TECHNICAL
EDUCATION
ACADEMY

School of Computer Science

COURSE PROGRAMME

000252

COMP002 - Coding principles

Develop computational thinking abilities and the skills needed to code simple computer programmes.



Learn from the Best in the Business!

Course overview

Intermediate level

Why take this course

Develop computational thinking abilities and the skills needed to code simple computer programmes. This module sets out essential concepts and skills relating to the ability to use computational thinking and coding to create simple computer programs. The Coding Principles module covers the main concepts and skills needed to use code and computational thinking. It helps develop the skills used to create simple computer programmes.

Computational thinking is used in many job roles, not just programme and software development. Coding is becoming the new standard of literacy, with skills used in roles as varied as art and design, engineering, data analysis, and science. Computing develops related skills such as problem- solving, pattern recognition, abstraction, and algorithms.

Who it is for and how it helps

This module is suitable for a wide range of candidates, including students and those who would like to develop their IT skills. Computer science is a broad field and its applications continue to grow.

What you will learn

- Understand key concepts relating to computing and the typical activities involved in creating a program.
- Understand and use computational thinking techniques like problem decomposition, pattern recognition, abstraction and algorithms to analyze a problem and develop solutions.
- Write, test and modify algorithms for a program using flowcharts and pseudocode.
- Understand key principles and terms associated with coding and the importance of well-structured and documented code.
- Understand and use programming constructs like variables, data types, and logic in a program.
- Improve efficiency and functionality by using iteration, conditional statements, procedures and functions, as well as events and commands in a program.
- Test and debug a program and ensure it meets requirements before release.

Curriculum

Modules 01–05

01 Computing Terms

- Key Concepts

02 Computational Thinking Methods

- Problem Analysis
- Algorithms

03 Starting to Code

- Getting Started
- Variables and Data Types

04 Building using Code

- Logic
- Iteration
- Conditionality
- Procedures and Functions
- Events and Commands

05 Test, Debug and Release

- Run, Test and Debug
- Release

Pre-course requirements

- Basic coding knowledge and skills

Participation and contacts

Joining the programme

Contact the Academy and quote course code 000252 to confirm dates, delivery format, prices and enrolment terms.

Training for your team

Tell us your business goals, the roles and number of participants, and your preferred dates and location. This will help us discuss the right training option.

Preparing for the programme

Read the pre-course requirements in this programme before enrolling.

Discuss your training needs

mail@tecedu.org
www.tecedu.academy

Learn from the Best in the Business!