

KOENIG SOLUTIONS · COURSE OUTLINE

Introduction to Programming Using Python

Learn to write Python code using data types, control flow, input/output, error handling and built-in modules.

5 Days

40 HOURS

6

MODULES

31

TOPICS

11

HANDS-ON ACTIVITIES

COURSE OVERVIEW

The 55264-A: Introduction to Programming Using Python course is a comprehensive paid python course that provides learners with the foundational skills necessary to start programming in Python. Designed for beginners, this intro to python programming course covers essential concepts such as Data types, Operators, Control flow, Input/output operations, Code documentation, Error handling, and the Use of modules. Through a series of modules, each consisting of lessons and hands-on labs, participants will learn to write Python code effectively and solve real-world problems. The structured learning ensures that by the end of the course, learners are proficient in Writing Python code, performing operations, Debugging, and leveraging Python's extensive ecosystem of modules and tools, thus setting a solid foundation for further programming endeavors and career advancement.

WHO THIS COURSE IS FOR

Course 55264-A: Introduction to Programming Using Python is designed for beginners looking to build foundational skills in Python programming.

Aspiring programmers and developers

Data analysts and data scientists

Students pursuing computer science or software engineering

Technical professionals seeking to upskill

Hobbyists interested in learning programming

IT professionals needing to automate tasks

Business analysts aiming to understand data manipulation

Educators and teachers preparing to teach programming

Quality assurance testers looking to write automation scripts

System administrators interested in scripting for task automation

Non-technical professionals seeking a basic understanding of programming concepts

What You Will Learn

- Assign data types to variables and perform operations on them
- Execute arithmetic, comparison and logical operations
- Implement branching and iteration operations
- Perform input and output operations using files and the console
- Write structured code with comments and documentation strings
- Identify and fix errors in Python code
- Implement error-handling mechanisms using exceptions
- Use built-in modules for operating system, date and mathematical operations

COURSE SYLLABUS

6 Modules, 31 Topics

01

3 Activities

Performing Operations Using Data Types and Operators

This module explains how to use Python operators and data types to achieve specified results.

LESSONS

- Assigning data types to variables
- Performing data and data type operations
- Executing arithmetic, comparison, and logical operations
- Review

AFTER COMPLETING THIS MODULE, STUDENTS WILL BE ABLE TO

- Assign data types to variables
- Manage data and perform operations on different data types
- Execute arithmetic, comparison, and logical operations

02

2 Activities

Control Flow with Decisions and Loops

This module explains how to use control flow and looping operations in Python.

LESSONS

- Constructing and analyzing code segments that use branching statements
- Constructing and analyzing code segments that perform iterations
- Review

AFTER COMPLETING THIS MODULE, STUDENTS WILL BE ABLE TO

- Implement branching operations
- Implement iteration operations

03**2 Activities**

Performing Input and Output Operations

This module explains how to construct input and output operations using files and the console.

LESSONS

- Writing Python code segments to perform file input and output operations
- Writing Python code segments to perform console input and output operations
- Review

AFTER COMPLETING THIS MODULE, STUDENTS WILL BE ABLE TO

- Perform input and output operations using files
- Perform input and output operations via the console

04**2 Activities**

Documenting and Structuring Code

This module explains how to structure and document well-written Python code.

LESSONS

- Writing and analyzing structured code segments
- Documenting code segments using comments and documentation strings
- Review

AFTER COMPLETING THIS MODULE, STUDENTS WILL BE ABLE TO

- Write structured code
- Document code effectively using comments and documentation strings

05**2 Activities**

Troubleshooting and Error Handling

This module explains how to troubleshoot and handle errors in Python.

LESSONS

Analyzing, detecting, and fixing code errors · Writing code to handle exceptions effectively · Review

AFTER COMPLETING THIS MODULE, STUDENTS WILL BE ABLE TO

Identify and fix errors in Python code · Implement error-handling mechanisms

Performing Operations Using Modules and Tools

This module explains how to use built-in Python modules for various operations.

LESSONS

- Using built-in modules for basic operations
- Using built-in modules for complex operations
- Review

AFTER COMPLETING THIS MODULE, STUDENTS WILL BE ABLE TO

- Use built-in modules to perform operating system, date, and mathematical operations

HANDS-ON ACTIVITIES

Practise What You Learn

#	MODULE	ACTIVITY
01	Performing Operations Using Data Types and Operators	LAB: PERFORMING OPERATIONS USING DATA TYPES AND OPERATORS ■ Assigning data types to variables ■ Performing data and data type operations ■ Executing arithmetic, comparison, and logical operations
02	Control Flow with Decisions and Loops	LAB: CONTROL FLOW WITH DECISIONS AND LOOPS ■ Implementing branching operations ■ Implementing iteration operations
03	Performing Input and Output Operations	LAB: PERFORMING INPUT AND OUTPUT OPERATIONS ■ Performing input and output operations using files ■ Performing input and output operations from the console
04	Documenting and Structuring Code	LAB: DOCUMENTING AND STRUCTURING CODE ■ Writing and analyzing code segments ■ Documenting code segments
05	Troubleshooting and Error Handling	LAB: TROUBLESHOOTING AND ERROR HANDLING ■ Analyzing, detecting, and fixing code errors ■ Writing and implementing exception-handling code
06	Performing Operations Using Modules and Tools	LAB: PERFORMING OPERATIONS USING MODULES AND TOOLS ■ Utilizing built-in modules for basic operations ■ Utilizing built-in modules for complex operations

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

ABOUT KOENIG

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

FLEXIBLE DELIVERY

Learn the Way That Suits You

Classroom Training

Live Online Classes (ILO)

Fly-Me-A-Trainer (FMAT)

Flexi (Self-Paced)

1-on-1 Training

Ready to Get Started?

Talk to a learning advisor about schedules, group training and customised delivery.

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