Python Programming

Aim: To provide students with an understanding of the role computation can play in solving problems and, regardless of their major

Feel justifiably confident of their ability to write small programs that allow them to accomplish useful goals.

Duration: 45 days (1 hr. 30 minutes daily)

Sr. No.	Contents
1.	**Values and Variables** - Integer and String Values Identifiers User Input String Formatting

2.	**Operators & It's uses** - Types of Operators Arithmetic Operators Relational Operators Logical Operators Assignment Operators *Special Operators* Membership Operators

	Identity Operators
	How to use Operators
3.	**Conditional Statements**
	Boolean expressions
	If/Else statement
	Other Conditional Expressions
4.	**Iteration**
	Loops
5.	**Using Functions**
	Introduction to Using Functions
	Functions and Modules
6.	**Writing Functions -1**
	Function Basics
	Parameter Passing
	Custom Functions v/s Standard Functions
	Refactoring

7.	**Writing Functions -2** Global Variables Making Functions Reusable Functions as Data
8.	**Objects** Using Objects String, File Objects
9.	**Lists** Using Lists Building Lists List Traversal
10.	**Tuples, Dictionaries, and Sets** Storing Aggregate Data Enumerating the Elements of a Data Structure
11.	**Class Design** Composition and Inheritance

12.	**GUI**
	Python and Tkinter Prototype
	Overview of Tkinter Widgets
	Geometry Managers and Widget Placement
	Toplevel
	Button
	Checkbutton
	Entry
	Frame
	Label
	Listbox
13.	**Python Project**
	To create GUI of Calculator
	Insert Program for Calculator Testing