



PYTHON TRAINING

Python Penetration Testing Training Certification Course

Gain hands-on Python skills for penetration testing. Develop custom tools and automate security assessments to become a certified ethical hacker.

DURATION

2 hours

LEVEL

Intermediate

FORMAT

Instructor-Led

- Globally Recognized Certification

- Expert-Led Hands-On Training

- Flexible Scheduling

Computer Pride | 1st Floor, ICEA Building, Kenyatta Avenue, Nairobi | www.computer-pride.co.ke

COURSE OVERVIEW

This "Python Penetration Testing Training Certification Course" is designed for IT professionals eager to leverage Python's power in the realm of cybersecurity. Participants will delve into the practical application of Python for automating penetration testing tasks, from network reconnaissance and vulnerability scanning to exploit development and post-exploitation. You will learn to build custom security tools, analyze network traffic, and identify weaknesses in systems and web applications, significantly enhancing your offensive security capabilities. The course emphasizes hands-on learning with core Python libraries and frameworks commonly used in ethical hacking. You'll explore essential modules like `socket` for network communication, `requests` for web interactions, `subprocess` for integrating external tools, and `Scapy` for crafting and manipulating network packets. By mastering these tools, you'll gain the ability to develop efficient and flexible penetration testing scripts, moving beyond reliance on pre-built tools to create tailored solutions for complex security challenges. Upon completion, you will not only be proficient in using Python for various penetration testing methodologies but also possess a foundational understanding of how to automate security assessments, making you a highly valuable asset in any cybersecurity team. This certification will equip you with the skills to identify, exploit, and report vulnerabilities effectively, paving the way for advanced roles in offensive security and security automation.

Duration	2 hours
Level	Intermediate
Vendor	Python

COURSE CURRICULUM

01 Module 1: Foundations of Python for Network Security

- Setting up the Python development environment for security
- Review of Python essentials (data types, control flow, functions)
- Introduction to network programming with ``socket`` module
- Handling command-line arguments and file I/O for scripts

02 Module 2: Network Reconnaissance & Scanning with Python

- Developing basic port scanners
- Host discovery techniques using ``socket`` and ``subprocess``
- Implementing banner grabbing scripts
- Introduction to ``Scapy`` for packet crafting and sniffing
- ARP poisoning detection (scripting basics)

03 Module 3: Web Application Vulnerability Analysis with Python

- Automating HTTP requests with the ``requests`` library
- Crafting scripts for web content analysis and information gathering
- Basic brute-forcing authentication forms
- Detecting common web vulnerabilities (e.g., XSS, SQLi - conceptual and simple payload crafting)

04 Module 4: Exploitation & Post-Exploitation Scripting

- Understanding exploit development principles
- Building simple reverse and bind shell scripts
- File transfer techniques using Python
- Basic privilege escalation concepts and scripting examples

Module 5: Building Custom Penetration Testing Tools

- 05**
- Designing and structuring reusable Python security scripts
 - Integrating external tools and commands
 - Automating reporting and logging of findings
 - Best practices for secure Python coding in pen testing contexts

CAREER PATHWAYS

Graduates of this program are prepared for the following roles:

- > **Security Automation Engineer**
- > **Python-focused Penetration Tester**
- > **Ethical Hacker (Tool Developer)**

FREQUENTLY ASKED QUESTIONS

Q: What specific Python proficiency level is required to succeed in this penetration testing course?

This course is designed for individuals with an intermediate understanding of Python. Familiarity with core Python concepts such as data structures (lists, dictionaries), control flow (loops, conditionals), functions, and basic object-oriented programming is essential. While not a deep dive into Python fundamentals, a solid scripting background will ensure you can effectively build and customize the security tools taught.

Q: How will this certification enable me to automate security tasks more effectively in a professional environment?

This course will equip you with the skills to move beyond manual processes and readily available tools. You'll learn to write custom Python scripts for repetitive reconnaissance, vulnerability scanning, exploit delivery, and data collection tasks. This automation capability allows security professionals to conduct more thorough assessments in less time, tailor tools to specific target environments, and integrate security checks directly into CI/CD pipelines, significantly boosting efficiency and coverage.

Q: Can I use the Python scripts and tools developed in this course for real-world penetration testing engagements?

Absolutely. The curriculum focuses on practical, hands-on development of functional penetration testing scripts and tools using industry-standard Python libraries. While the 2-hour duration provides a foundational introduction, the principles and foundational scripts you build can be expanded and refined for professional engagements, always within legal and ethical boundaries and with explicit authorization. The goal is to empower you to create adaptable and effective custom solutions.

ABOUT COMPUTER PRIDE



East Africa's Premier IT Training Center

With over 15 years of excellence, Computer Pride delivers globally recognized certification programs from leading technology vendors. Located on Kenyatta Avenue in Nairobi's CBD, our state-of-the-art facilities and expert instructors have empowered thousands of professionals across East Africa.

15+

Years of Excellence

10,000+

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50+

Vendor Certifications

READY TO ENROL?

Take the next step in your technology career.

Location

1st Flr, ICEA Building
Kenyatta Ave, Nairobi

Email

info@computer-pride.co.ke

Phone

+254 705 900 900

www.computer-pride.co.ke