

EXPECTED STANDARDS

1.1 Systems Architecture	
The purpose of the CPU	1
Von Neumann Architecture	2
Common CPU Components and their functions	3
The function of the CPU as fetch and execute instructions stored in memory	4
How common characteristics of CPUs affect their performance	5
Embedded systems	6
1.2 Memory	
The difference between RAM and ROM	1
The purpose of ROM in a computer system	2
The purpose of RAM in a computer system	3
The need for virtual memory	4
Flash memory	5
1.3 Storage	
The need for secondary storage	1
Data capacity and calculation of data capacity requirements	2
Common types of storage	3
Storage devices and storage media	4
1.4 Wired and wireless networks	
Types of networks (LAN/WAN)	1
Factors that affect the performance of networks	2
The different roles of computers in a client-server and a peer-to-peer network	3
The hardware needed to connect stand-alone computers into a Local Area Network	4
The internet as a worldwide collection of computer networks	5
The concept of virtual networks	6
1.5 Network topologies, protocols and layers	
Star and mesh topologies	1
Wifi	2
Ethernet	3
The uses of IP addressing, MAC addressing, and protocols	4
The concept of layers	5
Packet switching	6
1.6 System security	
Forms of attack	1
Threats posed to networks	2
Identifying and preventing vulnerabilities	3
1.7 System software	
The purpose and functionality of system software	1
Operating systems	2
Utility system software	3
1.8 Ethical, legal, cultural, environmental concerns	
Discussing Computer Science technologies	1
How key stakeholders are affected by technologies	2
Environmental impact of Computer Science	3
Cultural implications of Computer Science	4
Open source vs proprietary software	5
Legislation relevant to Computer Science	6