

# St John's Curriculum Overview – Year 12

<b>Subject title</b>	<b>Computer Science</b>
Setting arrangements	No setting
Time allowance each fortnight	9 hours

## Introduction

Students work towards two external exams in Computer Science:

- Paper 1 - Computer Systems
- Paper 2 – Algorithms & Programming

Students are also required to complete a Non-Examined Assessment, consisting of a programming project in year 12.

## Topics, Skills and Assessment covered during the course

	Topics covered	Skills developed	Assessment
<b>Term 1</b>	<b>1.1 Processors, IO &amp; Storage</b>	Structure & Function of the Processor, Types of Processor, IO & Storage	End of unit tests will be used to monitor progress and understanding
	<b>2.2 Problem Solving &amp; Programming</b>	Programming Techniques & Computational Methods	
<b>Term 2</b>	<b>1.2 Software &amp; Software Development</b>	Systems Software, Applications Generation, Software Development, Types of Programming Languages	End of unit tests will be used to monitor progress and understanding
	<b>2.2 Problem Solving &amp; Programming</b>	Programming Techniques & Computational Methods	
	<b>2.1 Computational Thinking</b>	Thinking abstractly, ahead, procedurally, logically, concurrently	
	<b>1.4 Data Types, Data Structures &amp; Algorithms</b>	Data Types, Data Structures, Boolean Algebra	
<b>Term 3</b>	<b>1.3 Exchanging Data</b>	Networks	End of unit tests will be used to monitor progress and understanding
	<b>2.3 Algorithms</b>	Searching, Sorting & Data Structure Algorithms, Algorithm Complexity	

<b>Term 4</b>	<b>2.3 Algorithms</b>	Searching, Sorting & Data Structure Algorithms, Algorithm Complexity	End of unit tests will be used to monitor progress and understanding
	<b>NEA Preparation, Problem Analysis &amp; Design</b>	Problem identification, Stakeholders, research & specification	
<b>Term 5</b>	<b>1.5 LMCE</b>	Computing Related Legislation, Moral & Ethical Issues	End of unit tests will be used to monitor progress and understanding
	<b>2.3 Algorithms</b>	Searching, Sorting & Data Structure Algorithms, Algorithm Complexity	
	<b>NEA Problem Analysis &amp; Design</b>	Problem identification, Stakeholders, research & specification	
<b>Term 6</b>	<b>1.3 Exchanging Data</b>	Web Technologies	End of year exams will be used to check retention and improve exam technique
	<b>NEA Problem Analysis &amp; Design</b>	Decompose the problem, describe the solution & approach to testing	

#### **Resources Recommended for Revision and where they are available:**

- Hodder Education Computer Science for A Level (OCR) Text Book – available to borrow from the library
- PG Online OCR AS and A Level Computer Science Text Book – limited copies available to borrow from the library
- Craig n Dave Video lessons – available online at <https://www.youtube.com/craigndave>

#### **Homework**

- Students will receive weekly homework to introduce/reinforce topics covered in lessons
- Students will also be expected to revise for the various assessments, as well as practise vocabulary & their programming skills

#### **Additional support and help for the course**

- After school & lunchtime sessions will be put on, as required in year 13, in the build-up to exams

#### **Extra-Curricular**

- N/A