SUBJECT CODE: Python Programming Lab (BCSG1800)

COURSE OBJECTIVE

The course is designed to provide an introduction to the Python Programming language. The focus of the course is to provide students with an introduction to programming, I/O, and data structure with Python Programming language.

Credits: 03 **L–T–P: 4–0–0**

Module No.	Content	Teaching Hours
I and II	**Programs based on the concepts of:** • Building Python Modules • Obtaining user Data • Printing desired output **Programs based on the concepts of:** • Conditional if statements • Nested if statements • Using else if and elif **Programs based on the concepts of Iteration using different kinds of loops** **Usage of Data Structures** • Strings • Lists • Tuples • Dictionary **Program based on the concepts of User-defined modules and Standard Library (random, numpy, sys, math module, string module, list module etc.).** Program based on Input Output. Program based on exception Handling. Program based on Simple Data analysis. Program based on read/write operation with local file	20 hours

Text Books:

- Paul Barry: "Head First Python "O'Reilly Media, Inc.".
- Python Data Science Handbook: Essential Tools for Working with Data

Reference Books:

- Bret Slatkin: "Effective Python: 59 Specific ways to write better Python", Addison Wesley, 2015.

Outcome:

After completion of course, the student will be able to:

- Understand to solve problems with smaller Lines of Code using Python as compared to other programming languages
- Use Object-Oriented Programming concepts while programming in Python
- Gain knowledgeof Python visualization libraries
- Create a plot of retrieved data
- Work with Python using GUI