BUILD AND IMPLEMENT APIS WITH PYTHON

Course Code: 840200

Learn to use Python to both access APIs and to build API sites

Programmatic access to data through Application Programming Interfaces (APIs) is an increasingly important skill for programmers. This course teaches you both how to use Python to access APIs as well as build your own API sites. You'll learn about a variety of data serialization formats, multiple API accessing libraries, and how to build sites that host APIs using both FastAPI and Django.

This course is lab focused and you'll gain hands-on experience working with and building APIs.

What You'll Learn

- Serializing and deserializing in JSON, CSV, YAML, and XML formats
- Scraping data from the web using the Python requests and Beautiful Soup libraries
- Authenticating to API services
- How to interact with REST API services
- SQL and SQLAlchemy for database access
- Speeding up API access through concurrent programming (threading, asyncio, and multi-processing)
- Building FastAPI web sites
- Building Django web sites for APIs

Who Needs to Attend

- Data scientists
- Software developers
- Python enthusiasts

Prerequisites

General Python programming knowledge is required

- Python Foundations course or equivalent knowledge

skillsoft global knowledge™

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VIRTUAL CLASSROOM LIVE	$1,995 USD	4 Day

Virtual Classroom Live Outline

- **Fetching Data**
  - Serializing and deserializing data in JSON, CSV, YAML, and XML
  - Using the Python requests library
  - Scraping web pages
  - Using the Python Beautiful Soup library
- **Authenticating to APIs**
  - Header based authentication
  - JSON Web Tokens (JWT)
- **REST Interfaces**
  - HTTP Methods
  - Create, Read, Update, and Delete (CRUD) actions
  - REST nouns and verbs
  - Writing good REST URLs
- **GraphQL**
  - How to fetch data from a GraphQL interface
  - Using GraphQL web tools
- **SQL**
  - Introduction to SQL
  - Using SQLite and the sqlite3 command-line interface
  - Writing Python SQLAlchemy scripts to access databases using both the text and function interfaces
- **Concurrent Programming**
  - How to write concurrent code to speed up your API access
  - The difference between I/O bound and CPU bound concurrency
  - Writing Python asyncio routines
  - Using Python's threading library
  - Using Python's mulit-processing library

- **FastAPI**
  - Writing an API server using FastAPI
  - Writing a complete REST interface using GET, POST, PUT, PATCH, and DELETE
  - How to use Pydantic to specify payload serialization
- **Django for APIs**
  - Introduction to the Django web framework
  - Using Django to access a database
  - Writing web views in Django
  - Using the Django Ninja library to build APIs

Virtual Classroom Live Labs

- Reading JSON data
- Converting CSV to JSON
- Converting YAML to CSV
- Converting XML to YAML
- Fetching JSON data
- craping a web page
- Dealing with Pagination
- Authenticating to an API with headers
- Authenticating with JWT
- Using REST API end-points
- Using GraphQL
- Exploring a database with sqlite3
- Using SQLAlchemy's text() interface
- Using SQLAlchemy's function interface
- Fetching from multiple sources concurrently
- Threading and multi-processing
- A complete REST interface in FastAPI
- FastAPI file uploads and page redirects
- Django views and routes
- Django database access
- Django Admin
- Database relationships in Django ORM
- Django Ninja for APIs
- A complete REST interface in Django Ninja
- Writing secure API end-points in Ninja

Jan 26 - 29, 2026 | 8:30 AM - 4:30 PM EST

Mar 30 - Apr 2, 2026 | 8:30 AM - 4:30 PM EDT

May 11 - 14, 2026 | 8:30 AM - 4:30 PM EDT

Jul 6 - 9, 2026 | 8:30 AM - 4:30 PM EDT

Sep 28 - Oct 1, 2026 | 8:30 AM - 4:30 PM EDT

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PRIVATE GROUP TRAINING	4 Day

Visit us at www.globalknowledge.com or call us at 1-866-716-6688.

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