

# ICDL Professional

## CODING PRINCIPLES



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.

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.

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

## The Coding Principles module is part of ICDL Professional, designed to meet the needs of modern professionals in a range of sectors.

### Main learning outcomes

Successful candidates will be able to plan and create simple programmes. The computational thinking skills developed in this module are transferrable to other types of role. After passing this module, candidates will feel confident analysing problems and writing, testing, and modifying algorithms. They will be able to:

- understand key concepts in computing and the typical activities involved in creating programmes
- recognise and use computation thinking techniques such as problem decomposition and pattern recognition
- identify problems and develop solutions
- write and build with code
- apply project management methodologies such as test, debug, and release

### Why certify with ICDL?

- ICDL certification is internationally recognised by employers and institutions.
- ICDL modules are developed with input from computer users, subject matter experts, and practising professionals from all over the world.
- The regularly updated syllabus content reflects day-to-day tasks and responsibilities typical of job roles.
- ICDL modules focus on skills acquisition as well as an understanding of concepts.
- ICDL syllabus content is vendor-independent so that skills and knowledge are transferable.
- ICDL has rigorous Quality Assurance Standards (QAS) and regular quality audits are conducted internally and externally.

Module Overview	
Category	Skill Set
Computing Terms	• Key Concepts
Computational Thinking Methods	• Problem Analysis • Algorithms
Starting to Code	• Getting Started • Variables and Data Types
Building using Code	• Logic • Iteration • Conditionality • Procedures and Functions • Events and Commands
Test, Debug and Release	• Run, Test and Debug • Release

