National 4 Computing Science (Course Code: C716 74)

SCQF Level 4 (24 Credit Points)

Why study Computing Science?

Computing science is vital to everyday life – on social, technological and economic levels. It shapes the world in which we live and its future. Computing is embedded in the world around us, from systems and devices in our homes to our places of work. It has also changed the way we learn, relax, travel and communicate.

Learning computing science will give you many benefits apart from learning about technology. You will learn valuable transferable work and life skills, such as being able to solve problems in a logical way, think creatively and handle information.

The skills you learn in this course are useful in lots of different job areas. These include science, communications, entertainment, education, business and industry.

Career Pathways

To see what career areas this subject could lead to and the routes to get there, download and view these career pathways:

Computing and ICT

Science and Maths

Teaching and Classroom Support

Transport and Distribution

Uniformed and Security Services

What do I need to get in?

The school or college will decide on the entry requirements for the course. You would normally have achieved:

- **National 3 Numeracy Unit**
- **National 3 Computing Science**

What will I study?

This course aims to help you understand key computing concepts and processes. You will learn basic computing, logical and problem solving skills. You will learn how to solve a variety of computing problems, through designing, developing and testing in real life situations. And, you will look at the impact of computing technologies on the environment or society.

The course has **two** compulsory units, plus an **added value** unit that assesses your practical skills.

Software Design and Development (9 SCQF credit points)

In this unit you will:

- learn, understand and solve problems in software design and development
- develop basic computational thinking and programming skills through practical tasks
- learn how data and instructions are stored in binary form and how programming supports computer applications.

Information System Design and Development (9 SCQF credit points)

In this unit you will:

- learn, understand and solve problems in information system design and development
- use suitable development tools to create databases, web-based information systems or multimedia information systems
- learn about basic computer hardware, software, connectivity and security issues through a range of practical and research tasks.

Added Value Unit: Computing Science Assignment (6 SCQF credit points)

In this unit you will:

- investigate and find a solution to a computing problem
- produce a short report on how you tested the solution.

How will I be assessed?

Your work will be assessed by your teacher or tutor on an ongoing basis throughout the course. Items of work might include:

- practical work – producing web pages, blogs, games or digital presentations
- class-based tests – online or electronic tests or a producing a short written report.

You must pass all units plus the added value unit to gain the course qualification.

Study Materials

- BBC Bitesize National 4 Computing Science
- UShare Study Resources

What can I go on to next?

If you complete the course successfully, it may lead to:

- **National 5 Computing Science**

Further study, training or employment in:

- Computing and ICT
- Science and Mathematics
- Teaching and Classroom Support
- Transport and Distribution
- Uniformed and Security Services