

Learn **Python**

CREDO SYSTEMZ

Python Course Curriculum

Our Python training course content covers all the latest topics from basics to very advanced. Here we will give you the brief exposure of various Python packages and frameworks.

Who We Are

Credo Systemz boasted as the Best IT Training institute in Chennai, aim in educating the workforce to the IT industry. Along with a team of highly experienced and qualified trainers, we offer state of the art training with excellent infrastructure to keep you above par for the emerging IT skill trends.

With individual attention to our Customers, unique mentorship from trainers with hands-on project training, career & placement guidance, we have 15000+ happy customers who have distinguished us from our competitors, with their satisfied reviews.

Why Choose US

Be it an individual or a corporate collaboration, our dedicated team will serve and assist you for your needs to enhance the effectiveness of training with utmost commitment to your professional development. Also, with comprehensive course duration & Flexible schedule & training pattern, allowing candidates to choose between week day \ week end sessions, or online learning sessions or for our corporate friends to conduct the training in their office premises, we are committed to deliver as per the need of our customer.



Real Time Projects

Advanced 15+ live projects that involve various Python concepts to gain practical experience through guidance.



Hands-on Assignments

With the minimum of 60 hours, every session is handled to create better understanding of concepts with practice to gain coding skills.



Expert Faculty

Learn from expert faculties with great industry exposure who are dedicated towards designing our Python curriculum and leading the course.



Lifetime Support & Access

Lifetime access to our LMS and guidance with the help of Technical Forum from 24x7 online support team.



Assured Placement

Dedicated Placement Team engaged constantly with the HR's in the industry to find the right opportunity for you.



Certification

Industry recognized Certification as a Python Certified Professional by Credo Systemz that adds weightage to your resume.



I joined Python training at Credo Systemz which is referred to by my friend and this is the right decision that I made. My Python training tutor teaches each concept in a detailed manner using real-world examples. The Python training curriculum covers all the latest concepts which meet industrial standards. Thanks to my trainer who helps to complete the Python certification successfully.

- Radha

Cloud Solution Architect





01 Introduction

Topics

- What's python?
- Why do people use python?
- Some quotable quotes
- A python history lesson
- Advocacy news
- What's python good for?
- What's python not good for?
- The compulsory features list
- Python portability
- On apples and oranges
- Summary: why python?

02 Using the Interpreter & Text Editor

Topics

- Introduction to Sublime & Pycharm
- Config Pycharm for Python Project
- How Python Runs Programs
- How You Run Programs
- Configuration Details
- Module Files: A First Look
- The Idle Interface
- Other Python Ides
- Time To Start Coding
- Lab Session 1

Hands-on Practicals:

- Writing the Python Program in text editor and execute from command prompt.
- Writing the Python Program in Notebook and execute from Notebook.
- Writing the Python Program in IDE and execute from IDE

03 Types and Operators

Topics

- A First Pass
- The 'Big Picture'
- Numbers
- Dynamic Typing Interlude
- Strings
- Lists
- Dictionaries
- Tuples
- General Object Properties
- Mutable vs Immutable
- Summary: Python's Type Hierarchies
- Built-In Type Gotchas
- Lab Session 2



Hands-on Practicals:

- Writing the program to expose all the Arithmetic Operators.

04 Basic Statements



Topics

- Introduction to Reserved Key words
- General Syntax Concepts
- Expressions
- Print
- If Selections
- Python Syntax Rules
- Documentation Sources Interlude
- Truth Tests
- While Loops
- Break, Continue, Pass, And The Loop Else
- For Loops
- Comprehensions And Iterations
- Loop Coding Techniques
- Comprehensive Loop Examples
- Basic Coding Gotchas
- Preview: Program Unit Statements
- Lab Session 3



Hands-on Practicals:

- Writing the program to expose more on Logical Programing
- Example: Prime Number, Fibonacci series
- Writing the Program to manipulate List, Tuple, Set and Dict

05 Functions



Topics

- Function Basics
- Scope Rules In Functions
- More On "Global" (And "Nonlocal")
- More On "Return"
- More On Argument Passing
- Special Argument Matching Modes
- Odds And Ends
- Generator Expressions And Functions
- Function Design Concepts
- Functions Are Objects: Indirect Calls
- Function Gotchas
- Optional Case Study: Set Functions
- Lab Session 4



Hands-on Practicals:

- Writing the module framework to implement calculator app.



06 Modules

Topics

- Module Basics
- Module Files Are A Namespace
- Name Qualification
- Import Variants
- Reloading Modules
- Package Imports
- Odds And Ends
- Module Design Concepts
- Modules Are Objects: Metaprograms
- Module Gotchas
- Optional Case Study: A Shared Stack Module
- Lab Session 5

Hands-on Practicals:

- Writing the Object-Oriented programming to implement application.

