

STEP GNDEC Syllabus Python

Python Programming – Beginner Course Syllabus

Module 1: Introduction to Python

- Features of Python
- Installing Python & running scripts
- Python IDEs (IDLE, VS Code, Jupyter)

Module 2: Basic Syntax and Data Types

- Variables, keywords, and identifiers
- Numbers, strings, booleans
- Input and Output (`input()`, `print()`)

Module 3: Operators and Expressions

- Arithmetic, relational, logical, assignment operators
- String formatting and f-strings

Module 4: Control Flow

- `if, elif, else`
- `for` and `while` loops
- `break, continue, pass`

Module 5: Data Structures

- Lists and list operations
- Tuples, sets, and dictionaries
- List comprehensions

Module 6: Functions

- Defining and calling functions
- Default and keyword arguments
- Lambda functions
- `map, filter, reduce`

Module 7: Modules and Packages

- Importing standard and custom modules

- Using `pip` and virtual environments

Module 8: Exception Handling

- `try, except, finally`
- Catching specific exceptions

Module 9: File Handling

- Reading/writing text files
- Working with CSV/JSON (basic)

Optional for Beginners:

- Basic OOP in Python (classes, objects, `__init__`, inheritance)