

Python Language Syllabus

By
GharSeCode (GSC)

Course Title: Programming in Python

Course By: GSC (Ghar Se Code)

Duration: 3 Hrs

Code Spirit: From Logic To Magic--One Line At A Time.

Topics	Detailed Overview
Introduction to Python Programming	What is Python? History and Features of Python Setting up Python Environment Writing and Executing First Python Program Python IDEs and Interpreters
Variables, Data Types, and Operators	Variables and Assignment Keywords and Identifiers Data Types (int, float, str, list, tuple, dict, set) Type Conversion and Typecasting Operators: Arithmetic, Relational, Logical, Bitwise, Assignment, Identity, Membership Operator Precedence
Control Structures	Decision Making: if, if...else, nested if Loops: for, while Loop Control: break, continue, pass
Functions in Python	Function Definition and Calling Function Arguments (default, keyword, variable-length) Return Statement Lambda Functions Recursive Functions Scope and Lifetime of Variables
Data Structures	Lists, Tuples, Sets, Dictionaries List Comprehension Accessing, Modifying, and Iterating Data Structures
Strings	String Operations and Methods String Formatting Escape Sequences String Slicing and Indexing
Modules and Packages	Importing Modules Standard Python Modules (math, random,

	datetime, etc.) Creating and Using Packages
File Handling	Opening and Closing Files Reading and Writing Files File Modes Working with Text and Binary Files File Methods and Context Manager (with statement)
Exception Handling	Errors in Python Try, Except Block Finally and Else Clause Raising Exceptions Built-in Exceptions
Object-Oriented Programming	Classes and Objects Constructor (__init__) Instance and Class Variables Inheritance Polymorphism Encapsulation