

Syllabus :

Python on Azure

Topics Covered as Follows

Python Fundamentals

Introduction to Python

- Overview of Python
- Installation and setup
- Writing and running basic Python scripts

Python Data Types and Variables

- Numeric types, strings, and booleans
- Variables and basic operations
- Type conversion

Control Flow and Functions

- Conditional statements (if, elif, else)
- Loops (for, while)
- Functions and parameters

Data Structures in Python

- Lists, tuples, and dictionaries
- Working with data structures

File Handling and Exception Handling

- Reading and writing files
- Handling exceptions in Python

Introduction to Object-Oriented Programming (OOP)

- Classes and objects
- Inheritance and encapsulation

Advanced Python Programming

Advanced OOP Concepts

- Polymorphism, abstraction, and interfaces
- Class methods and static methods

Python Modules and Packages

- Importing modules
- Creating and using packages

Working with APIs

- Introduction to APIs
- Using Python to interact with RESTful APIs

Web Scraping with Python

- Overview of web scraping
- Using libraries like BeautifulSoup and requests

Introduction to Testing in Python

- Writing and running tests using the unittest framework
- Test-driven development (TDD) basics

Introduction to Virtual Environments

- Creating and managing virtual environments
- Dependency management with pip

Azure Cloud Integration with Python

Introduction to Azure Cloud Services

- Overview of Microsoft Azure
- Key Azure services for Python developers

Azure Resource Manager

- Creating and deploying ARM templates with Python

Azure Functions with Python

- Creating and deploying serverless functions
- Triggering functions using Azure services

Azure Storage with Python

- Working with Azure Blob Storage
- File and data management in Azure

Azure Databases with Python

- Connecting to Azure SQL Database with Python
- Querying and manipulating data

Azure DevOps and Continuous Integration

- Setting up CI/CD pipelines for Python projects in Azure DevOps
- Automating deployment workflows

Final Project and Capstone

Final Project Development

- real-world project integrating Python and Azure Cloud.

