



X E 1 0 5

FOUNDATION • LEVEL 1

Python Fundamentals

8

MODULES

161

LAB TASKS

96

CTF CHALLENGES

47

TOPICS

8

COURSE BOOKS

89

SLIDES

8 COURSE BOOKS INCLUDED



This program transforms students into confident Python programmers by building a rock-solid foundation in coding logic. You will start by mastering the core building blocks—from data structures like dictionaries and tuples to the logic that drives modern apps. As you progress, the focus shifts to writing professional-grade code, using modular functions and exception handling to build reliable tools. The journey concludes with practical applications, where you'll learn to interact directly with the operating system and manage complex files, giving you the power to automate repetitive tasks and handle data like a pro.

CURRICULUM & WHAT EACH MODULE COVERS

MODULE	TASKS
01 Variables Variables, print(), and Data Types Overview · Numbers and Arithmetic · Comparisons and Booleans · Strings in Depth · +2 more	20
02 Basic Functions List Methods and Functions · String Methods · Foundations of Built-in Functions and Sequences · Character Encoding: ord() and chr()	21
03 Slicing and Casting Type Casting and Data Types · String Operators: Concatenation and Repetition · String Methods for Transformation · Indexing in Python · +2 more	20
04 Loops Summing and Counting with Conditions · Loop Control Statements: break and continue · Working with Characters: ASCII and ord() · Processing Lists	20
05 I/O String Operations for Processing File Content · Displaying Output with print() and String Formatting · Combining I/O and Strings into Practical Scripts · Analyzing Numeric Data from Files · +2 more	20
06 Modules Building a Duplicate File Finder (fu2.py) · Building a Password Generator (fu1.py) · The random Module: Generating Random Data · The time Module: Delays and Timestamps · +3 more	20
07 Functions Data Types for Storing Program Data · Reading Functions to Identify Their Purpose · Conditional Logic and Validation Inside Functions · Return Values and Function Output · +4 more	20
08 Practice Parsing and Analyzing Numeric Data in Text Files · Reading and Parsing Text File Content · Gathering System Information with Python Modules · Getting Oriented: VM Access and Python Basics · +2 more	20

GOOD TO KNOW

Starts from zero — no prior experience needed · Self-paced or trainer-led · Cy, the AI helper, answers in the student's own language

HOW EVERY MODULE RUNS

Lab



Extra at 80%



Timed test at 85%



Slides at 90%

A REAL TASK FROM MODULE 4 — LOOPS

"Given the list ['abcd','123','xyz','john',70.2], write a loop to determine the total number of characters present in the list. Enter the total number of characters."

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