



PYTHON TRAINING

Python For Etl Course

Master Python for efficient data extraction, transformation, and loading. Automate data workflows and build robust ETL pipelines.

DURATION

2 hours

LEVEL

Intermediate

FORMAT

Instructor-Led

- Globally Recognized Certification

- Expert-Led Hands-On Training

- Flexible Scheduling

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COURSE OVERVIEW

This "Python for ETL Course" is specifically designed for intermediate data professionals eager to master the crucial processes of Extract, Transform, and Load (ETL) using Python. In an era dominated by data, efficient and automated data integration is paramount, and Python stands out as a powerful, flexible, and scalable solution for managing diverse data sources. This intensive 2-hour course delves into leveraging key Python libraries like Pandas for robust data manipulation, SQL connectors for database interaction, and basic principles of API clients to automate data extraction, perform complex transformations, and reliably load processed data into target systems.

Participants will gain practical, hands-on experience in constructing essential ETL pipelines, learning to handle various data formats, effectively clean and reshape data for analytical readiness, and ensure data integrity throughout the process. By the end of this concentrated course, you will be equipped with the fundamental skills to streamline data workflows, significantly reduce manual effort, and make a tangible contribution to data-driven decision-making within your organization, enhancing your value in any data-centric role.

Duration	2 hours
Level	Intermediate
Vendor	Python

COURSE CURRICULUM

01 Module 1: Introduction to Python for ETL

- Understanding the ETL Process and its Business Value
- Why Python for ETL: Strengths and Use Cases
- Setting Up Your Python Environment: Pip and Virtual Environments
- Introduction to Key Libraries: Pandas, SQLAlchemy (conceptual)

02 Module 2: Data Extraction Techniques

- Extracting Data from Flat Files (CSV, Excel) using Pandas
- Connecting to Relational Databases (e.g., SQLite) with Python
- Executing SQL Queries to Extract Data
- Basic Principles of Extracting Data from Web APIs (conceptual overview)

03 Module 3: Data Transformation with Pandas

- Loading Extracted Data into Pandas DataFrames
- Data Cleaning: Handling Missing Values (fillna, dropna)
- Data Deduplication and Consistency Checks
- Data Manipulation: Filtering, Sorting, Grouping, Aggregation
- Merging and Joining DataFrames

04 Module 4: Loading Transformed Data & Basic Automation

- Writing Data to Flat Files (CSV, Excel)
- Loading Data into Relational Databases using Pandas `to\_sql()`
- Building a Simple End-to-End ETL Script
- Introduction to Error Handling (try-except blocks)

CAREER PATHWAYS

Graduates of this program are prepared for the following roles:

- > **Junior Data Engineer**
- > **Business Intelligence Developer specializing in Data Integration**
- > **Data Analyst with Automation Responsibilities**

FREQUENTLY ASKED QUESTIONS

Q: What specific Python libraries and tools will I master in this 2-hour Python for ETL course?

This course is intensely focused on practical application, ensuring you gain proficiency with foundational libraries crucial for ETL. You will deeply engage with Pandas for powerful data manipulation and transformation, and learn to use Python's built-in capabilities and database connectors (like sqlite3 or SQLAlchemy's core features) for seamless data extraction and loading from various sources.

Q: Is prior data engineering or specific ETL experience a prerequisite for this intermediate Python course?

No prior specific data engineering experience is strictly required. This course is designed for individuals with an intermediate understanding of Python programming fundamentals (variables, control flow, functions) and a basic grasp of data concepts. While familiarity with SQL or general data structures would be beneficial, the course will guide you through the ETL process from the ground up using Python.

Q: Given the 2-hour duration, what practical skills can I expect to apply immediately in my role after completing this course?

Despite its concise duration, this course is designed for immediate impact. You will learn to construct basic Python scripts to automate core ETL tasks: extracting data from common sources like CSVs and databases, performing essential data cleaning and transformation using Pandas, and loading the processed data into target systems. This enables you to start building simple, efficient data pipelines that automate repetitive data integration challenges in your daily work.

ABOUT COMPUTER PRIDE



East Africa's Premier IT Training Center

With over 15 years of excellence, Computer Pride delivers globally recognized certification programs from leading technology vendors. Located on Kenyatta Avenue in Nairobi's CBD, our state-of-the-art facilities and expert instructors have empowered thousands of professionals across East Africa.

15+

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READY TO ENROL?

Take the next step in your technology career.

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