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#### PHOENIX TS

# **Advanced Python 3 Programming Training**

This advanced training addresses the programming language's more complicated features such as high level data structures, constructing GUIs, network and CGI programming.

**BONUS! Cyber Phoenix Subscription Included:** All Phoenix TS students receive complimentary ninety (90) day access to the Cyber Phoenix learning platform, which hosts hundreds of expert asynchronous training courses in Cybersecurity, IT, Soft Skills, and Management and more!

## **Course Overview**

Our 2-day, instructor-led Advanced Python 3 Programming Training course, students already familiar with Python programming will learn the following:

- Advanced Python techniques such as Jupyter Notebook, the Collections module
- Mapping and filtering, lamba functions, advanced sorting
- Working with regular expressions in Python
- Working with databases, CSV files, JSON and XM
- Writing object-oriented code, testing and debugging
- · Unicode and text encoding.

Students should be familiar with Python programming. This knowledge can be developed in the <u>Introduction to Python 3 Programming Training</u> course.

## **Schedule**

Currently, there are no public classes scheduled. Please contact a Phoenix TS Training Consultant to discuss hosting a private class at 301-258-8200.

## **Course Outline**

#### **Advanced Python Concepts**

- Lambda functions
- Advanced list comprehensions
- Exercise rolling 5 dice
- Collections module
- Exercise creating a defaultdict
- Exercise creating a OrderdDict
- Exercise creating a counter
- Exercise working with a deque
- · Mapping and filtering
- Mutable and immutable built-in objects
- Sorting
- Exercise converting list.sort() to sorted (iterable)
- Unpacking sequences in functions calls
- Exercise converting a string to a datetime.date object
- Modules and packages

#### **Working With Data**

- Relational databases
- Exercise querying a SQLite database
- Exercise inserting file dat into ad atabase
- CSV
- Exercise comparing data in a CSV file
- · Getting data from the web
- Exercise requests and beautiful soup
- JSON
- Exercise using JSON to print course data

## **Testing And Debugging**

- Testing for performance
- The unittest module
- Exercise fixing functions

## **Classes And Objects**

- Attributes
- Behaviors
- Classes vs objects
- Attributes and methods
- Exercise adding a roll() method to die
- Private attributes
- Properties
- Exercise properties
- Documenting classes
- Exercise documenting the die class
- Inheritance
- Exercise extending the die class
- Exercise extending the roll() method
- Static methods
- Class attributes and methods
- Abstract classes and methods
- Understanding decorators

# **Advanced Python 3 Programming Training FAQs**

#### Who should take Advanced Python 3 Programming Training?

Programmers seeking to advance their Python programming skills and basic programmers who want to learn how to incorporate the language into frameworks, software and other programs.

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Starting at **\$1,790** 



#### **Price Match Guarantee**

We'll match any competitor's price quote. Call 301-258-8200 Option 4.

## This **Advanced Python 3 Programming Training** class includes:

- 2 days instructor-led training
- Advanced Python 3 Programming Training book
- Notepad, pen and highlighter
- Variety of bagels, fruits, doughnuts and cereal available at the start of class\*
- Tea, coffee and soda available throughout the day\*
- Freshly baked cookies every afternoon\*

\*denotes this benefit is only available at participating locations