



Python Programming Primer / Quick Start to Python

Hands-On Quick Introduction to Python Basics

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Course Snapshot

- **Course:** Python Programming Primer / Quick Start to Python (TT4802) (Formerly TTPS4802)
- **Duration:** 2 days
- **Audience & Skill-Level:** This is an **introductory-level** course geared for anyone **new to Python** who wants to use Python in web development projects or automate or simplify common tasks with the use of Python scripts. Prior scripting or development experience is recommended.
- **Hands-on Learning:** This lab-intensive, hands-on course combines engaging expert lessons, demos and group discussions with real-world, skills-focused machine-based labs and exercises. Student machines are required.
- **Delivery Options:** This course is available for **onsite private classroom presentation, live online virtual presentation**, or can be presented in a **blended learning format**. Please also ask about our **Self-Paced / Video / QuickSkills** or **Mini-Camp / Short Course** flexible delivery options.
- **Public Schedule:** This course has active dates on our live-online open enrollment **Public Schedule**.
- **Customizable:** This course agenda, topics and labs can be further adjusted to target your specific training skills objectives, tools and learning goals. Please ask for details.

Overview

Python Programming Primer / Quick Start to Python is a basic level course that provides experienced developers new to Python with basic skills needed to start using Python on the job to perform simple scripts and basic task automation. This course also serves a quick introduction to Python for technical team members or users new to Python who want to get started quickly without needing a lot of depth. Students seeking more robust hands-on training, more extensive core Python coverage or deeper skills acquisition might wish to attend another more lab-intensive course from our extensive Python training suite.

In order to do the hands-on labs, students are required to have incoming familiarity with a programming or scripting language, as this course does not teach basic programming. Students who are non-developers may attend as more of a survey course to get an overview of Python as opposed to gaining live programming skills.

Learning Objectives

This course combines expert lecture, real-world demonstrations and group discussions with machine-based practical labs and exercises. Our engaging instructors and mentors are highly experienced practitioners who bring years of current "on-the-job" experience into every classroom. Throughout the hands-on course students will learn to write essential Python scripts using the most current and efficient skills and techniques.

Working in a hands-on learning environment, guided by our expert team, attendees will explore:

- Uses for Python in software development, testing and systems administration environments
- How to develop basic Python applications for a variety of uses
- Packaging and distribution of Python applications and modules

Need different skills or topics? If your team requires different topics or tools, additional skills or custom approach, this course may be further adjusted to accommodate. We offer additional python, web development, data science, machine learning and other related topics that may be blended with this course for a track that best suits your needs. Our team will collaborate with you to understand your needs and will target the course to focus on your specific learning objectives and goals.

Audience & Pre-Requisites

This basic level course provides an excellent kick start for users new to Python, enabling them to use basic Python skills on the job in a variety of ways. Students can apply the course skills to use Python in basic web development projects or automate or simplify common tasks with the use of Python scripts. The course also serves as a solid primer course / foundation for continued Python

study in support for next level web development with Python, Python for data science / machine learning or Python for systems admin or networking support.

In order to get the most out of this course, students should have basic familiarity with any other programming or scripting language, as basic scripting isn't covered in this agenda. Students should have a working, user-level knowledge of Unix/Linux, Mac, or Windows.

Follow On Courses: Our Python tracks include a wide variety of follow-on courses and learning paths for leveraging Python for next-level web development, data science / machine learning, networking, task automation, security and other topics. Please see the attached **Python Training Suite** list of courses, or inquire for recommendations based on your specific role and goals.

Enhanced Learning Services: Please also ask about our **Pre-Training Class OnRamp & Prep / Primer** offerings, **Skills Gap Assessment Services, Case Studies, Knowledge Check Quizzes, Skills Immersion Programs & Camps, Collaborative Mentoring Services and Extended Learning Support & Post Training** services.

