

8-Hour Python Bootcamp Schedule (Draft)

Hour 1: Setup and Orientation

- What is Python? Why it matters in cyberdefense
- Installing Python, using REPL vs. scripts
- IDEs and editors (VS Code, IDLE, etc.)
- Running a script, basic print statements
- First mini-challenge: “Hello, Hacker!”

Hour 2: Variables and Data Types

- Strings, integers, floats, booleans
- Type conversion and type() inspection
- Naming conventions and readability
- Practice: create a simple calculator or password strength checker

Hour 3: Control Flow

- if, elif, else
- Comparison and logical operators
- Practice: write a login simulator or access control logic

Hour 4: Loops and Iteration

- for and while loops
- Loop control: break, continue
- Practice: brute-force password cracker simulation

Hour 5: Functions and Reusability

- Defining and calling functions
- Parameters and return values
- Scope basics
- Practice: modularize previous challenges

Hour 6: Collections

- Lists, dictionaries, sets
- Indexing, slicing, iteration
- Practice: build a simple log parser or alert system

Hour 7: Unique Python Features

- List comprehensions
- Virtual environments (venv, pip)
- Imports and modules
- Practice: install and use requests or os for basic system interaction

Hour 8: Wrap-Up and Mini Project

- Review key concepts
- Mini-project: write a script that simulates a basic intrusion detection log parser or alert generator
- Optional: introduce basic file I/O or subprocess if time allows