

Basic Python - 24 hours

Course description

The Python Basic Programming course provides a solid foundation in Python with a practical focus on data-oriented use cases. Participants learn core programming concepts, data structures, functions, file handling, and how to work with external data sources such as JSON, databases, and APIs. The course is designed to gradually introduce Python as a powerful tool for data analysis and automation, and to build a professional foundation for further development in data-related roles.

What Participants Gain?

Graduates leave the course with hands-on Python skills, the ability to work with common data structures and file formats (CSV, JSON), connect to external data sources and APIs, debug and handle errors in code, and apply Python to real-world data and analytics use cases as a strong foundation for continued professional growth.

Target Audience

- Data analysts
- BI professionals
- Junior developers
- Data practitioners in organizations
- Professionals who want to integrate Python into their daily work
- Anyone interested in practical data manipulation with Python

Prerequisites

- Experience with data engineering concepts and workflows
- Familiarity with databases, data pipelines, and basic programming
- Basic understanding of APIs and working with structured data
- No prior experience with AI or LLMs is required

Course Syllabus:

Basic Python

- Fundamentals
 - Introduction to Python
 - Python essentials
 - Working environment
- Data Types
 - Numbers
 - Strings
 - Booleans
 - None
- Collections
 - Lists
 - Tuples
 - Dictionaries
 - Sets
- Control Flow
 - if / else
 - for / in
 - list comprehensions
 - while
 - continue & break
- Textual Interface
 - input
 - string formatting

Python programming Basics

Intermediate Python

- Functions
 - User-defined functions
 - *args and **kwargs
 - Built-in functions
 - Lambda expressions
- Debugging and Error Handling
- Working with Text Files
- The Standard Library

- import
 - datetime
- General Tools
 - Introduction to regular expressions (re)
 - APIs and connecting to data resources
 - Working with JSON
 - Introduction to databases with SQLAlchemy
 - HTTP web requests with the requests package