

Python Programming Course Outline

Week 1: Introduction to Python

- Overview of Python: History, features, and installation
- Setting up the Python environment: IDEs, text editors, and Python shell
- Basic syntax and structure: Python keywords, comments, and indentation
- Data types: Integers, floats, strings, booleans
- Variables and constants

Week 2: Control Flow

- Basic input/output: `input ()` and `print ()`
- Basic operations: Arithmetic, comparison, and logical operators
- Conditional statements: `if`, `else`, `elif`
- Loops: `for` and `while` loops
- Break and continue statements
- Nested loops and conditions

Week 3: Functions and Modules

- Defining functions: Syntax and examples
- Arguments and return values
- Built-in functions
- Scope of variables
- Lambda functions
- Introduction to OOP: Concepts of classes and object
- Importing and using modules: Built-in modules like `math`, `datetime`, `random`