Python Programming Training Curriculum

STRUCTURE

Python Programming Training

About Croma Campus:

Croma Campus Training & Development Private Limited is an education platform since 2010 providing rigorous industry-relevant programs designed and delivered in collaboration with world-class faculty and industry.

- Hands-On Live Projects
- Simulation Test Papers
- Industry Cases Studies
- 61,640+ Satisfied Learners
- 140+ Training Courses
- 100% Certification Passing Rate
- Live Instructor Classroom / Online Training
- 100% Placement Assistance

Croma Campus Training Program Deliverables:

- **Session Recordings** - Original Class Room Voice & Video Recording
- **Training Material** - Soft Copy Handbooks
- **Assignments** | Multiple Hands-on Exercises
- **Test Papers** - We provide **Practice Test** as part of our course to help you prepare for the actual certification exam.
- **Live Case Studies**
- **Live Projects** - Hands-on exercises and Project work. You will work on real time industry-oriented projects and assignments for each module to practice.
- **Key focus on Hands-on exercises and Project work**. You will work on real time industry-oriented projects.
- Faculty with more than **10+ Years of Experience** in the Industry.
- **Technical Resume Designing & Job Assistance:** With more than 100+ Clients across the Globe and we help learners to get a good job in their respective field. We also help learners with resume preparation.
- **Interview Q&A**
- **About Croma Campus Training Certificate:** Croma Campus will provide you with an industry-recognized (Certified by **ISO 9001:2015** & **E-Cell IIT Jodhpur**) course completion certificate, which has lifelong validity.

How I unlock my Croma Campus Certificate: Attend Complete Batch & Submit at least One Completed Project.

Why Learn Python Programming ?

Python has been a favourite option for **Data Scientists** who use it for building and using **Machine Learning Applications** and other **Scientific Computations**. Python cuts development time in half with its simple to read syntax and easy compilation feature. Debugging programs is a breeze in Python with its built in debugger.

It runs on Windows, Linux/Unix and Mac OS and has been ported to Java and .NET virtual machines. Python is free to use, even for the commercial products, because of its OSI-approved open source license.

It has evolved as the most preferred Language for **Data Analytics** and the increasing search trends on Python also indicates that it is the **"Next Big Thing"** and a must for Professionals in the **Data Analytics Domain.**

Python Training Structure:

- Introduction of Python Programming
- Python Fundamentals
- Python Data Type
- String Objects and Collection
- Operators in Python
- Python Namespace
- List, Tuples, Set and Dictionaries
- Decision making Loops in Python
- Modules
- Functions
- File Handling Using Python
- Object Oriented Programming in Python
- Reg Expressions
- Python Sending Mail
- Python Multithreading
- Exception Handling in Python
- Accessing Data from Multiple Source
- Python GUI Programming

Python Programming Course Content:

Module 1: Introduction of Python Programming

- What is Python
- Installing Python
- How to Execute Python program
- Getting Help
- Python IDEs
- List the Advantages/Disadvantages of Python

Module 2: Python Fundamentals

- Literals
- Keywords
- Identifiers
- Variables
- Statement
- Expression
- Python Indentation
- Exercise for Practice
- Comments in Python

Module 3: Python Data Type

- Booleans
- Numbers
- Strings
- Bytes
- Lists
- Tuples
- Sets
- Dictionaries
- Exercise for Practice

Module 4: String Objects and Collection

- String Object Basics
- String Methods
- Splitting and joining strings
- String Format Functions
- List object Basics
- List Methods

Module 5: Operators in Python

- Arithmetic operators

- Comparison operators
- Logical operators
- Bitwise operators
- Identity operators
- Membership Operators

Module 6: Python Namespace

- About Python Namespace
- Local Namespace
- Global Namespace
- Built-in Namespace
- Name Conflict

Module 7: List, Tuples, Set and Dictionaries

- Create the List
- Accessing the List
- Indexing and Slicing Lists
- Iterate a list in Python
- List Operations
- Searching elements in a List
- Sorting a list in Python
- Built- in List Function
- What is Tuples
- Tuples Operation
- Difference between List and Tuples
- What is Dictionary
- Dictionary Operation
- What is Set in python

Module 8: Decision making Loops in Python

- Python if, if-else, else-if, nested-if
- Python Loops (for, while)
- Python break Keyword
- Python continue Key word

Module 9: Modules

- What is Module
- How to import a Module
- Import module
- The From… import statement
- The From…import* statement use
- Accessing Modules form another Directory
- Packages

- How to use packages in Python
- Import modules form a Package
- Exercise for Practice

Module 10: Functions

- Introduction to Function
- Defining a Function
- Calling a Function
- Function Arguments
- What are Args and Kwargs in Python
- Built-in Function
- Scope of the Variables
- Passing function to a Function
- Decorators
- Recursion Concept
- Iterators
- Nested Statements
- Lambda Functions
- Map, Reduce & filter functions
- List Comprehensions

Module 11: File Handling Using Python

- How to create a File
- Writing data to a File
- Reading data from a file using various read Methods
- Additional file Methods
- Pickling and Unpicking in Python

Module 12: Object Oriented Programming in Python

- OOPS basic concepts
- Class and Object
- Use of self in OOPS
- Constructors
- Accessor & Mutator in Python
- Inheritance
- Polymorphism
- Method Overriding
- Special methods

Module 13: Reg Expressions

- Intro to Regular Expression
- Use of the re Library
- Use of Match() and Search() Method in Reg Ex

- Grouping
- Replace with sub() Method
- Use of Special Characters
- Flags

Module 14: Python Sending Mail

- Sending an Text e-mail using Python
- Sending an HTML e-mail using Python
- Sending Attachments as an E-mail

Module 15: Python Multithreading

- What is the Thread
- Thread Life Cycle
- Create the Thread

Module 16: Exception Handling in Python

- Python Error
- Python Exception
- Handle the Exception
- What is Try, finally and Except
- Use of the Python Built-in Exception
- Most common exception errors in Python

Module 17: Accessing Data from Multiple Source

- Reading and writing data from Local Files (.txt,.csv,.xls, .json, etc)
- Reading data from Remote Files.
- Scraping Tables from Web Pages (.html)
- Making the most of the powerful Read Table Method
- Exercise for Practice

Module 18: Python GUI Programming

- Intro of the GUI using Tkinter
- Create First GUI Application
- Create label and set Font size and colour
- Create Button and his Event
- Get Input Using Entry Class
- Set the Check State of a Check-button
- Create a Message Box
- Show Warning and Error Messages
- Add a File Dialog
- Live Project (Tk player)