Rajarshi Shahu Mahavidyalaya, Latur

(Autonomous)

Department of Information Technology

Course Type: SEC-I

Course Title: Basics of Python Programming

Course Code: 101COM1601

Credits: 02   **Max. Marks: 50**   **Lectures: 30 Hrs.**

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Learning Objectives:

LO 1. Understand basic principles of Python programming language

LO 2. Acquaint with basics of Python programming

LO 3. Learn Python collections with examples

LO 4. Design basic level applications using Python

Course Outcomes:

After completion of course the student will be able to-

CO 1. Solve numerical as well as non-numerical problems using python programming

CO 2. Adequately use functions, conditional and looping statements

CO 3. Write code in using conditional, looping and functions

CO 4. Handle errors occurred in program

CO 5. Develop basic applications using Python

Unit No.	Title of Unit & Contents	Hrs.
I	**Introduction to Python**	**06 Hrs**
	1. Python History 2. Features of python 3. Flavors of python 4. Installation of python 5. Applications of python	
	Unit Outcomes:	
	UO 1. Explain features and flavors of python UO 2. Acquire the installation process of python	
II	**Python Basics**	**08 Hrs**
	1. Identifiers 2. Keywords 3. Input-output statements: input(), print() 4. Comments in python 5. Code blocks and indentation 6. Simple python programs	
	Unit Outcomes:	
	UO 1. Acquaint with basics of python programming	

III	Python Collections and Operators	07 Hrs
	1. Datatypes: int, float, complex, bool, str 2. Python Collections – List, Tuple, Sets and Dictionary 3. Type Casting in python 4. Operators: Arithmetic Operators, Relational Operators or Comparison Operators, Logical operators, Assignment operators, Special operators	
	Unit Outcome: UO 1. Make use of data types, collections and operators for solving given problem	
IV`	**Statements and Functions**	09 Hrs
	1. Conditional Statements: if, if-elif, if-elif-else 2. Transfer Statements: break, continue, pass 3. Iterative Statements: for, while 4. Functions in Python: Built in Functions, User Defined Functions 5. Examples on conditional and looping statements	
	Unit Outcomes: UO 1. Write code in using conditional, looping and functions UO 2. Handle errors occurred in program UO 3. Develop basic applications using python	
V	**Practicals (Included in above 04 units)**	

Learning Resources:

1. Core Python Programming, Second Edition, Wesley J. Chun., Prentice Hall, 2001
2. Learning Python, 5th edition, Mark Lutz, O'Reilly
3. Programming Python, 4th Edition, O'Reilly
4. https://www.python.org/
5. https://www.w3schools.com/python/
6. https://www.tutorialspoint.com/python/index.htm