

# Python for Beginners

**Duration:**

3 months

**Starting Date:**

Available Now

**Price:**

PKR. 5,000

## MEET YOUR INSTRUCTOR

Dr. Muhammad Hamid is an Assistant Professor at GC Women University, Sialkot. He has 12+ years of teaching and research experience in Artificial Intelligence and Software Engineering. He has also published 30+ research papers and worked on projects in Canada during his Ph.D. His interests include AI, Software Engineering, and Intelligent Diagnosis.



# Course Outline

MODULE	LEARNING OUTCOMES
Welcome to Python Programming	Welcome to the course on Python Programming! In this module you will learn what Python is, who this course is for, what topics it covers, and how you can benefit by mastering this versatile language.
Introduction to Python	This module introduces the history and features of Python, explains why it is widely used in data science, AI, and web development, and shows how to set up your first Python environment.
Python Basics	Python basics are the foundation of coding. This module covers variables, data types, operators, and simple input/output so you can begin writing your first Python programs confidently.
Control Structures	Control structures allow programs to make decisions. This module covers if-else conditions, loops, and nested statements to help you build logic-driven Python applications.
Functions in Python	This module focuses on creating and using functions. You will learn to define, call, and reuse functions, improving the readability and efficiency of your code.
Data Structures	In this module you will explore Python's core data structures: lists, tuples, dictionaries, and sets. You will practice storing, retrieving, and processing data in flexible ways.
File Handling	This module introduces reading from and writing to files. You will learn how to manage data stored in text files, opening doors to handling larger datasets in real projects.

## Modules and Packages

This module explains how to use Python's built-in modules and create your own packages, enabling you to write more structured, reusable, and professional programs.

## Error Handling and Debugging

This module shows how to identify, handle, and fix errors using exceptions and debugging tools. You will learn to make your Python code more reliable and robust.

## Object-Oriented Programming (OOP)

This module introduces the principles of OOP in Python. You will learn about classes, objects, inheritance, and encapsulation to design more advanced programs.

## Working with Libraries

This module covers essential Python libraries such as NumPy, pandas, and matplotlib. You will practice using them for data handling, analysis, and visualization tasks.

## Final Project

The final module brings everything together. You will build a complete Python project applying all your learning, from coding and debugging to structuring and presenting your solution.



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