This syllabus covers the fundamental and advanced concepts of Python programming, providing a comprehensive understanding of the language. Each main topic is broken down into its subtopics to guide the learning process.

INTRODUCTION

- Python Overview
- Installation & Getting Started
- What is Syntax?

BASICS

- Python Comments
- Python Variables
- Python Data Types & Operators

DATA TYPES

- Data Types
- Python Numbers
- Data Conversion
- Type Casting

OPERATORS

- Python Operators
- Python Booleans

STRINGS

- Python Strings
- Operation on Strings
- String Methods
- Format Strings
- Escape Characters

LISTS

- Python Lists
- List Indexes
- Add List Items
- Remove List Items
- Change List Items
- List Comprehension
- List Methods

TUPLES

- Python Tuples
- Tuple Indexes
- Manipulating Tuples
- Unpack Tuples

SETS

- Python Sets
- Add/Remove Set Items
- Join Sets
- Set Methods

DICTIONARIES

- Python Dictionaries
- Access Items
- Add/Remove Items
- Copy Dictionaries

CONDITIONAL STATEMENTS

- if Statement
- if-else Statement
- elif Statement
- Nested if Statement

LOOPS

- Python Loops
- Python for Loop
- Python while Loop
- Nested Loops
- Control Statements

FUNCTIONS

- Python Functions
- Function Arguments
- return Statement
- Python Recursion

MODULES AND PACKAGES

- Python Modules
- Python Packages

OBJECT-ORIENTED PROGRAMMING (OOPS)

- Python OOPS
- self method
- init method

ADVANCED TOPICS

- Python Iterators
- JSON
- Python try...except
- Python PIP
- Data & Time

File Handling

- Python File Handling
- Read/Write Files