07 Classes

Topics

- Oop: The Big Picture
- Class Basics
- A More Realistic Example
- Using The Class Statement
- Using Class Methods
- Customization Via Inheritance
- Specializing Inherited Methods
- Operator Overloading In Classes
- Namespace Rules: The Whole Story
- Oop Examples: Inheritance And Composition
- Classes And Methods Are Objects
- Odds And Ends
- New Style Classes
- Class Gotchas
- Optional Case Study: A Set Class
- Summary: Oop In Python
- Lab Session 6

Hands-on Practicals:

- Writing the Object-Oriented programming to implement application.



08 Exceptions

Topics

- Exception Basics
- First Examples
- Exception Idioms
- Exception Catching Modes
- Class Exceptions
- Exception Gotchas
- Lab Session 7

Hands-on Practicals:

- Writing the program to handle the difference type of exceptions

09 Built-in Tools Overview

Topics

- The Secret Handshake
- Debugging Options
- Inspecting Name-Spaces
- Dynamic Coding Tools
- Timing And Profiling Python Programs
- File Types And Packaging Options
- Development Tools For Larger Projects
- Summary: Python Tool-Set Layers
- Lab Session 7 Continued

Hands-on Practicals:

- Writing the program to design the logic for Age Calculator.
- Writing the program to design the logic for Guessing Game.

10 System Interfaces

Topics

- System Modules Overview
- Running Shell Commands
- Arguments, Streams, Shell Variables
- File Tools
- Directory Tools
- Forking Processes
- Thread Modules And Queues
- The Subprocess And Multiprocessing Modules
- Ipc Tools: Pipes, Sockets, Signals
- Fork Versis Spawnv
- Larger Examples
- Lab Session 8



Hands-on Practicals:

- Writing the program to read and write the data in text file.
- Writing the program to read and write the data in json file.
- Writing the program to read and write the data in csv file.

11 GUI Programming



Topics

- Python Gui Options
- Introduction of Tkinter
- The Tkinter 'Hello World' Program
- Adding Buttons, Frames, And Callbacks
- Getting Input From A User
- Assorted Tkinter Details
- Building Guis By Subclassing Frames
- Reusing Guis By Subclassing And Attaching
- Advanced Widgets: Images, Grids, And More
- Designing UI using QT4 Designer
- Introduction to PySide2
- Converting UI into Application Using PySide
- Larger Examples
- Tkinter Odds And Ends
- Lab Session 8 Continued



Hands-on Practicals:

- Writing the program to design the GUI and logic for Age Calculator.
- Writing the program to design the GUI and logic for Guessing Game.
- Writing the program to design the GUI and logic for Digital Calculator.

12 Databases and Persistence



Topics

- Databases and Persistence
- Object Persistence: Shelves
- Storing Class Instances
- Pickling Objects Without Shelves
- Using Simple Dbm Files
- Shelve Gotchas
- Zodb Object-Oriented Database
- Python Sql Database Api
- Persistence Odds And Ends
- Lab Session 9



Hands-on Practicals:

- Writing the program to Create the Table and Insert Data in it.
- Writing the program to Read data from the Table and manipulate it.

13

Text Processing



Topics

- String Objects: Review
- Regular Expressions
- Lab Session 10
- Splitting And Joining Strings
- Parsing Languages



Hands-on Practicals:

- Writing the program to validate the User Name, Password, Mobile No and Mail Pattern.

14

Internet Scripting



Topics

- Using Sockets In Python
- Building Web Sites With Python
- Active Scripting And Com
- The Ftp Module
- Writing Server-Side Cgi Scripts
- Other Internet-Related Tools
- Email Processing
- Jython: Python For Java Systems
- Lab Session 11
- Other Client-Side Tools



Hands-on Practicals:

- Writing the program to send email to your friend using Python.

Topics

- Unicode Text And Binary Data
- Managed Attributes
- Decorators
- Metaclasses
- Context Managers
- Python 3.X Changes
- Lab Session 12

Hands-on Practicals:

- Writing the program to create the wrapper class and use it for all the functions

Laboratory Exercises

- Lab 1: Using The Interpreter
- Lab 2: Types And Operators
- Lab 3: Basic Statements
- Lab 4: Functions
- Lab 5: Modules
- Lab 6: Classes
- Lab 7: Exceptions And Built-In Tools
- Lab 8: System Interfaces And GUIS
- Lab 9: Persistence
- Lab 10: Text Processing And The Internet
- Lab 11: Decorators And Meta classes

Real Time Projects

- Building the Credo Enquiry Form
- Building the Registration form on submission the data should be stored in the DB .
- Building the Login application and validating the user against the database .
- Guessing Game
- Date Of Birth Calculator
- Calculate the monthly expenses of your credit card.
- Rock Paper Scissors Game
- Bank - ATM Operations





Real Time Projects For - Case Studies



Bank - ATM Operations

Developing the ATM transactions like checking balance, withdraw, and all other Banking process Using Python OOPS concepts and libraries.



Calculate monthly expenses of your credit card

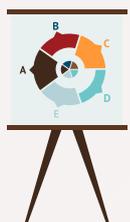
Download the credit card statement in excel and develop the Python logic to read data from excel using openpyxl and calculate the monthly expenses .



Guessing Game

Develop the Guessing Game Using Python Random Package . The program should generate the random value between 1 to 100 and validate against user input .

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