

# PYTHON COURSE CONTENT

- Python Basics
  - Running Python
    - Python Interpreter in Interactive Mode
    - IDLE
    - Commercial and Free Python IDEs
  - Hello, World!
  - Literals
  - Python Comments
  - Data Types
  - Variables
    - Variable Names
    - Variable Assignment
    - Simultaneous Assignment
    - Constants
    - Deleting Variables
  - Writing a Python Module
    - The main() Function
  - print() Function
  - Named Arguments
  - Collecting User Input
  - Getting Help
- Functions and Modules
  - Defining Functions
  - Variable Scope
  - Global Variables
  - Function Parameters
    - Using Parameter Names in Function Calls
    - Default Values

- Returning Values
- Importing Modules
  - Module Search Path
  - pyc Files
- Math
  - Arithmetic Operators
  - Modulus and Floor Division
  - Assignment Operators
    - Order of Operations
  - Built-in Math Functions
  - The math Module
  - The random Module
  - Seeding
- Python Strings
  - Quotation Marks and Special Characters
    - Escaping Characters
    - Triple Quotes
  - String Indexing
  - Slicing Strings
  - Concatenation and Repetition
  - Common String Methods
  - String Formatting
    - Format Specification
    - Long Lines of Code
  - Built-in String Functions
- Iterables: Sequences, Dictionaries, and Sets
  - Definitions
  - Sequences
    - Lists
    - Deleting List Elements
    - Sequences and Random
  - Tuples
    - The Immutability of Tuples

- Lists vs. Tuples
- Ranges
- Indexing and Slicing
- Converting Sequences to Strings with `str.join(seq)`
- Splitting Strings into List
- Unpacking Sequences
- Dictionaries
  - The `update()` Method
  - The `setdefault()` Method
  - Dictionary View Objects
  - Deleting Dictionary Keys
- Flow Control
  - Conditional Statements
  - The `is` and `is not` Operators
  - Python's Ternary Operator
  - Loops in Python
    - `while` Loops
    - `for` Loops
    - `break` and `continue`
    - The `else` Clause
  - The `enumerate()` Function
  - Generators
    - The `next()` Function
  - List Comprehensions
- File Processing
  - Opening Files
  - The `os` and `os.path` Module
- Exception Handling
  - Wildcard `except` Clauses
  - Getting Information on Exceptions
  - The `else` Clause
  - The `finally` Clause
  - Using Exceptions for Flow Control

- Exception Hierarchy
- Dates and Times
  - Understanding Time
  - The time Module
  - The datetime Module
- Running Python Scripts from the Command Line
  - `sys.argv`