COMPUTER STUDIES DEPARTMENT

Grade 8 Information Technology

Course Outline

September (2024) -July (2025)

IMPORTANT **DATES**

1. Christmas Midterm: **October 21 - 23**
2. 1st Sixth week test: **October 14 - 18**
3. 2nd Sixth week test: **December 9 – 13**
4. Prize Giving: **December 18**
5. 3rd Sixth week test: **February 17- 21**
6. Easter Mid Term**: March 5-7**
7. 4th Sixth week test: **May 12- 16**
8. Summer Mid Term**: May 21-23**

Department Name:	Computer Studies
Grade Level:	Eight (8)
Tile of Course:	Grade 8 Information Technology
Duration:	September 4 (2024) - July 4 (2025)
Description of the Course:	The Grade 8 Information Technology curriculum builds on foundational knowledge from Grade 7, expanding students' understanding of computer systems, data communication, networking, and productivity tools. Below is a brief overview of the key themes covered: 1. **Foundations of Hardware & Software:** o Students will deepen their understanding of computer components, both hardware and software, exploring how these elements function together within a system.

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	○ Emphasis will be placed on the historical development of computers, different types of computers, and their specific uses. 2. **Data Communication, Networking & Internet:** ○ Students will explore the basics of data communication, focusing on networking concepts such as LAN (Local Area Network) and WAN (Wide Area Network). ○ The course will also cover Internet fundamentals, including terminologies and the use of Internet-related software, along with safe and effective online research strategies. 3. **Productivity Tools & Multimedia Authoring:** ○ The course will introduce students to various productivity tools, including word processing, desktop publishing, and multimedia management software. ○ Students will learn to create multimedia presentations and manage files using an operating system. 4. **Health and Safety:** ○ Students will discuss the importance of maintaining safety while using computer systems, including the proper care of equipment. ○ The course will cover ergonomics, its impact on computer-related disorders, and the environmental effects of computer use.
Course Objective:	Upon Completion of this course student should be able to: **Foundations of Hardware & Software:** ● Examine and describe the components of a computer system. ● Understand the characteristics of various hardware components. ● Identify and explain different types of software **Data Communication, Networking & Internet:** Understand and use terminologies associated with data communication and networking. Explain the fundamentals of computer networks, including PAN, LAN, MAN and WAN.

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	Understand basic Internet terminologies and effectively use Internet-related software. **Productivity Tools & Multimedia Authoring:** ● Manipulate word processing and desktop publishing software to create documents. ● Use various multimedia management tools. ● Manage files and desktop environments using an operating system. **Health and Safety:** ● Discuss risks and safety issues associated with operating computer systems. ● Understand and practice proper care and maintenance of computer equipment. ● Explain the importance of ergonomics and its impact on computer-related disorders. ● Evaluate the environmental effects of computers. **Computer Ethics and Research:** ● Understand and practice ethical approaches when using information on the Internet. ● Demonstrate effective online research skills using successful search strategies. ● Know and apply appropriate safety measures when using the Internet.
Student Learning Outcomes:	Upon successful completion of this course, students will be able to: • **Foundations of Hardware & Software:** o Identify and explain the functions of key computer system components. o Differentiate between various types of hardware and assess their characteristics. o Support peers in effectively using computer hardware. o Distinguish between different types of software and their practical uses. • **Data Communication, Networking & Internet:** o Define and correctly use terminologies related to data communication and networking.

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	◦ Describe the basic principles of computer networks, including LAN and WAN. ◦ Navigate and utilize resources on the World Wide Web efficiently. ◦ Apply basic Internet terminologies in practical scenarios and demonstrate proficiency in using Internet-related software. • **Productivity Tools & Multimedia Authoring:** ◦ Create and edit documents using word processing and desktop publishing software. ◦ Manage and utilize multimedia tools for various projects. ◦ Design and develop multimedia presentations using appropriate software. ◦ Organize and manage computer files effectively using an operating system. • **Health and Safety:** ◦ Identify and discuss potential risks and safety concerns when using computer systems. ◦ Demonstrate proper care and maintenance of computer equipment. ◦ Explain the principles of ergonomics and its relevance to preventing computer-related disorders. ◦ Assess the environmental impact of computers and propose measures to mitigate negative effects. • **Computer Ethics and Research:** ◦ Apply ethical principles when using and sharing information online. ◦ Conduct effective online research using advanced search techniques. ◦ Implement appropriate safety measures while using the Internet.