Course Topics / Agenda

Please note that this list of topics is based on our standard course offering, evolved from typical industry uses and trends. We'll work with you to tune this course and level of coverage to target the skills you need most. Topics, agenda and labs may adjust during live delivery based on audience interests, skill-level and participation.

Day One

1. An Overview of Python

- What is python?
- Python Timeline
- Advantages/Disadvantages of Python
- Getting help with pydoc

2. The Python Environment

- Starting Python
- Using the interpreter
- Running a Python script
- Python scripts on Unix/Windows
- Editors and IDEs

3. Getting Started

- Using variables
- Builtin functions
- Strings
- Numbers
- Converting among types
- Writing to the screen
- Command line parameters

4. Flow Control

- About flow control
- White space
- Conditional expressions
- Relational and Boolean operators
- While loops
- Alternate loop exits

5. Sequences

- About sequences
- Lists and list methods
- Tuples
- Indexing and slicing
- Iterating through a sequence
- Sequence functions, keywords, and operators
- List comprehensions
- Generator Expressions
- Nested sequences

Day Two

6. Working with files

- File overview
- Opening a text file
- Reading a text file
- Writing to a text file
- Reading and writing raw (binary) data
- Converting binary data with struct

7. Dictionaries and Sets

- About dictionaries
- Creating dictionaries
- Iterating through a dictionary
- About sets
- Creating sets
- Working with sets

8. Functions

- Defining functions
- Parameters
- Global and local scope
- Nested functions
- Returning values

9. Sorting

- The sorted() function
- Alternate keys
- Lambda functions
- Sorting collections
- Using operator.itemgetter()
- Reverse sorting

10. Errors and Exception Handling

- Syntax errors
- Exceptions
- Using try/catch/else/finally
- Handling multiple exceptions
- Ignoring exceptions

TIME PERMITTING SESSIONS

11. Modules and Packages

- The import statement
- Module search path
- Creating Modules
- Using packages
- Function and Module aliases

12. Regular Expressions

- RE syntax overview
- RE Objects
- Searching and matching
- Compilation flags
- Groups and special groups
- Replacing text
- Splitting strings

13. The standard library

- The sys module
- Launching external programs
- Math functions
- Random numbers
- The string module
- Reading CSV data

14. Introduction to Python Classes

- About o-o programming
- Defining classes
- Constructors
- Methods
- Instance data
- Properties
- Class methods and data

Hands-on Setup Made Simple! All course software (limited versions, for course use only), courseware files, hands-on lab guides, labs and solutions, data sets and resources (as applicable) are provided for you in our “easy access / no install required” high-speed remote lab environment. In most cases, we can also offer local (non-cloud) set up as an alternative. Either way, our dedicated live tech team works with every student to ensure everyone is set up with working access and ready to go prior to every course start date, ensuring a smooth delivery and great hands-on experience. All your coursework can be accessed or downloaded after class, so you never lose your work or materials. Please ask for details.

For More Information

All courses can be presented **onsite** or **online**, or in a **combined / flex / blended learning format**, tailored to target your specific audience, needs and learning goals. We also offer focused, flexible **short courses, self-paced learning options, recorded sessions** and more. We train beginner to advanced skills in all areas we cover, and offer **New Hire / Cohort Training, Boot Camps, Skills Immersion Programs, Reskilling Programs, Skills Migration & Transition Programs**, and more. We collaborate with you to ensure all courses are truly targeted to meet your specific needs and learning skills, maximizing your valuable training time, as well as your important budget.

Please also visit our extensive **Public Training Schedule** for training for smaller groups or individuals. Please contact us for course details, **Corporate Rates** and **Special Discount Offers**.

For more information about our dedicated training services, collaborative coaching services, courseware licensing options, public course schedule, training management services, partner programs, or to see our complete list of course offerings and special offers please visit us at www.triveratech.com, email Info@triveratech.com or call us toll free at **844-475-4559**. Our pricing and services are always satisfaction guaranteed.

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