**PCEP Python Introduction**

Duration: 3 Days

Course Code: NTPY100

Description

This three-day class covers topics tested in the PCEP-30-02 exam. The five modules in this course include lecture and multiple labs per module. At the end of this course, students will have the knowledge required to take and pass the Certified Entry-Level Python Programmer Certification.

Objectives

* Gain a comprehensive understanding of Python programming fundamentals, including syntax, data types, operators, and input/output operations.
* Acquire the ability to implement control flow structures such as conditional statements and loops effectively, enabling precise control over program execution.
* Learn to work with various Python data structures such as lists, tuples, dictionaries, and strings to store, manipulate, and retrieve data efficiently.
* Gain proficiency in defining and utilizing functions to modularize code, promote code reuse, and enhance code maintainability.
* Develop skills in recognizing, handling, and managing errors and exceptions gracefully in Python programs, ensuring robustness and reliability in software development.

Prerequisites

This course has no prerequisites as it is an introductory level course. Knowledge of other programming languages and/or computational logic is helpful but not required.

Outline

* Module 1: Python and Programming Fundamentals

#### Programming Terms and Definitions

#### Python’s Logic and Structure

#### Literals, Variables, and Numeral Systems

#### Operators and Data Types

#### Input and Output Console Operations

* Module 2: Control Flow

#### Conditional Statements

#### Iterations

* Module 3: Collections

#### Lists

#### Tuples

#### Dictionaries

#### Strings

* Module 4: Functions

#### User-Defined Functions and Generators

#### Parameters and Arguments

#### Scope

#### Variable Shadowing

* Module 5: Exceptions

#### Built-In Exceptions

#### Exception Hierarchy

#### Exception Handling

* Module 6: Exam Review

#### Practice Reading and Analyzing Code Snippets

#### Common Exam-Type Questions

#### Practice Exams