

## Information Technology Course Outline – Trinity Term 4<sup>th</sup> Form

Week	Topic	Objectives	Content	Evaluation/Activities
<b>1 – Theory</b>	Fundamentals of Hardware and Software	<ul style="list-style-type: none"> <li>i) Describe a general purpose computer system.</li> <li>ii) Describe the two main components of all computer systems</li> <li>iii) Identify and describe computers and types of computers</li> <li>iv) Describe the data processing cycle and its components</li> <li>v) Explain the functions of the major hardware components of a computer system - Input Devices</li> </ul>	<p>Define the two major components of computer systems; hardware and software</p> <p>Describe the various types of computers and their characteristics</p> <p>Define the major functions of computer systems (input, processing, output, storage) and its relationship to the data processing cycle</p> <p>Identify categories of Input Devices</p> <p>Identify common Input Devices and explain how they are used to accomplish a variety of tasks in various organisations.</p>	<p>1) <b>Interactive Revision Class Activity – Revision Jeopardy</b></p> <p>Divide Class into two teams. A Member picks a category to answer a question from.</p> <p>2) <b>Graded Revision Worksheet</b></p>

<b>1 - Practical</b>	Database	Create a database;	Table structure with at least three data types and populate with at least twenty-five records. <b>Use of wizard is prohibited.</b>	<b>Database Section – School Based Assessment</b>
		Modify a table structure;	Adding new fields, deleting fields, changing field definitions.	
		Sort a database;	Arranging data in numeric, alphabetic; or alphanumeric format	
		Query a database using multiple search conditions;	Using more than one criterion; use of select, calculated fields;	
		Establish relationships;	Use of joins, merge tables/files.	
		Generate reports to the screen, printer and files.	Report generating facilities of the database package, including use of sorting, grouping, statistical and summary features, for example, count, sum and average.	

<p><b>2 – Theory</b></p>	<p>Fundamentals of Hardware and Software</p>	<p>manipulate units of storage;</p> <p>Explain the functions of the major hardware components of a computer system – Output Devices (Soft Copy)</p> <p>Explain the functions of the major hardware components of a computer system – Output Devices (Hard Copy)</p>	<p>Revise Bit, byte, kilobyte, megabyte, gigabyte, terabyte, word, word size.</p> <p>Visual display unit: resolution, types, sizes. Audio output devices (for example, speakers, headphones, earphones); microfilm. Also terms such as hard copy, soft copy, human readable and machine-readable.</p> <p>Printers: impact and non-impact, types: (character, line, page, laser, inkjet, dot matrix). Characteristics: (speed, quality, storage capacity); plotters;</p>	<p><b>Homework Activity 1 &amp; 2</b> Answer Recap Questions</p> <p><b>Quiz</b></p> <p><b>Classroom Activity</b></p>
<p><b>2 –Practical</b></p>	<p>Database</p>	<p>Create a database;</p> <p>Modify a table structure;</p>	<p>Table structure with at least three data types and populate with at least twenty-five records. <b>Use of wizard is prohibited.</b></p> <p>Adding new fields, deleting fields, changing field definitions.</p>	<p><b>Database Section – School Based Assessment</b></p>

		<p>Sort a database;</p> <p>Query a database using multiple search conditions;</p> <p>Establish relationships;</p> <p>Generate reports to the screen, printer and files.</p>	<p>Arranging data in numeric, alphabetic; or alphanumeric format</p> <p>Using more than one criterion; use of select, calculated fields;</p> <p>Use of joins, merge tables/files.</p> <p>Report generating facilities of the database package, including use of sorting, grouping, statistical and summary features, for example, count, sum and average.</p>	
<b>3 – Theory</b>	Fundamentals of Hardware and Software	<p>Distinguish between systems programs and application programs;</p> <p>Explain the functions of an operating system;</p>	<p>Systems software: operating systems, translators, utilities: Application software: general purpose, special purpose, custom written. Customization, integrated software.</p> <p>File management, memory management, security, device management, input/output management,</p>	<p><b>Homework Activity</b> Answer Recap Questions</p> <p><b>Software Worksheet – Graded</b></p> <p><b>Quiz</b></p>

<b>3 –Practical</b>	Database	Distinguish between types of user interface.	user interface, process management.  Software interface: Command driven, graphical user interface (GUI) (menu driven, pull-down and pop-up menus, icons). Hardware interface: touch screens, non-visual interface, sensors, and Braille keyboards.	<b>Database Section – School Based Assessment</b>
		Create a database;	Table structure with at least three data types and populate with at least twenty-five records. <b>Use of wizard is prohibited.</b>	
		Modify a table structure;	Adding new fields, deleting fields, changing field definitions.	
		Sort a database;	Arranging data in numeric, alphabetic; or alphanumeric format	
		Query a database using multiple search conditions;	Using more than one criterion; use of select, calculated fields;	

		Establish relationships;  Generate reports to the screen, printer and files.	Use of joins, merge tables/files.  Report generating facilities of the database package, including use of sorting, grouping, statistical and summary features, for example, count, sum and average.	
<b>4 – Theory</b>	Fundamentals of Hardware and Software	Describe how data are stored and manipulated within the computer;	Decimal to binary conversion, Binary to Decimal Conversion, Binary Addition, Binary Subtraction	<b>Conversion Worksheet 1 &amp; 2 Binary Addition Worksheet Binary Subtraction worksheet Quiz</b>
<b>4 –Practical</b>	Spreadsheet	Select basic pre-defined systems functions;	Basic Excel Manipulation, Formulas and Functions	<b>Spreadsheet Section – School Based Assessment</b>
<b>5 –Theory</b>	Fundamentals of Hardware and Software	Describe how data are stored and manipulated within the computer;	BCD, Sign & Magnitude, Two's Complement	<b>BCD – Worksheet, Sign &amp; Magnitude Worksheet Two's Complement Worksheet</b>  <b>Classroom Activity</b>
<b>5 -Practical</b>	Spreadsheet	Select basic pre-defined systems functions;	Basic Excel Manipulation, Formulas and Functions	<b>Spreadsheet Section – School Based Assessment</b>
<b>6- Theory</b>	Fundamentals of Hardware and Software	Describe how data are stored and manipulated within the computer;	Octal, Hexadecimal & ASCII	<b>Octal Worksheet Hexadecimal Worksheet ASCII Worksheet</b>

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				<b>Classroom Activity</b>
<b>6 - Practical</b>	Spreadsheet	Select basic pre-defined systems functions;	Basic Excel Manipulation, Formulas and Functions	<b>Spreadsheet Section – School Based Assessment</b>
<b>7- Practical</b>	Fundamentals of Hardware and Software  Spreadsheet	Describe how data are stored and manipulated within the computer;	Parity, Binary Revision  Basic Excel Manipulation, Formulas and Functions	<b>Binary Quiz</b>  <b>Spreadsheet Section – School Based Assessment</b>
<b>8- Revision</b>	Fundamentals of Hardware and Software  Applications and Implications of Information and Communications Technology  Database  Spreadsheet	Revision – Advent, Lent & Trinity Term Objectives	Discussion, Demonstration & Recap	<b>Classroom Activity</b>