



**Course:** **A Gentle Introduction to Coding and Algorithm Design Using the Python Programming Language**

**Contact Hours:** **24**

**Pre-requisite:** **Computer Literacy**

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## **Description**

This course aims to teach learners the basics of programming computers using Python. Students will learn how to construct a program from a series of simple instructions in Python. This course avoids all but the simplest mathematics and anyone with moderate computer experience should be able to master the materials in this course.

## **Target Audience**

This course is designed for individuals that are interested in the field of Python Programming

- Students
- Programmers
- IT Professionals

## **Learning outcomes**

On completion of this course, learners will be able to:

- Describe the basics of the Python programming language
- Install Python and write your first program
- Use variables to store, retrieve and calculate information
- Utilize core programming tools such as functions and loops

## **Course Content**

- 1.** Opportunities in Value Addition (home base) Course Overview. Usage of Python. Download & Install of Python, Formatted Printing, Literals & Variables
- 2.** Formatted Printing, Variables & Calculations
- 3.** Formatted Printing, Expressions, Statements
- 4.** Boolean expressions, Decisions with if-else
- 5.** Decisions with if-else and Loops (while & for)
- 6.** Loops and Arrays (for in loops)
- 7.** Decisions (if, if-else), Procedures & Functions
- 8.** Decisions, Arrays, Procedures and Functions