

## Lesson Plan COE - \_\_\_\_2023\_\_

<b>Lesson Plan Ref.</b>	COE/2023/	<b>Course Ref.</b>	
<b>Technical Course:</b>	Python Programming Language		
<b>Trainer Name:</b>	Raman Tiwari		
<b>College Name:</b>	St.Bede's College.		
<b>Topic:</b>	Python Programming Language		
<b>Level:</b>	Basic to Advance	<b>Lesson Duration:</b>	40 hours

### Lesson Overview

This course is designed for individuals who are new to programming or have limited experience with programming languages. Python is an easy-to-learn, high-level language that is popular for its readability and versatility, making it a great first language for beginners. Throughout the course, students will learn the fundamental concepts of programming using Python syntax and build practical applications through hands-on exercises and projects.

### Summary of Lessons

	Description
<b>Introduction to Python</b>	<ol style="list-style-type: none"> <li>1. Overview of Python and its applications</li> <li>2. Installing Python and setting up the development environment</li> <li>3. Python syntax</li> <li>4. Basic data types</li> </ol> <p>TEST – 1</p>
<b>Control Structures</b>	<ol style="list-style-type: none"> <li>5. Conditional statements (if/else)</li> <li>6. Loops (for/while)</li> <li>7. Flow control and branching</li> </ol> <p>TEST – 2</p>
<b>Functions</b>	<ol style="list-style-type: none"> <li>8. Writing and calling functions</li> <li>9. Arguments and parameters</li> </ol>

	<b>10.Scope and lifetime of variables</b> TEST – 3
<b>Data Structures</b>	<b>11.Lists, tuples, and dictionaries</b> <b>12.Indexing and slicing</b> <b>13.Common list and dictionary operations</b> TEST – 4
<b>File I/O and Exception Handling</b>	<b>14. Reading and writing to files</b> <b>15.Handling exceptions and errors</b> <b>16.Debugging techniques</b> TEST – 5
<b>Object-Oriented Programming (OOP)</b>	<b>17.Introduction to OOP concepts</b> <b>18.Creating classes and objects</b> <b>19.Encapsulation, inheritance, and polymorphism</b> TEST – 6
<b>Intermediate Concepts</b>	<b>20.Modules and packages</b> <b>21.Regular expressions</b> <b>22.Lambda functions and generators</b> <b>23.Decorators</b> TEST – 7