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aci LEARNING | VIDEOS & **SKILL** LABS

Introduction to Programming Using Python, Videos & Skill Labs Set

Course Specifications

Course Number: ACI77-016VL_rev1.0
Video and Lab Length: Approximately 34 hours, 41 minutes

Course Introduction

Introduction to Programming Using Python is designed to build foundational Python skills through guided practice, the labs progress from core syntax and data handling to control flow, file operations, functions, and standard library usage—making them ideal for introductory programming, IT, cybersecurity, and data-focused pathways.

Video Enhanced Learning

(9h 41m * 1 Modules * 26 Episodes)

We've enhanced select lab sets with targeted video content to strengthen student readiness and improve lab success. With focused video learning, students get reinforcement of core concepts before they enter the lab, giving them the confidence and context needed to apply skills effectively. Support diverse learning styles, improve lab readiness, and drive stronger outcomes across today's most in-demand skills.

Video Topics

1. Overview
2. Working with Primitive Data Types
3. Working with Multiple Assignment Statements
4. Converting Types in Python
5. Creating Lists
6. Modifying Lists
7. Sorting and Reversing Lists
8. Slicing Lists
9. Working with Operators
10. Determining Operator Precedence
11. Working with If Statements
12. Using Compound Conditional Expressions

13. Working with For Loops
14. Working with While Loops
15. Nesting For Loops
16. Reading Files
17. Copying Files
18. Merging Mails
19. Reading Console Inputs and Formatting Outputs
20. Reading Command Line Arguments
21. Defining Functions
22. Using Default Arguments
23. Using Keyword and Positional Arguments
24. Handling Exceptions
25. Using Math and Random Modules
26. Display Datetime Working Directory File Metadata

Skill Labs

(25h * 25 Labs)

A **skills lab** is a guided, hands-on learning environment that allows students to practice real-world tasks in a safe, virtual setting. Instead of simply reading or watching videos, learners actively do the work—navigating realistic scenarios, applying concepts, troubleshooting issues, and building confidence through practical experience. This ensures that theory becomes usable skill. Skill labs are essential for developing true workplace readiness because they mirror real systems, tools, and challenges, helping learners bridge the gap between knowledge and performance. By completing a skills lab, students gain the hands-on competence employers expect and are better prepared for both assessments and real job responsibilities.

Skill Labs Topics

1. Working with Primitive Data Types (PLAB-PYTH)
2. Working with Multiple Assignment Statements (PLAB-PYTH)
3. Converting Types in Python (PLAB-PYTH)
4. Creating Lists (PLAB-PYTH)
5. Modifying Lists (PLAB-PYTH)
6. Sorting and Reversing Lists (PLAB-PYTH)
7. Slicing Lists (PLAB-PYTH)
8. Working with Operators (PLAB-PYTH)

9. Determining Operator Precedence (PLAB-PYTH)
10. Working with If Statements (PLAB-PYTH)
11. Using Compound Conditional Expressions (PLAB-PYTH)
12. Working with For Loops (PLAB-PYTH)
13. Working with While Loops (PLAB-PYTH)
14. Nesting For Loops (PLAB-PYTH)
15. Reading Files (PLAB-PYTH)
16. Copying Files (PLAB-PYTH)
17. Merging Mails (PLAB-PYTH)
18. Reading Console Inputs and Formatting Outputs (PLAB-PYTH)
19. Reading Command-Line Arguments (PLAB-PYTH)
20. Defining Functions (PLAB-PYTH)
21. Using Default Arguments (PLAB-PYTH)
22. Using Keyword and Positional Arguments (PLAB-PYTH)
23. Handling Exceptions (PLAB-PYTH)
24. Using Math and Random Modules (PLAB-PYTH)
25. Displaying Datetime, Working Directory, and File Metadata (PLAB-PYTH)