

VEER NARMAD SOUTH GUJARAT UNIVERSITY – SURAT

T Y B. Sc. (Computer Science)

Syllabus for T. Y. B. Sc. Semester-VI

Effective From: June-2022

Course: 602 : Python Programming-2

CourseCode	602
CourseTitle	Python Programming-2
Credit	2
Teachingper Week	2 Hrs
Minimumweeks per Semester	15 (Including Class work, examination, preparation, holidays etc.)
Review /Revision	Newly Introduced subject
Purpose of Course	<p>The purpose of the course is to make students capable of implementing Basic concepts, methods and tools of python programming like.</p> <ul style="list-style-type: none">• GUI Designing for Python Desktop Application• Web site Development using Python• To make students understand handling database and dumping the database to csv and text file as well as converting csv and text files to database.• To make students understand the importance of library functions to connect python with SQLite and handle the database using python.• To handle csv and excel files using python and use various statistical analysis using Numpy and Pandas library.• To make student understand and learn matplotlib functions to perform basic visualization of data.
Course Objective	<p>To make students learn of python programming skill for high level Computational programming as well as developing Python GUI application and Web Application.</p>

Pre-requisite	The basic knowledge of C and C++ and object oriented programming is Required.						
Course Outcomes	<p>After completion of this course, the student will be capable to develop, manage and maintain basic applications using Python.</p> <p>C01: Understand and aware about how to design GUI for Python Desktop Application</p> <p>C02: Understand aware about how to Create Web pages for Python Web Application</p> <p>C03: Introduction to Web Development Frameworks</p> <p>C04: Understand how to take backup of database and .csv file</p> <p>C05: Understand read, write and other operation of file</p> <p>C06: Learn the database connectivity with various types of databases</p> <p>C07: Learn to deal with Sqlite3 database using Python .</p>						
Mapping between COs with PSOs		PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
	C01						
	C02						
	C03						
	C04						
	C05						
	C06						
	C07						
Course Content	<p>Unit-1 : Developing Python GUI with Tkinter</p> <p>1.1 introduction</p> <p>1.2 Import Tkinter Libraries</p> <p>1.3 Tkinter Widgets</p> <p>1.4 Widgets Attributes</p> <p>Unit-2 : Introduction to Web Development Frameworks</p> <p>2.1 Flask</p> <p>2.2 Django</p> <p>2.3 GIS Web Services</p>						

	<p>Unit-3: Database backup and CSV handling:</p> <p>3.1 SQLite dump :</p> <p>3.1.1 Dump specific table into file, Dump only table structure</p> <p>3.1.2 Dump entire database into file</p> <p>3.1.3 Dump data of one or more tables into a file</p> <p>3.2 CSV files handling:</p> <p>3.2.1 Import a CSV file into a table</p> <p>3.2.2 Export a CSV file from table</p> <p>3.3 Python Connectivity with different types of databases</p> <p>Unit-4: Python interaction with SQLite:</p> <p>4.1 Module: Concepts of module and Using modules in python.</p> <p>4.1.1 Setting PYTHONPATH, Concepts of Namespace and Scope</p> <p>4.1.2 Concepts of Packages in python</p> <p>4.2 Importing sqlite3 module</p> <p>4.2.1 connect () and execute() methods.</p> <p>4.2.2 Single row and multi-row fetch (fetchone(), fetchall())</p> <p>4.2.3 Select, Insert, update, delete using execute () method.</p> <p>4.2.4 commit () method.</p>
<p>Reference Book</p>	<p>1. Learning with Python, Author: Allen Downe Publisher: DreamTech Press, ISBN: 978-9351198147</p> <p>2. Python: The Complete Reference, Author: by Martin C. Brown, McGraw Hill Education, ISBN: 978-9387572942</p> <p>3. Python In - Depth, Author: AhidjoAyevea , KamonAyevea, Publisher: BPB Publication, ISBN: 978-9389328424</p>

	<p>4. The SQLite Handbook, Author: by Rita Blackburn, Publisher: EmereoPublishing, ISBN:978-1489136459</p> <p>5. Using SQLite, Author: Jay A. Kreibich, Publisher: O'Reily, ISBN:978-0596521189</p> <p>6. Android SQLite Essentials, Author: Sunny Kumar Adity, Publisher: Packt Publishing:978-1783282951</p>
Methodology	Discussion, Independent Study, Seminars / Assignment
Evaluation Method	quiz, assignment / seminar, internal examination etc. 70% assessment is based on end semester written examination