

Programming Fundamentals

This course is an introduction to programming concepts and is ideal for anyone who wishes to learn how to program but doesn't have a background in coding.

course outline

IS THIS COURSE FOR YOU?

This course is designed as an introduction for anyone looking to gain a basic understanding of computer programming.

ABOUT THE COURSE

This course is designed as introduction to programming and programming concepts.

For starters, you'll learn the most common Command Line Interface and Operating System commands for both Windows- and Linux-based computers.

You'll then move on to explore the structure of a simple computer program, identifying the purpose of each part. You'll examine variables, and you'll dive into the role of functions.

You'll then become familiar with the design process behind writing a computer program. You'll explore program flow, decision making, and looping. Moving on, you'll examine how algorithms and flowcharts are used in computer program design, and you'll examine the three programming concepts of sequence, selection, and repetition.

As you progress through the course, you'll learn the most common best practices for designing and developing software documentation. And you'll learn best practices for writing and documenting your source code.

Finally, you'll learn best practice for implementing security within your applications. And you'll learn how to test and debug your code to eliminate potential errors.

AIMS AND OBJECTIVES

This course will be helpful to anyone looking to develop a foundational understanding of computer programming.

PRE-REQUISITES

There are no pre-requisites for this course.

COURSE CONTENT

Module 1 - Command Line Interface & Operating System Commands

Module 2 - Introduction to Programming

Module 3 - Systematic Design with Pseudocode

Module 4 - Algorithms, Sorting, & Searching

Module 5 - Object-oriented Programming

Module 6 - Design & Development Best Practices

Module 7 - Source Coding Best Practices

Module 8 - Software Security Best Practices

Module 9 - Best Practices for Maintaining Code

CAREER PATH

This course is ideal if you're seeking to enhance an existing IT skillset or if you have aspirations of working in the field of software development.

COURSE DURATION

18 hours. This will vary from individual to individual based on prior knowledge and ability.



CPD POINTS: 18

CPD points awarded upon successful completion.



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