National 4 / National 5 Computing Science
The purpose of these courses is to develop knowledge and understanding of Computing Science. These skills are vital as computing pervades our everyday life — socially, technologically and economically. Understanding computational processes and thinking is also vital to many other fields, including science, economics, business and industry. While many learners will want to become computing professionals, all will benefit from the development of these skills and the underpinning knowledge necessary to meet the needs of society today and for the future.

The aims of the National 4 Course are to enable learners to:
- 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

The aims of the National 5 Course are the same as National 4 plus:-
- develop knowledge and understanding of key concepts and processes in computing science
- apply skills and knowledge in analysis, design, implementation and evaluation to a range of digital solutions

National 4 / National 5 Course Content
Unit 1: Software Design and Development
This unit includes the software development process and the writing and testing of programs

Unit 2: Information System Design and Development
This unit includes the design and development of information systems and the legal and environmental implications.

Unit 3: Added Value
In this unit, learners draw on and extend the skills they have learned from across the other units and demonstrate the breadth of knowledge and skills acquired, in unfamiliar contexts / integrated ways.
Assessment: National 4 Computing Science
Internal assessments
At both National 4 and National 5 pupils are required to pass each individual unit.
Courses from National 4 to Advanced Higher include assessment of added value. At National 4, added value will be assessed in an Added Value Unit. In the National 4 Computing Science Course, the Added Value Unit will focus on challenge and application. Learners will apply knowledge and skills from both Units to solve an appropriately challenging computing science problem. Drawing on factual knowledge and skills developed the learner will present the findings in a creative manner using multimedia.

The 2 main units will be assessed by a combination of closed book tests and practical assignments.
External assessments: NO external assessment.

National 5 Computing Science
Internal assessments
Courses from National 4 to Advanced Higher include assessment of added value. At National 5, Higher and Advanced Higher, the added value unit will be assessed in the Course Assessment and is termed an Assignment. In the National 5 Computing Science Course, the Assignment will focus on breadth, challenge and application. Learners will apply knowledge and skills from both Units to solve an appropriately challenging computing science problem. They will draw on and extend factual knowledge and skills developed during the course.

External assessments
The Course assessment will consist of two Components: a question paper and an assignment, titled 'Developing a Computing Science Solution'.
Question Paper (external)
This is a written exam set by SQA. The paper will consist of 90 marks (60% of total mark): 20 marks will consist of short answer questions; 70 marks and will consist of extended response questions.
Assignment (internal)
The assignment will have 60 marks (40% of the total mark). It will assess learners' skills in analysing a problem, designing a solution to the problem, implementing a solution to the problem, and testing and reporting on that solution.

Homework
Regular homework in the form of written exercises, worksheets, background research and completion of unfinished classwork will be given. Some homework tasks are online materials and can be completed
using a computer or mobile device. Homework will consolidate all learning, including literacy and
numeracy and will test knowledge and skills.
Progression
Pupils who successfully complete the National 4 course can progress to National 5.
Pupils who successfully complete the National 5 course at level A-C can progress to Higher Computing Science.
Possible career routes

Games Developer	Electrical Engineer	Computer Animator
Digital Photographer	Programmer	Microprocessor Designer
Web Designer	Computer Technician	AntiVirus/Malware Designer
Database Designer	Systems Analyst	Computer Security Consultant
Forensic Analysis	Social Network Manager	