Unogeeks

Python Certification Training Course Content

Course Duration – 45-50 Hrs., 7-8 Weeks

Course Information

Batch Options

Weekday Batch
Mon – Fri – 1.5 Hr./Day

About the Trainer

Industry Expert Trainer with 15+ Years
Real Time Work Experience at Top US
Based Product and Consulting Firms

Contact Us

Mobile: +91 73960 33555
WhatsApp: +91 73960 33555
Mail: Prasad@unogeeks.com
Website: https://unogeeks.com

Introduction To Python Training

Python

Python is world's fastest growing and most popular programming language used by software engineers, analysts, data scientists, and machine learning engineers alike.

What you'll learn

- Master Control Flow Statements, Functional Programming, Collections in Python
- Explore In-Depth Python Modules and Packages, Files, Errors and Exceptions Handling
- Understand OOPS, Python Decorators & Generators, Advanced Python Modules
- Web Scraping with Python, Emails, Standard Libraries, VENV using Flask
- Database Programming with Python & Data Science Libraries
- Build 15+ Python Real Time Project Examples
- Prepare for Python certification exams and get Job Ready
- Resume & Interview preparation and Job Assistance

Course Content

Module 1: Introduction to Python and Setup

- Overview of Programming Languages
- Why Python is quite popular?
- Overview of Python
- Command Line Basics
- Installing Python and other tools
- Run Hello World in Python

Module 2: Python Basics

- Introduction to Python Data Types
- Python Numbers
- Numbers: Simple Arithmetic
- Variable Assignments
- Introduction to Strings
- Quick Print Check
- Indexing and Slicing with Strings
- String Indexing, Slicing
- String Properties and Methods
- Print Formatting with Strings
- Booleans in Python

Module 3: Python Control Flow Statements

- Comparison Operators in Python
- If Elif and Else Statements in Python
- For Loops in Python
- While Loops in Python
- range() function
- break and continue Statements, and else Clauses on Loops
- pass Statements
- match Statements

Module 4: Functional Programming in Python

- Methods and the Python Documentation
- Introduction to Functions
- Types of functions
- Function Arguments
- Anonymous functions
- Special functions (map, reduce, filter)
- Default Argument Values
- Keyword Arguments
- Special parameters
- Positional-or-Keyword Arguments
- Function Examples
- Arbitrary Argument Lists
- Unpacking Argument Lists
- Lambda Expressions
- Documentation Strings

Module 5: Collections in Python

- Lists
- Using Lists as Stacks
- Using Lists as Queues
- List Comprehensions
- Nested List Comprehensions
- The del statement
- Tuples and Sequences
- Sets
- Dictionaries
- Looping Techniques
- More on Conditions
- Comparing Sequences and Other Types

Module 6: Python Modules and Packages

- Modules
- Executing modules as scripts
- The Module Search Path
- Compiled Python files
- Standard Modules
- The dir() Function
- Packages
- Importing * From a Package
- Intra-package References
- Packages in Multiple Directories

Module 7: Files and Input/Output in Python

- File Read Operations
- File Write Operations
- Methods of File Objects
- Handling image, excel, txt and csv files
- Saving structured data with json

Module 8: Errors and Exceptions Handling

- Errors and Exceptions
- Syntax Errors
- Exceptions
- Handling Exceptions
- Raising Exceptions
- Exception Chaining
- User-defined Exceptions
- Defining Clean-up Actions
- Predefined Clean-up Actions
- Raising and Handling Multiple Unrelated Exceptions
- Enriching Exceptions with Notes

Module 9: Object Oriented Programming in Python

- Introduction to Object Oriented Programming
- Attributes and Class Keyword
- Class Object Attributes and Methods
- Inheritance and Polymorphism
- Instance & Method Objects
- Special Methods - Magic/Dunder

