

COMPUTING SCIENCE – NATIONAL 5

What are the aims of this course:

- introduce and develop aspects of computational thinking across a range of contemporary contexts
- ◆ develop knowledge and understanding of key facts and ideas in computing science
- ◆ apply skills and knowledge in analysis, design, implementation and testing to a range of digital solutions
- ◆ communicate computing concepts clearly and concisely using appropriate terminology
- ◆ develop an understanding of the impact of computing science in changing and influencing our environment and society

What are the recommended entry levels for this course?

National 4 Computing Science Pass

Learners who have completed Curriculum for Excellence experiences and outcomes in Computing Science at Level 4.

What content is included in this course?

Software Design and Development: Learners will be able to

- Read and explain code
- Describe the purpose of a range of programming constructs and how they work
- Describe the purpose and role of variables
- Describe in simple terms how programs relate to low level operations and structure

Information System Design and Development

Develop an Information System

Consider the factors involved in design and implementation of an Information System (hardware/software, security, legal implications, environmental impact)

Computing Science Assignment (Added Value Unit): The assignment will outline a broad problem specification, with descriptions of one or two computing problems set within a given context. There will be a structured task sheet, describing what the learner is required to do for each stage of the assignment and what evidence is required.

What skills will I develop?

Programming skills, independent working and thinking, working with others, problem solving, collaborative working, research and presentation

What learning and teaching approaches will I experience?

- active learning
- development of problem solving skills and analytical thinking skills
- practical investigation and inquiry
- appropriate and effective use of technology,
- building on the principles of Assessment is for Learning
- collaborative learning and independent thinking.

How will I be assessed?

An assignment will have 60 marks. (40% of the overall marks)

The final exam consists of a question paper of 90 marks. (60% of the overall marks)

The course assessment is graded A-D and is determined by the total marks of both assessments together.

What are the homework requirements?

There is at least one significant written piece of homework each week with ongoing learning homework after each class.

What are the possible progression routes?

- Higher Computing Science Course
- National Certificate Group Awards in Computing, IT and related disciplines
other technological courses at National 5
- employment, apprenticeships and/or training in IT and related fields
- National Progression Awards in Digital Media

Certification anticipated in:

To achieve the National 5 Computing Science Course, learners must pass all of the required Units including the Added Value Unit. Employability, enterprise and citizenship skills gained in this National Course provide automatic certification of Core Skill: ICT at SCQF level 5.