Building 3
Chiswick Park
566 Chiswick High Road
London, W4 5YA
T: +44 (0) 20 3608 4036
E: email@phi-tuition.eu
W: www.phi-tuition.eu

Programming – Python

Course duration:
30 hours.

Description:
Python is a general-purpose interpreted, interactive, object-oriented, and high-level programming language. It is designed for ease of use and quick development of projects.

During the course, students will create, compile and run object-oriented Python programs, by understanding the fundamental concepts, syntax and semantics of programing.

This course is suitable for students with no or little programming experience and it will offer a hands-on experience using this modern procedural programming language.

Syllabus covered:

1. Overview
    a. History of Python and Python Features
2. Environment
    a. Local Environment Setup
    b. Getting and Installing Python
    c. Setting up PATH at Unix/Linux and Windows
    d. Python environment variables
    e. Running Python
3. Basic Syntax
    a. First Python Program
    b. Python Identifiers and Keywords
    c. Lines and Indentation, multi-Line Statements
    d. Quotation and Comments in Python
    e. Waiting for the User
    f. Multiple statements on a single line and groups as suites
    g. Command line arguments: accessing and parsing
    h. Getopt.getopt , getopt.getoptError methods
4. Variable types
    a. Assigning values to variables
    b. Multiple assignment
    c. Standard data types
    d. Python numbers, strings, lists, tuples, dictionary
    e. Data type conversion
5. Functions
    a. Defining, Calling functions
    b. Function arguments
6. Basic Operators
    a. Types of Operators
    b. Arithmetic, Comparison, Assignment and Bitwis operators
    c. Logical, Membership, Identity Operators
    d. Operators Precedence
7. Decision Making
    a. If, if..else, elif statements
    b. Single statement suites
8. Loops
    a. While and Infinite Loop
    b. For loop
    c. Nested Loops
    d. Break, Continue, Pass statements
9. Numbers
    a. Number type conversion
    b. Random number and trigonometric functions
    c. Mathematical constants
10. Strings
    a. Accessing values and updating strings
    b. String formatting and special operators
    c. Build-in string methods
11. Files I/O
    a. Opening, writing and closing Files
    b. File and directory handling methods
12. Lists
    a. Accessing and Updating Lists