



## Python 100 - Introduction to Python

- 2 Days
- Lecture and Hands-on Labs

### Course Overview

This Python fundamentals course provides essential skills required for anyone looking to advance in Python programming. It is ideal for both beginners taking their first steps in programming and seasoned developers transitioning to Python or seeking to fill gaps in their knowledge. Over two hands-on days, participants will master the core concepts that form the foundation of all Python programming and are critical for any further specialization. Additionally, this course includes all the necessary labs to prepare for and earn the PCEP certification, making it a perfect choice for those seeking official recognition of their Python proficiency. By the end of this course, students will be equipped with the essential Python knowledge and practical skills necessary for success in any Python-driven field or project. Whether you're just starting out or refining your expertise, this course will solidify your Python foundation and prepare you for advanced applications.

Review this course online at <https://www.alta3.com/courses/py-100>

### Who Should Attend

This class is designed for anyone looking to build a strong foundation in Python, providing the essential skills and concepts needed to confidently use Python at any level for any purpose. Without these foundations, further education in Python cannot occur!

### What You'll Learn

- Utilizing Python's built-in functions and creating custom functions for reusable code.
- Working with Python's core data structures such as lists and dictionaries.
- Applying conditionals and loops (`if`, `elif`, `else`, `while`, and `for`) for control flow in your programs.
- Reading from and writing to files for data interaction and manipulation.
- Importing and using Python modules, including managing third-party libraries with PIP.
- Handling errors gracefully using `try`, `except`, `else`, and `finally` blocks.
- Building and working with Python classes, including inheritance, to write object-oriented programs.

### Outline

#### Day 1

- 📄 Lecture + Lab: Built-in Functions
- 📄 Lecture + Lab: Custom Functions
- 📄 Lecture + Lab: Objects and Methods
- 💬 Lecture: Python Lists

- 📺 Lecture + Lab: Python Lists
- 🗣️ Lecture: Python Dictionaries
- 📺 Lecture + Lab: Python Dictionaries
- 🗣️ Lecture: Conditionals
- 📺 Lecture + Lab: If, Elif, and Else Conditions
- 📺 Lecture + Lab: While Loops

## Day 2

- 📺 Lecture + Lab: For Loops
- 🗣️ Lecture: Reading and Writing to Files
- 📺 Lecture + Lab: Reading Files
- 📺 Lecture + Lab: Using Modules
- 📺 Lecture + Lab: PIP and Third Party Libraries
- 📺 Lecture + Lab: Try and Except
- 📺 Lecture + Lab: Python Classes & Inheritance

## Optional- PCEP Certification Guide

- 🗣️ Lecture: Introduction to the PCEP Exam
- 📺 Lecture + Lab: Advanced Numbers and Operators
- 📺 Lecture + Lab: Pythonic Loops and Iteration
- 📺 Lecture + Lab: Advanced Lists and Tuples
- 📺 Lecture + Lab: Advanced Functionality and Error Handling

## Prerequisites

## Next Courses

Python 201 - Building API Clients and Servers Python 202 - Network Automation with Python Python 203 - Data Sciences with Python