

## Python Coding and Scripting

### Course Overview

Python is a functional and flexible programming language that is powerful enough for experienced programmers to use, but simple enough for beginners as well. Python is a well-developed, stable and fun to use programming language that is adaptable for both small and large development projects.

Python Coding & scripting course from CODEC Networks will teach you how to quickly write your first program in Python! You will also learn how to create custom modules and libraries. This comprehensive course covers the basics of Python as well as the more advanced aspects such as debugging and handling files.

Programmers love Python because of how fast and easy it is to use. Python cuts development time in half with its simple to read syntax and easy compilation feature. Debugging your programs is a breeze in Python with its built in debugger. Using Python makes programmers more productive and their programs ultimately better.

### Who Should Attend

The course is targeted at candidates who wish to start from basic or improve their Python skill level or developers, system administrators who wish to be able to develop, automate, and test applications and systems using Python programming languages.

### Pre-requisites

Candidates should have prior programming experience and be familiar with basic concepts of C/C++. Prior exposure to object-oriented programming concepts is not required, but definitely beneficial.

### Learning Objectives

After completing this course, students will have a fundamental understanding of how to:

- Master the fundamentals of writing Python scripts
- Learn core Python scripting elements such as variables and flow control structures
- Discover how to work with lists and sequence data
- Write Python functions to facilitate code reuse
- Use Python to read and write files
- Make their code robust by handling errors and exceptions properly
- Work with the Python standard library
- Explore Python's object-oriented features
- Search text using regular expressions
- Understand Python's flexible function protocols.
- Understand Python's memory model.
- Understand Python's straight-forward object-oriented features.

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## Course Outline

### Standard Module

- Python - Installation
- Python - Basic Syntax
- Python - Type Variables
- Python - Operators
- Python - Control Statements
- Python – loops (for loop and while loop)
- Python - break statement
- Python - continue and pass
- Python - Strings
- Python - Tuples
- Python - Lists
- Python - Dictionary
- Python - Modules
- Python - Functions
- Python - Stack and Heap
- Python - Exception
- Python - Files I/O
- Python – Pickles and Shelve
- Python - Collections Counter and Collections Deque
- Python – Collections (OrderedDict, DefaultDict, Namedtuple)
- Python - Time
- Python - Random module

### Advance Python

- Python - Regular Expression
- Python - Class
- Python – Threads and Queue
- Python - Queue with Thread
- Python - OS
- Python – Important built-in function
- Python - JSON
- Python - List & Dictionary (advance)
- Python - Networking
- Python - Configparser
- Python with Mysql