TABLE OF SPECIFICATION
CONTENT AREAS FOR ICT - JHS

	Content Areas	Competencies	Descriptive statements
1	General ICT Concepts	1. Demonstrate understanding in the components of the computer system 2. Demonstrate understanding in the functions of the various computer mouse operations 3. Demonstrate understanding in the stages the computer follows to perform a task 4. Demonstrate understanding between the user interfaces about user needs 5. Demonstrate understanding with health and safety issues in the ICT lab	1. Identify the components of the computer system 2. Determine the functions of the various computer mouse operations 3. Explain the stages the computer follows to perform a task 4. Differentiate between the user interfaces about user needs 5. Analyze health and safety issues in the ICT laboratory
2	Software development concepts	1. Demonstrate knowledge in flowchart symbols to their meanings 2. Demonstrate understanding in algorithm for solving a problem using pseudocode 3. Demonstrate knowledge in the importance of computer algorithms in software development 4. Demonstrate understanding in software process models for developing software 5. Demonstrate knowledge in flowchart or flow diagram of a given algorithm in developing software for a client.	1. Identify flowchart symbols to their meanings 2. Provide an example algorithm for solving a problem using pseudocode 3. Explain the importance of computer algorithms in software development 4. Explain the different software process models for developing software 5. Create a flowchart/diagram of a given algorithm in developing software for a client
3	Software and Hardware concepts	1. Demonstrate understanding in five strategies for troubleshooting and maintaining a computer system	1. Identify five strategies for troubleshooting and maintaining a computer system 2. Compare the different operating systems

		2. Demonstrate understanding in the different operating systems used by the computer 3. Demonstrate an understanding of application software for performing specific tasks 4. Understand the techniques and technologies used to manage input devices such as a mouse, keyboard, etc. 5. Demonstrate knowledge in software installation strategy for various hardware platforms	used by the computer 3. Apply appropriate tools to use application software for performing specific tasks 4. Describe the techniques and technologies used to manage input devices such as a mouse, keyboard, etc. 5. Develop a successful software installation strategy for various hardware platforms
4	Network concepts and system administration	1. Demonstrate understanding in the steps for planning a network for a home 2. Demonstrate knowledge with information from a variety of sources for designing and setting up a network for a company 3. Demonstrate understanding in administering a system of computers for managing a school 4. Demonstrate understanding in maintaining and expanding existing networks 5. Demonstrate knowledge in simple computer network for managing a business	1. Provide the steps for planning a network for a home 2. Classify information from a variety of sources for designing and setting up a network for a company 3. Formulate strategies for administering a system of computers for managing a school 4. Formulate solutions for maintaining and expanding existing networks 5. Create a simple computer network for managing a business
5	Web development and Internet concepts	1. Demonstrate knowledge in the steps for creating a website 2. Demonstrate knowledge in the protocols for developing and implementing web applications 3. Demonstrate understanding in the relevant search engines for problem-solving, research and continuous professional development 4. Demonstrate knowledge in the appropriate tools	1. Provide the steps for creating a website 2. Categorize the protocols for developing and implementing web applications 3. Investigate the relevant search engines for problem-solving, research and continuous professional development 4. Use appropriate tools for the design, development and creation of web

		for the design, development and creation of web applications for a school 5. Demonstrate knowledge of composing an email message with an attachment for distribution to a group of clients	applications for a school 5. Compose an email message with an attachment for distribution to a group of clients
6	Database concepts	1. Demonstrate knowledge in the steps to follow in creating a database 2. Demonstrate knowledge in database terminologies and techniques such as tuple, primary and foreign keys, normalization, table, schema, entity relationships, etc. 3. Demonstrate knowledge in the relationships between different entities in an entity relationship diagram (ERD) 4. Demonstrate understanding in the various technologies used for creating a database for a small business 5. Demonstrate knowledge in creating a database to support an application for managing a school	1. Outline the steps to follow in creating a database 2. Define database terminologies and techniques such as tuple, primary and foreign keys, normalization, table, schema, entity relationships, etc. 3. Illustrate relationships between different entities in an entity relationship diagram (ERD) 4. Differentiate the various technologies used for creating a database for a small business 5. Create a database to support an application for managing a school
7	Educational technologies	1. Demonstrate understanding in different technologies to aid teaching and learning 2. Demonstrate knowledge in the use of technologies, including mobile, for teaching and learning 3. Demonstrate understanding in the use of various educational technologies for teaching and learning to achieve inclusivity 4. Demonstrate knowledge in a lesson or presentation that incorporates educational	1. Identify different technologies to aid teaching and learning 2. Categorize the use of technologies, including mobile, for teaching and learning 3. Explain the use of various educational technologies for teaching and learning to achieve inclusivity 4. Create a lesson or presentation that incorporates educational technologies for

