



Course Outline: Python Programming



Course Duration
4 Days



Delivery Method
Available as Classroom
Instructor-led training and Virtual
Instructor-led training.

COURSE OVERVIEW

Python is a powerful and popular object-oriented scripting language. This course provides a comprehensive introduction to the core syntax and functions provided by Python, including full coverage of its object-oriented features. The course also explores some of Python's powerful APIs and techniques, including file handling, XML processing, object serialization, and Web services

WHO SHOULD ATTEND

This course is ideal for anyone who would like a comprehensive introduction to Python.

MANDATORY PREREQUISITE

No specific prerequisites. Familiarity with object oriented concepts would be an advantage.

COURSE OBJECTIVES

Upon completion of this course, students will have gained the working knowledge to

- Writing clean Python code
- Working with functions and objects
- Working with regular expressions
- Handling exceptions
- Manipulating files and XML data
- Working with web services



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COURSE AGENDA

Getting Started with Python

- Overview of Python
- Installing Python
- Getting ready to develop

Python Language Fundamentals

- Overview of core Python syntax rules
- Simple data types and variables
- Object essentials
- Flow control

Working with Functions

- The benefit of functions
- Writing and calling functions
- Passing parameters

Exception Handling

- Overview of exceptions in Python
- Handling exceptions
- Raising exceptions
- Design issues

Collections

- Overview of collections in Python
- Lists
- Tuples
- Sets
- Dictionaries

Strings and Regular Expressions

- Overview of strings in Python
- Basic string manipulation
- Introduction to regular expressions
- Using regular expressions in Python

Classes and Iterators

- Defining classes
- Instance variables
- Iterators
- Creating and initializing objects

File Handling

- Overview of file handling in Python
- Reading and writing text files
- Working with binary files
- Streaming and serializing Python

objects

XML Processing

- XML essentials
- Parsing XML documents
- Searching for XML content
- Generating XML data

Web Services

- Overview of Web services
- Implementing Web services using

Python

- Caching
- Compression
- Handling redirects