STRATFORD GIRLS' GRAMMAR SCHOOL

STRATFORD-UPON-AVON

Computer Science

Examination Board: OCR
A-Level Code H446

What will I learn?

The A-level Computer Science qualifications will inspire and challenge students to apply the knowledge they gain with the creative and technical skills they acquire. The qualification will be focused on programming, will build on our GCSE Computing and emphasise the importance of computational thinking as a discipline. There will be an expanded maths focus, much of which will be embedded within the course; Computational thinking will be at the core of this new specification.

The A Level will consist of three components, two of which will be externally marked question papers making up 80% of the qualification. The other 20% will be the coursework project, with a greater emphasis on coding and programming.

Highlights

Computer Systems
This component will be a traditionally marked and structured question paper with a mix of question types. It will cover the characteristics of contemporary systems architecture and other areas including the following:

- The characteristics of contemporary processors, input, output and storage devices
- Software and software development
- Exchanging data
- Data types, data structures and algorithms
- Legal, moral, cultural and ethical issues

Algorithms and Programming
This component will be a traditionally marked and structured question paper with two sections, both of which will include a mix of question types. Students will be given a problem in their exam for which they must design a solution.

Programming Project
You will have a Controlled Assessment, user-driven problem of an appropriate size and complexity to solve. You will need to analyse the problem, design a solution, implement the solution and give a thorough evaluation.

What are the entry requirements?

Previous study of Computing at GCSE level is required, in which you must have achieved a minimum of a grade 7. You will obviously need to be interested in, and keep well informed about current Computing-related events and news items as they occur. If you have not had the chance to study computing at your previous school, please contact bell.e@sggs.org.uk.

How will I be assessed?

There are two exams. Both 2.5hrs and worth 40% each. They are similar in nature to Component One and Component Two that you did at GCSE. There is also a programming project worth 20% of your marks.

What are the costs?

None, but access to a reasonable specification computer and an internet connection at home are essential. During the course there will be trips organised as enhancements to the course. These are not essential but do provide a fantastic insight into technology as a career choice.

Future Opportunities

This qualification will provide you with a range of transferable skills that are useful across the curriculum. There will also be an extended programming project which will give you an opportunity to develop your coding skills. Computer Science is a very creative subject and skills such as problem solving and analytical thinking will be refined and explored as you progress through the learning and assessment programme.