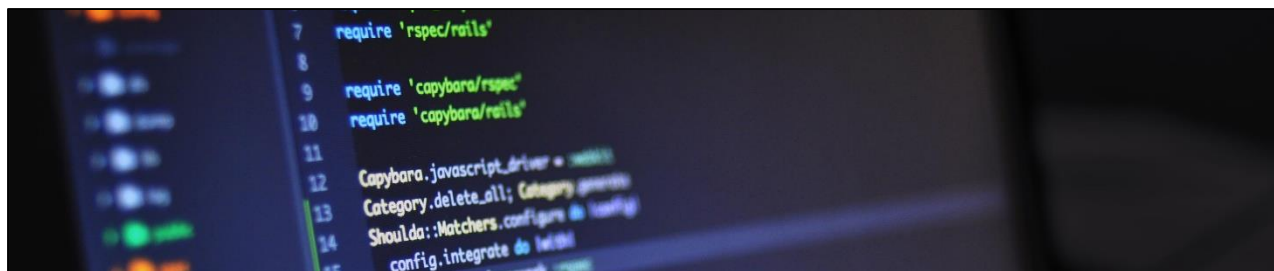


ICT & COMPUTING

A Level Computer Science



Examination Board: OCR
Subject Leader(s): Dr A Middleton



Course Structure

Unit	Topics/Unit Title	Assessment	A Level(%)
1	Computer Systems	Exam	40%
2	Algorithms and Programming	Exam	40%
3	Programming Project	Coursework	20%

What does the course involve?

- The characteristics of contemporary processors, input, output and storage devices
- Software and software development
- Exchanging data
- Data types, data structures and logarithms
- Legal, moral, cultural and ethical issues
- Elements of computational thinking
- Problem solving and programming
- Algorithms to solve problems and standard algorithms

On the project you will also work through a computing problem by analysing the problem, designing the solution, developing the solution and evaluating it. This solution can be written in any software program of your choice but we prefer those written in Python.

The course will have a mixture of theory and practical delivery and Dr Middleton will deliver the majority of the theory within 12 distinct workbooks with regular questions practice linked to each of the conceptual ideas.

Further Study/Employment Prospects

If you want to go on to take computing studies at degree level, or if you are considering employment in the field of computer science, this A level provides a superb preparation.

Computer Science is a forward-looking area that offers excellent prospects. All industries use computers so naturally computer scientists can work in any field. Problems in so many other areas can be solved by computers so it's up to the computer scientist to figure out how, and design the software to apply the solution.

Entry Requirements

A minimum of a C in ICT or Computing at GCSE

Grade 5 or equivalent in Mathematics at GCSE

A logical mind, to enable you to understand and use programming languages.

A step-by-step approach to problem solving.

The ability to work independently and to keep to deadlines.

INFORMATION TECHNOLOGY

BTEC National Extended Certificate in IT



Examination Board: Pearson Level 3

Subject Leader(s): Dr A Middleton



Course Structure

Unit	Topics/Unit Title	Assessment	A Level(%)
1	Information Technology Systems	External Assessment	33%
2	Creating Systems to Manage Information	External Assessment	25%
3	Using Social Media in Business	Internal Assessment	25%
5	Data Modelling	Internal Assessment	17%

What does the course involve?

The objective of this qualification is to give you the opportunity to develop your knowledge and skills in data management, social media in business and web development skills along with how information systems are used as a key tool in businesses.

In the BTEC National Extended Certificate units there are opportunities during the teaching and learning phase to give you practice in developing employability skills. Where employability skills such as:

- cognitive and problem-solving skills: use critical thinking, approach non-routine problems applying expert and creative solutions, use systems and technology.
- intrapersonal skills: communicating, working collaboratively, negotiating and influencing, self-presentation.
- interpersonal skills: self-management, adaptability and resilience, self-monitoring and development.

This qualification will also provide transferable knowledge and skills that prepare you for progression to university. The transferable skills that universities value include:

- the ability to learn independently
- the ability to research actively and methodically
- to be able to give presentations and be active group members.

Further Study/Employment Prospects

This qualification gives you the opportunity to progress to a degree in an IT discipline or a degree where IT related skills and knowledge may be advantageous.

This BTEC carries UCAS points and is recognised by higher education providers as meeting admission requirements for many relevant courses in exactly the same way as an A-Level. The content of the course is equivalent in size to an A Level. The qualification also supports entry to many other fields, for example:

- BSc (Hons) in IT or Digital Applications
- BSc (Hons) in Fashion Buying Management
- BSc (Hons) in Physical Geography.
- Travel and Tourism Management
- Art and Design
- Business

This qualification is also recognised in apprenticeship roles and trainee/entry-level roles, such as roles in administration, help desk support, help desk analysis, account management, customer service support and many many more.

Entry Requirements

Grade 5 or equivalent in Mathematics and English at GCSE.

The ability to work independently and to keep to deadlines.