


# Computer Science (A Level) Curriculum – Year 13 Pending

 <span style="float: right;"> <b>Holly Lodge High School</b>                      College of Science                 </span>						
Term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Focus</b>	Section 1 – Components of a Computer	Section 2 – System Software	Section 3 – Software Development	Section 4 – Exchanging Data	Section 5 – Networks & Web Technologies	Section 6 – Data Types Manage
<b>Key Tasks</b>	<p>Learners will developing an understanding of the following:</p> <ul style="list-style-type: none"> <li>• Processor Components</li> <li>• Processor performance</li> <li>• Types of processors</li> <li>• Input devices</li> <li>• Output devices</li> <li>• Storage devices</li> </ul>	<p>Learners will developing an understanding of the following:</p> <ul style="list-style-type: none"> <li>• Functions of an operating system</li> <li>• Types of operating systems</li> <li>• The nature of applications</li> <li>• Programming language translators</li> </ul>	<p>Learners will developing an understanding of the following:</p> <ul style="list-style-type: none"> <li>• Systems Analysis Method</li> <li>• Writing and following algorithms</li> <li>• Programming paradigms</li> <li>• Assembly language</li> </ul>	<p>Learners will developing an understanding of the following:</p> <ul style="list-style-type: none"> <li>• Compression, encryption and hashing</li> <li>• Database concepts</li> <li>• Relational databases and normalization</li> <li>• Introduction to SQL</li> <li>• Defining and updating tables using SQL</li> <li>• Transaction processing</li> </ul>	<p>Learners will developing an understanding of the following:</p> <ul style="list-style-type: none"> <li>• Structure and the internet</li> <li>• Internet communication</li> <li>• Network security and threats</li> <li>• HTML &amp; CSS</li> <li>• Web forms and JavaScript</li> <li>• Search engine indexing</li> <li>• Client-server and peer-to-peer</li> </ul>	<p>Learners will developing an understanding of the following:</p> <ul style="list-style-type: none"> <li>• Primitive data types, binary and hexadecimal</li> <li>• ASCII &amp; Unicode</li> <li>• Binary Arithmetic</li> <li>• Floating point arithmetic</li> <li>• Bitwise manipulation and masks</li> </ul>

<p><b>Assessment</b></p> <p>Final Computer Systems Exam: 2:30 Minutes (Written)</p> <p>Final Algorithms &amp; Programming Exam: 2:30 Minutes (Written)</p>	<p>Internally assessed through mock exam of Section 1 – Components of a Computer</p>	<p>Internally assessed through mock exam of Section 2 – System Software</p>	<p>Internally assessed through mock exam of Section 3 – Software Development</p>	<p>Internally assessed through mock exam of Section 4 – Exchanging Data</p>	<p>Internally assessed through mock exam of Section 5 – Networks &amp; Web Technologies</p>	<p>Internally assessed through mock exam of Section 6 – Data Types Manage</p>
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