

Devi Ahilya University, Indore, India Institute of Engineering & Technology			III Year B.E. (Computer engineering /Information Technology) (Full Time)				
Subject Code & Name	Instructions Hours per Week			Credits			
ITR5L3 Scripting Language Programming Laboratory	L	T	P	L	T	P	Total
	0	0	2	0	0	1	1
Duration of Practical: 2 Hours							

Learning Objectives: To learn basics and advance scripting language programming for modern computing requirements.

Prerequisite: Programming Concepts.

UNIT-I

Features of Python ,Setting up path ,Working with Python ,Basic Syntax ,Variable and Data Types ,Operator, If ,If- else ,Nested if-else, For ,While ,Nested loops
Break ,Continue Accessing Strings ,Basic Operations ,Function and Methods.

UNIT-II

Introduction of Sqlite, Database connectivity, Accessing tuples, Executing queries, Transactions ,Operations Working, Handling error Functions and Methods, Printing on screen
Reading data from keyboard ,Opening and closing file ,Reading and writing files

UNIT-III

Graphics and GUI programming-Drawing using Tkinter and python. Networking and Multithreaded programming –Sockets, Thread and Processes, Chat application.

UNIT-IV

Class and object. Attributes, Inheritance ,Overloading ,Overriding ,Data hiding Regular expressions ,Match function ,Search function ,Matching VS Searching ,Modifiers ,Patterns, CGI(Introduction, Architecture ,CGI environment variable, GET and POST methods ,Cookies ,File upload.

UNIT-V

Web Frameworks - for developing server-side Web applications in Python, Web Browse Programming - interfacing with existing browsers and browser technologies

Learning Outcomes:

After completion of the course students will be able to –
Apply scripting language programming skills for modern computing requirements.

Reference Books:

- 1 John V Guttag. “Introduction to Computation and Programming Using Python”, Prentice Hall of india
- 2 R. Nageswara Rao, “Core Python Programming”, dreamtech
- 3 Wesley J. Chun. “Core Python Programming - Second Edition”, Prentice Hall
- 4 Michael T. Goodrich, Roberto Tamassia, Michael H. Goldwasser, “Data Structures and Algorithms in Python”, Wiley
- 5 Kenneth A. Lambert, “Fundamentals of Python – First Programs”, CENGAGE Publication
- 6 Luke Sneeringer, “Professional Python”, Wrox
- 7 Hacking Secret Ciphers with Python”, Al Sweigart, URL-
<https://inventwithpython.com/hacking/chapters>

Learning Outcomes:

List of Practical Assignments:

Students are given programming assignments to learn following .

1. How to take input through file/command line/ network.
 2. Concept of Python List, Python String, Python Dictionary, Python Tuples and data type conversion.
 3. Techniques of function calling, modules like import, from import etc.
 4. Basic I/O functions and exception handling in Python.
 5. Concept of object oriented programming, built in class attributes, regular expressions for pattern matching.
 6. To work with database interfaces (Sqlite).
 7. Concept of networking using Python
 8. Web development using web framework flask,bootstrap.
 9. Use of XML, CSS, HTML, AJAX to understand the concept behind the web browsing.
 10. A project to be developed which uses the above concept.
-