

COMPUTER SCIENCE

CAMBRIDGE INTERNATIONAL A LEVEL COMPUTER SCIENCE

INTRODUCTION

This exciting advanced qualification gives students an excellent opportunity to investigate how computers work and how they are used to develop computer programming and problem solving skills. Students will also undertake fascinating in-depth research and practical work, including investigations into JavaScript™, encryption and assembly language programming.

AIMS OF QUALIFICATION

The aims of the qualification are to encourage students to develop:

- The capacity to think creatively, innovatively, analytically, logically and critically. They should also develop skills in project and time management
- An understanding of the organisation of computer systems, including software, hardware, data, communications and people
- The ability to apply skills, knowledge and understanding of computing, including programming, in a range of contexts to solve problems
- The capacity to see relationships between different aspects of the subject, and perceive their field of study in a broader perspective
- An understanding of the consequences of using computers, including social, legal, ethical and other issues. Also an awareness of emerging technologies and an appreciation of their potential impact on society.

COURSE CONTENT

UNIT	WEIGHTING
Theory Fundamentals	25%
Fundamental Problem Solving and Programming Skills	25%
Advanced Theory	25%
Further Problem Solving and Programming Skills	25%

Note: Topics for Unit 2 and 4 include those given in pre-release materials (20% of each paper)

LOOKING FURTHER AHEAD

Computer Science is a foundational science. It provides a way to understand something that permeates almost every aspect of modern life. Information-based tools and devices are now fundamental in education, medicine, finance, communication and entertainment. None of them would have been possible without the creative energy and analytical skills of the teams of creative people that conceived, designed, and built them.

Universities tend to expect students wishing to read Computer Science to have an A level or equivalent qualification in Mathematics.

