PY-ADVP

PYTHON ASSOCIATE – PROGRAMMER II

DURATION	LEVEL	TECHNOLOGY	DELIVERY METHOD	TRAINING CREDITS
3 Days	Advanced	Python	Instructor Led	NA

INTRODUCTION

In this Python training course, students already familiar with Python programming will learn advanced Python techniques. This advanced Python course is taught using Python 3; however, differences between Python 2 and Python 3 are noted.

AUDIENCE PROFILE

This course is intended for students who have attended the Introduction to Python Training as well as students who are already familiar with Python programming.

PREREQUISITES

Before attending this course, delegates must have basic Python programming experience. Students should be very comfortable with:

- Working with strings
- Working with lists, tuples and dictionaries
- Loops and conditionals of Writing your own functions
- Some exposure to HTML, XML, JSON, and SQL

COURSE OBJECTIVES

After completing this course, students will be able to:

- Learn to work with IPython Notebook
- Learn to work with the Collections module
- Learn about mapping and filtering and lambda functions
- Learn advanced sorting
- Learn to work with regular expressions in Python
- Learn to work with databases, CSV files, JSON, and XML
- Learn to write object-oriented code in Python
- Learn to test and debug your Python code
- Learn about Unicode and text encoding

COURSE CONTENT

Module 1: IPython Notebook
- Getting Started with
- IPython Notebook
- Creating Your First IPython
- Notebook
- IPython Notebook Modes
- Useful Shortcut Keys
- Markdown
- Magic Commands
- Getting Help

Module 2: Advanced Python Concepts
- Advanced List
- Comprehensions
- Collections Module

- Mapping and Filtering
- Lambda Functions
- Advanced Sorting
- Unpacking Sequences in
- Function Calls
- Modules and Packages

Module 3: Regular Expressions
- Regular Expression Syntax
- Python's Handling of
- Regular Expressions

Module 4: Working with Data
- Databases
- CSV
- Getting Data from the Web

- HTML
- XML
- JSON

Module 5: Classes and Objects
- Creating Classes
- Attributes, Methods and
- Properties
- Extending Classes
- Documenting Classes
- Static, Class, Abstract
- Methods
- Decorators

Module 6: Testing and Debugging

- Creating Simulations
- Testing for Performance
- The unittest Module

Module 7: Unicode and Encoding
- Encoding and Decoding
- Files in Python

- Converting a File from cp1252 to UTF-8

ASSOCIATED CERTIFICATIONS & EXAM

None