

# ST JULIAN'S COMPUTER SCIENCE



## INTRODUCTION

Computer science requires an understanding of the fundamental concepts of computational thinking as well as knowledge of how computers and other digital devices operate. Computer science has links with subjects outside of group 4, notably information technology in a global society (ITGS), but it should be noted that there are clear differences between the subjects.

## SYLLABUS OUTLINE

SL/HL core - Students study system fundamentals, computer organization, networks, computational thinking, problem-solving and programming.

HL extension - Students study abstract data structures, resource management, and control.

Case study - Students study additional subject content introduced by the annually issued case study.

Option - Students study one of the following options:

- Option A: Databases
- Option B: Modelling and simulation
- Option C: Web science
- Option D: Object-oriented programming (OOP)

## ASSESSMENT

The coursework element is a fully documented, programmed solution to a practical problem and this is worth 30% at SL and 20% at HL. Two examination papers at SL and three examination papers at HL account for the remaining percentage of the marks.

## PRIOR LEARNING

The study of computer science at HL demands a higher level of problem-solving skills and the ability to understand and manipulate abstract concepts. Although no previous knowledge of computer science is required, some exposure to programming is desirable. A good grade in mathematics and ICT GCSE is required. Please email [mjb@stjulians.com](mailto:mjb@stjulians.com) for more information.

## LINKS

St Julian's eLearning - <http://elearning.stjulians.com/>

Student WIKI - <http://compsci2014.wikispaces.com/>

IB WIKI - <http://csopedia.wikispaces.com/>

Computer Science Bookmarks - [https://groups.diigo.com/group/comp\\_sci](https://groups.diigo.com/group/comp_sci)