		technologies for teaching and learning 5. Demonstrate understanding in the usage of educational technologies in a case study	teaching and learning 5. Analyze the usage of educational technologies in a case study
8	Multimedia and emerging technologies	1. Demonstrate knowledge in different multimedia technologies to help teaching and learning 2. Demonstrate knowledge in the use of multimedia technologies, including video and YouTube, for teaching and learning 3. Demonstrate understanding in between other multimedia technologies used for teaching and learning 4. Demonstrate understanding in the elements of multimedia and how it can be applied in teaching and learning 5. Demonstrate understanding in the usage of multimedia technologies in a case study	1. Identify different multimedia technologies to help teaching and learning 2. Classify the use of multimedia technologies, including video and YouTube, for teaching and learning 3. Distinguish between other multimedia technologies used for teaching and learning 4. Explain the elements of multimedia and how it can be applied in teaching and learning 5. Analyze the usage of multimedia technologies in a case study
9	Ethical issues in computing	1. Demonstrate knowledge in what constitutes plagiarism in the context of computer ethics 2. Demonstrate knowledge in various copyright issues and give reasons for copyright protection 3. Demonstrate understanding of unethical behaviours in computing 4. Demonstrate understanding in the forms of cyberbullying that constitute unethical behaviour 5. Demonstrate understanding in the concept of fair usage to a copyrighted material	1. Identify what constitutes plagiarism in the context of computer ethics 2. Categorize various copyright issues and give reasons for copyright protection 3. Cite examples of unethical behaviours in computing 4. Evaluate the forms of cyberbullying that constitute unethical behaviour 5. Apply the concept of fair usage to a copyrighted material
10	Computer security concepts	1. Demonstrate knowledge in the various events and actions that constitute the potential threats to computers	1. Identify the various events and actions that constitute the potential threats to computers

		2. Demonstrate knowledge of threats, vulnerability, and attacks as applied in computer security 3. Demonstrate understanding in the bugs in a system of computers at a computer lab that could expose the system to threats 4. Demonstrate understanding of counter-security measures for dealing with computer attacks 5. Demonstrate understanding in measures to safeguard computer threats in a school setting	2. Distinguish between threats, vulnerability, and attacks as applied in computer security 3. Evaluate the bugs in a system of computers at a computer lab that could expose the system to threats 4. Cite examples of counter-security measures for dealing with computer attacks 5. Design and implement measures to safeguard computer threats in a school setting

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TABLE OF SPECIFICATION - ICT FOR JHS

NO.	CONTENT AREAS	Course Objectives/Outcomes (DOK)				Total
		Level 1 (Recall)	Level 2 (Skills/Concepts)	Level 3 (Strategic Thinking)	Level 4 (Extended Thinking)	
1	Introduction to Computer	1	2	2	2	**7**
2	Computer hardware	2	2	4	3	**11**
3	Computer Software	2	3	4	3	**12**
4	PC Maintenance	2	3	3	3	**11**
5	Spreadsheet application	1	2	3	3	**9**
6	Word Processing application	2	2	3	2	**9**
7	Data Communication and Networking	1	4	4	4	**13**
8	Database and Software development	1	2	3	5	**11**
9	Internet and web technologies	1	3	3	4	**11**
10	Presentation application	2	2	1	1	**6**
Total		15	25	30	30	100