

BUILDING APIs WITH PYTHON FAST TRACK

Course Code: 100417

Learn to design, build, and interact with APIs using Python.

This course provides a comprehensive guide to building and interacting with APIs using Python, equipping participants with the skills needed to create, manage, and deploy RESTful APIs effectively. The curriculum focuses on modern frameworks, secure design principles, and the full lifecycle of API deployment. Labs on core Python fundamentals are included for those who need it, and advanced topics are included for those who don't.

What You'll Learn

- Apply foundational Python concepts directly to API development.
- Design and build secure, database-backed APIs using modern Python frameworks.
- Implement user authentication and protect API routes.
- Containerize applications for consistent, repeatable deployments.
- Integrate API development into an automated CI/CD workflow.

Who Needs to Attend

- Backend Developers
- Software Engineers
- Full-Stack Developers
- Data Scientists/Analysts
- DevOps Engineers/Automation Specialists
- Technical Leads or Product Managers

Prerequisites

- Recommended Prerequisite: Python Basics
- Coding experience in another language serves as an adequate prerequisite

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VIRTUAL CLASSROOM LIVE \$2,855 CAD 3 Day

Virtual Classroom Live Outline

Python Fundamentals for APIs

- Lecture: Practical Application of Lists
- Lecture + Lab: Lists
- Lecture: Practical Application of Dict
- Lecture + Lab: Dictionaries
- Challenge: List and Dict Modeling
- Lecture + Lab: Your First API Request
- Lecture: Control Flow and Functions (NEW-LECTURE)
- Lecture + Lab: Modules, Libraries, and Exception Handling

Consuming APIs

- Lecture: Python Data sets vs JSON
- Lecture + Lab: Python Data to JSON file
- Lecture + Lab: requests library - RESTful GET and JSON parsing
- Lecture + Lab: requests library - Open APIs
- Lecture + Lab: requests library - GET vs POST to REST APIs
- Lecture + Lab: Secure API Requests with the requests library

Building RESTful APIs

- Lecture: Intro to Flask
- Lecture + Lab: Building APIs with Python
- Lecture: Learning sqlite3
- Lecture + Lab: Tracking API Data with sqlite3
- Lecture + Lab: Tracking Inventory with sqlite3

Securing and Managing APIs

- Lecture + Lab: APIs and Dev Keys
- Lecture + Lab: RESTful APIs and Dev Keys
- Lecture + Lab: Flask Sessions
- Lecture + Lab: Flask Uploading and Downloading Files
- Lecture + Lab: Securing Your API

Production Readiness

- Lecture + Lab: Running Flask in a Docker Container
- Lecture + Lab: Flask and waitress
- Lecture + Lab: Automating Deployment with CI/CD

Advanced and Optional Topics

- Lecture + Lab: Introduction to FastAPI
- Lecture + Lab: Asynchronous API Requests with asyncio
- Lecture + Lab: Using Swagger for API Documentation
- Lecture + Lab: Using Jinja2 for Dynamic Content

Virtual Classroom Live Labs

- Lab 1 - Using vim
- Lab 2 - Making a GitHub account
- Lab 3 - Getting dir(obj) help() and pydoc
- Lab 4 - Lists
- Lab 5 - Dictionaries
- Lab 6 - List and Dict Modeling
- Lab 7 - try and except
- Lab 8 - Python Data to JSON file
- Lab 9 - Python Data to YAML file
- Lab 10 - pandas dataframes - MS Excel, csv, json, HTML and beyond
- Lab 11 - CSV data - Standard Library and pandas dataframes
- Lab 12 - Introducing Paramiko
- Lab 13 - Paramiko SFTP with UN and PW
- Lab 14 - Paramiko SSH with RSA
- Lab 15 - Scripting Commands over SSH
- Lab 16 - RESTful Open APIs
- Lab 17 - RESTful Open APIs with requests
- Lab 18 - requests library - Open APIs
- Lab 19 - APIs and Dev Keys
- Lab 20 - RESTful APIs and Dev Keys
- Lab 21 - Logging API Behavior
- Lab 22 - requests library - GET vs POST to REST APIs
- Lab 23 - requests library - RESTful GET and JSON parsing
- Lab 24 - etcd and RESTful Client-side Design
- Lab 25 - Construct a SimpleHTTPServer and HTTP Client
- Lab 26 - Python to Cisco NX-OS API
- Lab 27 - Swagger for API Design
- Lab 28 - Building APIs with Python
- Lab 29 - Flask APIs and Jinja2
- Lab 30 - Flask APIs and Cookies
- Lab 31 - Flask Sessions
- Lab 32 - Flask Redirection, Errors, and API Limiting

- Lab 33 - Flask Uploading and Downloading Files
- Lab 34 - Learning sqlite3
- Lab 35 - Tracking API Data with sqlite3
- Lab 36 - Tracking Inventory with sqlite
- Lab 37 - Running Flask in a Docker Container
- Lab 38 - OAuth
- Lab 39 - Started with Django
- Lab 40 - Working With Threads
- Lab 41 - The Multiprocessing Module
- Lab 42 - Queues and Pipes
- Lab 43 - Introduction to Async IO
- Glossary

Apr 22 - 24, 2026 | 10:00 AM - 6:00 PM EDT

Jul 22 - 24, 2026 | 10:00 AM - 6:00 PM EDT

Sep 21 - 23, 2026 | 10:00 AM - 6:00 PM EDT



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PRIVATE GROUP TRAINING

5 Day

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

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