

<b>Course Code: CSOE2</b>	<b>Course Title: Python Programming Concepts</b>
<b>Course Credits: 03</b>	<b>Hours/Week: 03</b>
<b>Total Contact Hours: 42</b>	<b>Formative Assessment Marks: 40</b>
<b>Exam Marks: 60</b>	<b>Exam Duration: 03 Hrs.</b>

### Learning Outcome:

- An understanding of the principles behind the object oriented development process.
- Competence in the use of object oriented programming language in the development of small to medium sized application programs.

<b>Content</b>	<b>Hours</b>
<b>Unit – 1</b>	
<b>Introduction to Python:</b> Getting Started with Python, Essentials of Python Programming, <b>Fundamentals of Python:</b> indentation, comments, variables, operators, <b>Data Types:</b> Numeric, String, Collections: Lists, Tuples, Dictionary	7
<b>Unit – 2</b>	
Type Conversion, Decision making and Control flow ( Loops) while and for loop <b>Loop control statements:</b> break, continue, pass.	9
<b>Unit – 3</b>	
<b>Functions :</b> Functions with arguments ,lambda functions <b>Introduction to Object Oriented Programming in Python :</b> Objects, Classes, Python Classes, Specifying Attributes and Behaviors, Abstraction, Encapsulation , Polymorphism, Inheritance,	9
<b>Unit – 4</b>	
<b>Creating Python Classes-</b> Adding Attributes and making it perform a task, initializing the Object. Constructors <b>Custom Classes:</b> Attributes and Methods, Inheritance and Polymorphism, programs Using Inheritance and File handling.	9
<b>Unit – 5</b>	

Hands on practice Using Python Programming	8
--	---

**Text Book:**

Python for Everybody by Dr. Charles R. Severance

**Reference books:**

- Head-First Python: A Brain-Friendly Guide (2nd Edition)
- Learn Python the Hard Way: 3rd Edition.
- Python Programming: An Introduction to Computer Science (3rd Edition)

**BLUEPRINT**

Chapter	No. of hours	Total marks for which questions are to be asked (Including bonus questions)
Unit 1	10	6
Unit 2	10	10
Unit 3	6	21
Unit 4	6	21
Unit 5	10	25
<b>TOTAL</b>	42	83
<b>Maximum marks for the paper (Excluding bonus questions) = 60</b>		