Module 10: Python Decorators & Generators

- Decorators
- Generators

Module 11: Advanced Python Modules

- Introduction to Advanced Python Modules
- Python Collections Module
- Opening and Reading Files and Folders (Python OS Module)
- Python Datetime Module
- Python Math and Random Modules
- Python Debugger
- Python Regular Expressions Part One
- Python Regular Expressions Part Two
- Python Regular Expressions Part Three
- Timing Your Python Code
- Zipping and Unzipping files with Python

Module 12: Web Scraping with Python

- Introduction to Web Scraping
- Setting Up Web Scraping Libraries
- Grabbing a Title
- Grabbing a Class
- Grabbing an Image

Module 13: Emails with Python

- Introduction to Emails with Python
- Sending Emails with Python
- Receiving Emails with Python

Module 14: Standard Libraries – Part I

- Operating System Interface
- File Wildcards
- Command Line Arguments
- Error Output Redirection and Program Termination
- String Pattern Matching
- Mathematics
- Internet Access
- Dates and Times
- Data Compression

Module 15: Standard Libraries – Part II

- Performance Measurement
- Quality Control
- Output Formatting
- Templating
- Working with Binary Data Record Layouts
- Multi-threading
- Logging
- Decimal Floating-Point Arithmetic
- Weak References

Module 16: Virtual Environments and Packages using Flask

- Introduction to Virtual Environments and Packages
- Creating Virtual Environments
- Working with venv
- Installing Flask and Creating a Flask app
- HTTP GET and POST Request Methods in Flask
- Flask Folder Hierarchy
- Managing Packages with pip

Module 17: Version Control Using GitHub

- Creating a Repository
- Files State
- Commit and undo Commit
- File Removing and Merging
- Git Remove, PULL, PUSH, CLONE

Module 18: Data Science Libraries with Python

- Numpy
- Seaborn
- Pandas
- Matplotlib
- Jupyter Notebook

Module 19: Database Programming in Python – Part I

- Basics of database management
- Python MySql
- Create database
- Create, Drop a table
- Insert into table

Module 20: Database Programming in Python – Part II

- Select query, Where clause and OrderBy clause, Limit clause
- Update, Delete query
- Join and Self-Join
- MongoDB (Unstructured)
- Insert_one, Insert_many, Update_one, Update_many, Create_index , Drop_index
- Delete and drop collections
- Limit query

********** Python Real Time Project Examples **********

Module 21: Real Time Project Example 1, 2

- Introduction to Realtime Project Examples 1, 2
- Build Examples 1, 2 for Realtime scenarios
- Test the Examples and debug the if required

Module 22: Real Time Project Example 3, 4

- Introduction to Realtime Project Examples 3, 4
- Build Examples 3, 4 for Realtime scenarios
- Test the Examples and debug the if required

Module 23: Real Time Project Example 5, 6

- Introduction to Realtime Project Examples 5, 6
- Build Examples 5, 6 for Realtime scenarios
- Test the Examples and debug the if required

Module 24: Real Time Project Example 7, 8

- Introduction to Realtime Project Examples 7, 8
- Build Examples 7, 8 for Realtime scenarios
- Test the Examples and debug the if required

Module 25: Real Time Project Example 9, 10

- Introduction to Realtime Project Examples 9, 10
- Build Examples 9, 10 for Realtime scenarios
- Test the Examples and debug the if required

Module 26: Real Time Project Example 11, 12

- Introduction to Realtime Project Examples 11, 12
- Build Examples 11, 12 for Realtime scenarios
- Test the Examples and debug the if required

Module 27: Real Time Project Example 13, 14

- Introduction to Realtime Project Examples 13, 14
- Build Examples 13, 14 for Realtime scenarios
- Test the Examples and debug the if required

Module 28: Real Time Project Example 15 + Course Revision

- Introduction to Realtime Project Example 15
- Build Example 15 for Realtime scenario
- Course Revision

Module 29: Python Certification Exam Prep

- Explain various Python Certification Options
- Discuss 50+ Important Python Certification Questions
- Practice Python Certification questions

Module 30: Resume Preparation, Interview and Job Assistance

- Prepare Crisp Resume as Python Developer
- Discuss common interview questions in Python
- Explain students what jobs they should target and how