



YEAR 11 CURRICULUM SUMMARY

When?	Knowledge	Assessment
<p>AUTUMN Term – FIRST Half (7 Weeks)</p>	<p>Ethical, Legal, Cultural & Environmental Concerns Investigate Computer Science Technologies with respect to ethical, legal, cultural, environmental and privacy issues Stakeholders and technology Environmental Impact of Computer Science</p> <p>Cultural Implications</p> <p>Open Source vs Proprietary Software</p> <p>Legislation relevant to Computer Science</p> <p>Programming Skills Audit Identify existing programming skills Develop existing programming skills</p>	<p>ProProfs Online Quizzes developed by GCS Computing Department</p> <p>Ethical Aspects QUIZ Environmental Aspects QUIZ Open Source vs Proprietary Software QUIZ Legal Considerations QUIZ Programming QUIZ Further Programming QUIZ</p>

When?	Knowledge	Assessment
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">AUTUMN Term – SECOND Half (7 Weeks)</p>	<p>NEA Programming Project</p> <p>NEA Task Introduction</p> <ul style="list-style-type: none"> • Source Code • Object Code • Text-based Programming Languages • Python • C++ • JavaScript • HTML • CSS <p>Focus on Analysis & Design Requirements for a Project</p>	<p>Programming Challenges</p> <p>Submitting drafts for oversight of teacher. Teacher not allowed to assist with individual projects but can comment generally to class on areas where there might be issues on eg file handling or a general understanding of the NEA project requirements.</p>

When?	Knowledge	Assessment
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">SPRING Term – FIRST Half</p> <p style="writing-mode: vertical-rl; transform: rotate(180deg);">(6 Weeks)</p>	<p>REVISING ALL aspects of the theory for this course:</p> <p>Systems Architecture</p> <p>How common characteristics of CPUs affect their performance:</p> <ul style="list-style-type: none"> • clock speed • cache size • number of cores <p>Embedded systems:</p> <ul style="list-style-type: none"> • purpose of embedded systems • examples of embedded systems <p>Translators</p> <p>Characteristics and purpose of different levels of programming language, including low level languages</p> <p>The purpose of translators</p>	<p>ProProfs Online Quizzes developed by GCS Computing Department</p> <p style="text-align: center;">Computer Systems QUIZ</p> <p>The CPU QUIZ</p> <p style="text-align: center;">Von Neumann Architecture QUIZ 04</p> <p style="text-align: center;">Fetch-Decode-Execute Cycle QUIZ</p> <p style="text-align: center;">CPU Performance QUIZ</p> <p style="text-align: center;">Programming Languages QUIZ</p>

When?	Knowledge	Assessment
SPRING Term – SECOND Half (6 Weeks)	<p>REVISING ALL aspects of the theory for this course:</p> <p>Memory</p> <p>Translators & Facilities</p> <p>The difference between RAM and ROM</p> <p>The purpose of ROM in a computer system</p> <p>The characteristics of an assembler, a compiler and an interpreter</p>	<p>ProProfs Online Quizzes developed by GCS Computing Department</p> <p>Fetch-Decode-Execute Cycle QUIZ</p> <p>Von Neumann Architecture QUIZ</p> <p>The CPU QUIZ</p> <p>Computer Systems QUIZ</p>

When?	Key Learning Objectives Key Questions	Assessment
SUMMER Term – FIRST Half (6 Weeks)	<p>REVISING ALL aspects of the theory for this course:</p> <ul style="list-style-type: none"> • Importance of Computational Thinking • Systems Architecture • Primary Storage • Secondary Storage • Networks - Introduction • Networks – Topologies & Protocols • Networks - Layering • Networks – Connections • Networks - Security • The Internet • Systems Software • Computational Thinking & Algorithms • Programming Techniques • Writing Reliable Programs • Data Representation, Conversion & Arithmetic • Translators & Programming Tools 	<p>ProProfs Online Quizzes developed by GCS Computing Department</p> <ul style="list-style-type: none"> Memory QUIZ Secondary Storage QUIZ Computational Thinking QUIZ Data Types QUIZ