COURSE SYLLABUS

Python Programming Course Online

Start learning Python from the ground up by mastering core concepts like variables, data types, loops, and functions. Apply your skills to real-world problems using object-oriented programming, and build a GitHub portfolio that showcases your practical Python experience to employers.

> Group classes (Live Online) and onsite training are available for this course. For more information, email partnerships@vdci.edu or visit: https://vdci.edu/courses/python-programming



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Course Outline

Python software environment

- Terminal commands
- Jupyter Notebook
- Variables
- Built-in functions in Python
- Data types: strings, integers, floats, lists
- Definite loops: For loops
- Practical Exercises

Logical programming

- Creating functions in Python
- The behavior of data structures
- Data types: tuples
- If, Elif, Else statements
- Indefinite loops: While loops
- Indexing and slicing
- Practical Exercises

Python built in programming

- Data types: dictionaries
- Reading from a text file
- Writing to a text file
- Appending to a text file
- Analyzing a text file's content
- Practical Exercises

Computer science fundamentals

- Big-O notation
- Binary search
- Bubble Sort
- Insertion sort
- How to write efficient code
- Practical Exercises

Application development - Project based assessment

- Review and Q&A
- Intro to Object Oriented Programming
- Working on a project
- Git and GitHub