Programming

ADVANCED DIPLOMA IN COMPUTER PROGRAMMING (2021-22 ONWARDS)

SYLLABUS

I YEAR

COURSE I : OFFICE PACKAGES

Objectives:

The Course aims to

- Understand and effectively utilize the available features of Microsoft Word to create, format, and edit documents.
- Attain skillfulness in creating and engaging presentations using Microsoft PowerPoint.
- Evolve a powerful groundwork in using Microsoft Excel for data entry, formatting, and analysis.
- Interpret the basic principle of database design and management using Microsoft Access.
- Acquire the foundational concepts of HTML and its role in web development

SYLLABUS

UNIT I: MS WORD

No. of Hours : 10

Starting word - Creating Documents - Parts of word window - Mouse Operations - Keyboard Operations - Formatting Features - Menus, Commands, Toolbars and their Icons - Word Formatting Toolbar - Mail Merge - Macros - Creating Table.

UNIT II: MS EXCEL

No. of Hours : 10

Introduction - Menus, Commands, Toolbars and their Icons - Entering Text in cells - Column Width - Series Fill - Entering Formulas - Formatting - Inserting and Deleting Rows and Columns - Aligning Data - Print - Saving File - Opening File - Changing Font - Cut, Copy, Paste Commands - Deleting cell contents - Editing - Creating Chart - Recording Macros - Functions.

UNIT III: MS POWER POINT

No. of Hours : 10

Introduction - Menus (File, Edit, View, Insert, Format, Tools, Slide Show, Window, Help) Standard Toolbar - Formatting Toolbar - Drawing Toolbar - Navigating in Power Point - Creating a new Presentation - Opening a Presentation - Creating a New Slide - Deleting, Copying a Slide - Saving, Closing a Presentation Printing - Changing Font - Inserting Picture - Inserting Text.

UNIT IV MS - ACCESS

No. of Hours : 10

Databases - Parts of an Access Window - Creating a New Database - Creating a Database through Table Wizard - Creating a new Table - Rename Columns - Saving the Database - Relationships - Tables - Query - Form - Report.

UNIT V: HTML

No. of Hours : 10

HTML tags – Creating Your HTML Document – Displaying the Document in a Web Browser –Modifying an HTML document- HTML Document Headings- HTML Headings-HTML Paragraph Breaks- HTML Style Tags- Embedding Including Pictures in Web Pages- Linking to Local Files- Anchor Link a Graphic – Preformatted Text- Lists- Colorful and Textured Backgrounds- Horizontal Rules- Text Alignment. Tables- Creation of Table- Cell Padding ,Spacing, Column Specification- Framed Web Pages- Forms- Attributes- Text Input Elements- Password Input Elements- Text Area Input Elements- Radio Buttons- Check Boxes- Menu Select- Submit And Reset Buttons.

PRACTICAL

No. of Hours : 50

MS - WORD:

- Text preparation
- Creation of Tables
- Prepare a letter using mail merge and prepare envelopes

MS - EXCEL:

- Electronic spread sheet - Use of Arithmetic operations
- Graph

MS - POWER POINT:

Prepare a presentation with the following effects Slide transition, Custom Animation, Sound Effects

- About yourself
- About an organization
- About a Topic

MS - ACCESS:

- Student Mark Sheet preparation
- Employee Details
- Book Details

HTML

Creation of web page with following features

1. Create a HTML document with the following formatting options:
Bold, Italics Underline Headings (Using H1 to H6 heading styles), Font (Type, Size and Color) Background (Colored background/Image in background)
2. Paragraph, Line Break and Horizontal Rule
3. Create a HTML document which consists of:
i. Ordered List ii. Unordered List iii. Nested List
4. Create a table using HTML which consists of columns for Roll No., Student's name and grade.

BOOKS FOR STUDY:

1. Sanjay Saxena - MS Office 2000 for everyone.
2. C.Xavier," world wide web design with HTML", Tata McGraw Hill Publication, New Delhi, Third reprint 2001.

**ADVANCED DIPLOMA IN COMPUTER PROGRAMMING (2021-22 ONWARDS)
SYLLABUS**

II YEAR

COURSE II : 'C' PROGRAMMING

SYLLABUS

Objectives:

The Course aims to

- Understand the fundamentals of C programming.
- Apply decision-making and controls in program work flow.
- Develop proficiency in handling functions.
- Exploring user-defined data types effectively.
- Acquiring pointer concepts with pointer arithmetic

UNIT I: C - BASICS

No. of Hours : 10

Overview of C - Constants - Variables - Data Types - Operators and Expression - Managing Input and Output Operators.

UNIT II: CONTROL STATEMENT

No. of Hours : 10

Decision making and Branching - If statements, switch and goto statement - Decision making and Looping - While statement - do statement - for statement - Arrays - One and Two Dimensional Arrays.

