Semester – IV				
Title of the Course	:	**Python Programming**	Course Code	:	**05ABCAR24411**
Credits	:	2	Hours	:	30

Unit I

Python Programming Language, Features of Python, Python Syntax, Comments, Identifiers and Keywords, Variables, Indentation, Literals, Numbers, Strings, Standard Data Types, Python Input and Output, Type Conversions, Type() Function, Operators, Precedence of Arithmetic Operators.

Unit II

Control Flow Statements: if-else, Nested if statement, if-elif-else ladder, Loop Statements: for, while, nested loops, break and continue, Function: Definition, Fruitful functions – return values, parameters, local and global scope, Function Definition and Calling the Function, The return Statement and void Function, Scope and Lifetime of Variables, Default Parameters, Built-in Functions.

Unit III

Data Types: Numbers, Strings, String Slices, Creating and Storing Strings, Basic String Operations, Accessing Characters in String by Index Number, String Slicing and Joining, String Methods, Booleans, List: list operations, List Methods, list slices, list loop, Mutability, Aliasing, Cloning lists, List Parameters, List as Arrays, Tuples: tuple assignment, tuple as return value, Dictionaries: operations and methods.

Unit IV

Error Handling: Run Time Errors, Exception Model, Exception Hierarchy, Handling Multiple Exceptions, Data Streams, Access Modes, Writing Data to a File, Reading Data from a File, Errors and Exceptions, Handling Exceptions, Packages, Modules.

Semester – IV					
Title of the Course	:	**Python Programming - Practical**	Course Code	:	**05ABCAR24411**
Credits	:	2	Hours	:	30

1. Write a python program to perform arithmetic operations such as addition, subtraction, multiplication, and division based on user input:

2. Write a python program to check if a number is positive, negative or zero

3. Write a python program to check if a number is odd or even

4. Write a python program to check leap year

5. Write a python program to check prime number

6. Write a python program to find the factorial of a given number.

7. Write a python program to filter odd and even numbers from the list.

8. Write a python program to sum the numbers for the elements of a list.

9. Write a python program to demonstrate the concepts of exception handling.

10. Write a python program to print the fibonacci sequence up to the nth term.

11. Write a python program to open and write user-defined content into the file.

12. Write a program to create, append, and remove lists in python.

13. Write a program to demonstrate working with tuples in python.

14. Write a program to demonstrate working with dictionaries in python.