



OPERATIONAL PYTHON ACCESS-COURSE (OPA-C)

EXECUTIVE SUMMARY

Operational Python Access is a programming course that covers the essentials of Python in a networked environment. The exercises focus on establishing an initial foothold in a network, escalating privileges, reconnaissance and lateral movement within a network. The course covers basics of installing and using python on various systems, including a portable USB version, object-oriented programming, building objects and modules, and using network libraries with Python. Practical skills application skills are leveraged against virtual targets which can be enumerated, compromised, and exploited using Python programs written by the students.

COURSE SCHEDULE, DAYS 1-5 (40 HOURS)

DAY 1	DAY 2	DAY 3	• DAY 4	DAY 5
<ul style="list-style-type: none"> • Introduction to Object oriented Programming • Python Language Concepts • Input and Output • Coding Assignment 1 - Python on a Stick • Python on Mac, Linux, and other devices • Project Brief 	<ul style="list-style-type: none"> • Physical Architecture • Flow Control 1: Branching • Coding Assignment 2 - Persistence Shell • Files and Storage • Coding Assignment 3 - Advanced Scriptable Shell • Functions and Libraries • Project Review 	<ul style="list-style-type: none"> • Physical Architecture • Flow Control 2: Loops • Coding Assignment 4 - Bypassing Host-based Firewalls • Modularization • Coding Assignment 5 - Command and Control Cryptography • Communication with the internet 	<ul style="list-style-type: none"> • Physical Architecture • Flow Control 2: Loops • Coding Assignment 6 - Working with Passwords • Modularization • Coding Assignment 7 - Privilege Escalation • Communication with the internet 	<ul style="list-style-type: none"> • Physical Architecture • Controlling Devices • Coding Assignment Final - Cyberattack Cycle • Project Review • Course Review • AAR / Graduation