Computing Science

Higher
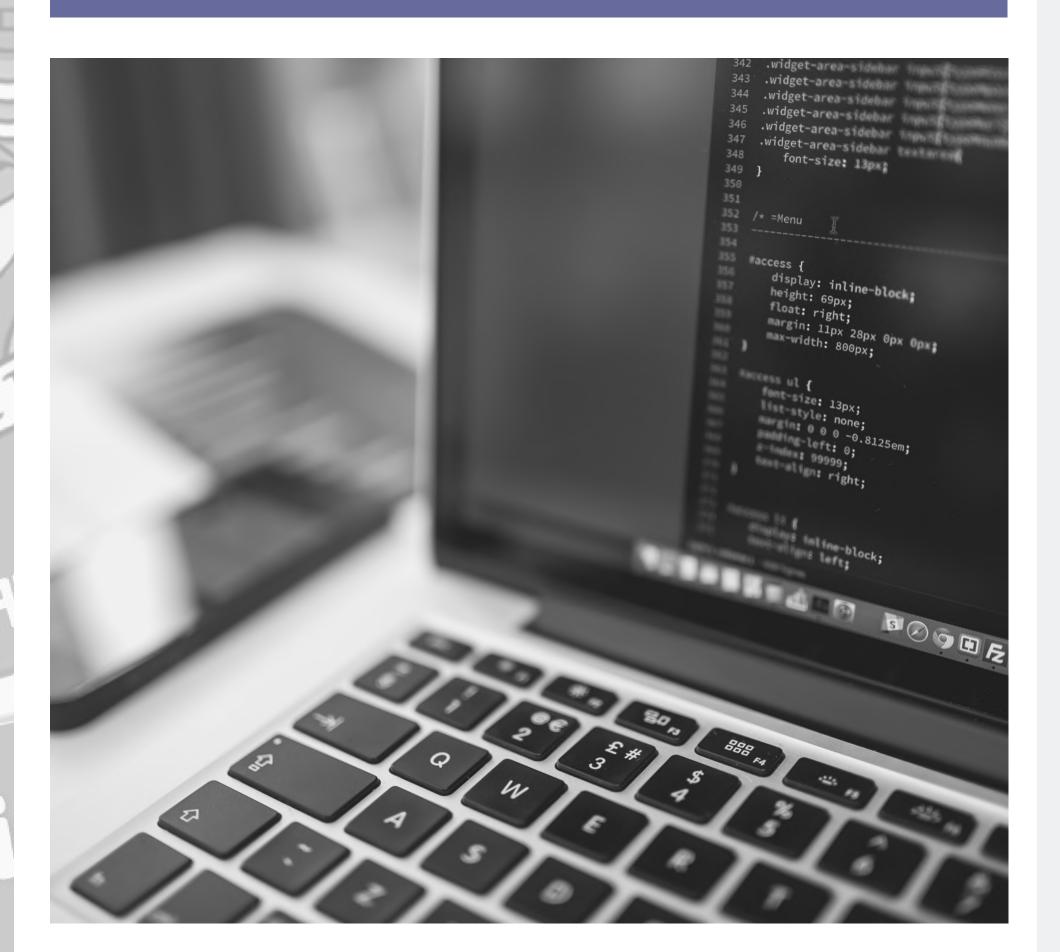
Recommended Entry Requirements

B at National 5 Computing

Progression through Computing Science

Computer Games Development (SCQF 6)

College certificate in Emerging Technologies (SCQF 7)

Course Content

The course introduces candidates to an advanced range of computational processes, where they learn to apply a rigorous approach to the design and development process across a variety of contemporary contexts. They also gain an awareness of the important role that computing professionals play in meeting the needs of society today and for the future

Software design and development
Candidates develop knowledge and understanding of advanced concepts and practical problem-solving skills in software design and development. They do this by using appropriate modular software development environments. Candidates develop modular programming and computational-thinking skills by analysing, designing, implementing, testing, and evaluating practical solutions and explaining how these programs work.

Computer systems
Candidates develop their understanding of how data and instructions are stored in binary form and factors affecting system performance. They gain an awareness of the environmental impact of intelligent systems, as well as the security risks, precautions and laws that can protect computer systems.

Database design and development
Candidates develop knowledge, understanding and advanced practical problem-solving skills in database design and development. They do this through a range of practical tasks, using a minimum of three linked tables and implemented in SQL. Candidates apply computational thinking skills to analyse, design, implement, test, and evaluate practical solutions.

Web design and development
Candidates develop knowledge, understanding and advanced practical problem-solving skills in web design and development. They do this through a range of practical and investigative tasks. Candidates apply computational-thinking skills to analyse, design, implement, test, and evaluate practical solutions to web-based problems, using a range of development tools including HTML, Cascading Style Sheets (CSS) and JavaScript.

Skills Developed

The Computing Science Higher course builds on the generic National 5 Computing Science course. Pupils will be encouraged to use an enquiring, critical and problem-solving approach to their development of software and applications solutions. As well as providing pupils with a wide range of practical IT experiences, it also provides opportunities to enhance their literacy and numeracy skills.

Assessment

Assignment 8 hours - 50 marks

Question paper 2 hours, 30 minutes - 110 marks

Related Careers

Popular careers relating to Computing include:

- IT consultant
- Cyber security consultant
- Information systems manager
- Database administrator
- Systems analyst
- Games developer
- Technical writer

Grace Hopper, Mark Zuckerberg, Margaret Hamilton, Jimmy Fallon and Liam Neeson all studies Computing, whether they stuck with it or not!