UNIT III: FUNCTION

No. of Hours : 10

Handling of character String - Reading - Writing - Arithmetic Operations - Introduction to function - The form of C functions - Category of function - Nesting of Function - Recursion - Function with Arrays.

UNIT IV MS - USER DEFINE DATA TYPE

No. of Hours : 10

Structures and Unions - Definition - Initialization - Comparison - Array of Structures - Structures within structure - Structure and Function - Union.

UNIT V: POINTERS

No. of Hours : 10

Pointers - Accessing the Address of Variable - Initialization of pointer Variables - Pointer and Arrays - Pointers and Structures - File Management in C - Error Handling during Input and Output Operations - Command Line Arguments.

PRACTICAL

No. of Hours : 50

1. Factorial of a Number
2. Fibonacci Series
3. Prime Number
4. Perfect Number
5. Armstrong Number
6. Palindrome Number
7. Sum of digits of a Number
8. Swapping of two Integers
9. Pyramid of Numbers
10. Determinant of Matrix
11. Sparse Matrix
12. Swapping of two Arrays
13. Double Dimensional Arrays
14. Sorting all elements of a Matrix
15. Recursive Functions to find Factorial
16. Structures with Arrays
17. Structures with Structures
18. String Function
19. Sorting of Function
20. Palindrome String

BOOKS FOR STUDY:

1. E. Balagurusamy - Programming in ANSI C, Tata McGraw - Hill - Chapter - 1 to 2.

ADVANCED DIPLOMA IN COMPUTER PROGRAMMING(2021-22 ONWARDS)
SYLLABUS
III YEAR
COURSE III : PYTHON PROGRAMMING
SYLLABUS

Objectives:

The course aims to

- Configure a python development environment.
- Remember the basic of Identifiers, Operators, data types and pythons statements.
- Understand the concepts of list, tuples and dictionary and their applications
- Apply OOPs concept in Python
- Understand the files and data base handling in python.

Unit I:

No. of Hours: 10

Introduction to Python: Overview - History of Python - Python features - Environment - Environment setup - Getting Python - Install Python - Setting up Path - Running Python - Basic Syntax - Hello World - Interactive mode programming - Script mode Programming - A simple Python example

Unit II:

No. of Hours : 10

Programming Basics of Python: Python Keywords -Identifiers - Rules for writing Identifiers - Reserved words - Lines and Indentation - Multiline statements - Python Variable - Variable Assignment - Multiple Assignment - Standard Data Types: Numbers: int, float and decimal - Basic Operators: Arithmetic Operators - Comparison (Relational) Operators - Assignment Operators - Logical Operators - Bitwise Operators - Membership Operators - Identity Operators - Loops: Types of loops - while - for Loops - Control statements: if ...else - for loop - break and continue.

Unit III:

No. of Hours: 10

Programming with Python: Functions: Introduction - Using a Function - Communicating with Functions - Example of creating a simple calculator using functions - Lists: Accessing values in Lists - Updating Lists - Delete List elements - Built-in Lists functions & Methods - Tuples: Creating Tuples - Accessing Tuples -Updating Tuples - Deleting Tuples - Basic Tuple operations - Built-in Tuple functions - Dictionary: Access, Update and Delete dictionary elements- Built-in Dictionary Functions & Methods.

Unit IV:**No. of Hours : 10**

Object Oriented Programming: Classes and Objects: Creating a Class - Using a Class - A simple Inheritance - Multiple Inheritance - Exception Handling: Try, Except and Finally

Unit V:**No. of Hours: 10**

Advanced Concepts: Files I/O: Opening a file - Seek and Find a file - Other I/O functions - Database and SQL: Database - Transactions - What is SQLDB? - Database connection Parameters - Insert, Update, Delete - Sending Mail: SMTP protocol - Syntax - Sending Email using Python.

BOOK FOR STUDY:

1. Python practical Python programming for beginners and experts, Create Space Independent Publishing Platform, 2016.
2. Beginning Programming with Python, John Paul Mueller, 2ND EDITION, John Wiley & Sons, 2018.

REFERENCE BOOK:

1. Python Programming Python Programming for Beginners, Adam Stewart, Create space Independent Pub; Comprehensive edition, 2016.

PRACTICAL

No. of Hours : 50

1. Write the Python code to Print Hello World.
2. Write the Python code for Adding Two Numbers.
3. Write the Python code to find the Area of Triangle.
4. Write the Python code to check the leap year.
5. Write the Python code to find the ASCII key value of the characters.
6. Write the Python code to Display the Calendar.
7. Write the Python code to check whether the given number is Odd or Even.
8. Write the Python code to Addition of Two Matrix.
9. Write the Python code to make simple Calculators.
10. Write the Python code to check whether the given number is Palindrome number or Not.