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Topical Outline of the Course Content:	**Foundations of Hardware & Software** • Overview of Computer Systems • Characteristics and Functions of Hardware Components • Introduction to Software: System Software vs. Application Software • Practical Session: Assisting Peers with Hardware Devices **Data Communication, Networking & Internet** • Basics of Data Communication • Introduction to Networking Concepts: PAN, LAN, MAN and WAN • Understanding Network Devices: Routers, Switches, Modems • Internet Fundamentals: Web Browsers, Search Engines, and Email • Internet Terminologies: IP Address, URL, DNS, HTTP/HTTPS • Safe and Effective Internet Use: Research Strategies and Online Safety **Productivity Tools & Multimedia Authoring** • Word Processing Software: Creating and Formatting Documents • Desktop Publishing: Designing Flyers, Brochures, and Newsletters • Multimedia Management Software: Photo and Video Editing Tools • Presentation Software: Creating Slideshows and Multimedia Presentations • File and Desktop Management: Organizing Files and Folders • Operating Systems: Navigating and Customizing User Interfaces **Health and Safety** • Identifying Risks and Safety Issues in Computer Use

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	• Proper Care and Maintenance of Computer Equipment • Understanding Ergonomics: Setting Up a Healthy Workstation • Preventing Computer-Related Disorders: RSI, Eye Strain, and Back Pain • Environmental Impact of Computers: E-Waste and Energy Consumption • Best Practices for Sustainable Computing **Computer Ethics and Research** • Introduction to Computer Ethics: Privacy, Security, and Intellectual Property • Safe Internet Practices: Avoiding Cyber Threats and Protecting Personal Data • Ethical Use of Information: Plagiarism, Copyright, and Fair Use • Conducting Online Research: Evaluating Sources and Citing Information
Guidelines/Suggestions for Teaching Methods and Student Learning **Activities:**	Lectures: Provide contextual background and detailed analysis of each topic. Group Discussions: Facilitate discussions on the computer system. Research Projects: Assign research on a topic related to the components of a computer system. Differentiated Instruction: Tailoring instruction to meet the needs, strengths, and interests of each student. Lecture-Demonstration: Combining lectures with demonstrations to enhance understanding through verbal and visual learning Peer Teaching: Students teach their peers, which can reinforce their own learning and enhance their understanding.
Guidelines/Suggestions for Methods of Student Evaluation:	Quizzes and Tests: Regular assessments to check understanding of key concepts. Classwork: Assignments completed during class that help monitor ongoing student progress and understanding.

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	Homework Assignments: Tasks assigned for completion outside of class, reinforcing concepts taught and promoting independent study. Class Participation: Assessment based on engagement in discussions and activities. Presentations: Students present their research findings to the class. Final Exam: A comprehensive exam covering all course material. Group Projects: Team assignments that assess collaborative and interpersonal skills along with individual contributions. Peer Reviews: A process where students evaluate each other's work, providing feedback and gaining insights from peers. Reflections: Written insights by students on their learning experiences, often discussing what they learned and areas for improvement. Self-Grading: Allowing students to evaluate their own work, fostering self-reflection and critical thinking about their performance. Online Quizzes and Exams: Digital tests that make use of technology to assess students' understanding in a more flexible or remote setting
Suggested Readings, Texts, Objects of Study:	• Interact with Information Technology Rolland Birbal, Michelle Taylor new Edition.
Bibliography of Supportive Texts and Other Materials	**Bibliography**

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