

ICT Fundamentals

Objectives Matrix

The *ICT Fundamentals* course focuses on introductory Digital Tool literacy. Students will review computing functions, systems, devices, and networking types. They will learn how the Internet functions, how Web browsers and search engines function. Effective communication skills using email and other technologies, and the appropriate purpose of various applications used in cloud computing or physical location implementation. Using various word processing and spreadsheet applications features and functions. Internet safety practices and risks, ethical and legal issues related to Internet content, and how to apply guidelines for copyright and fair use. Describe security issues and how to secure various devices.

ICT Fundamentals Objective	ICT Fundamentals Courseware Lesson(s) and Section(s)
Domain 1: Demonstrate fundamental knowledge of computers and their uses	
1.1: Explain computing functions, systems and devices	
1.1.1: Define "computer" and explain how computers work.	Lesson 1: Computing Fundamentals - What Is a Computer?
1.1.2: Describe functions of the computing cycle (i.e. input, processing, output, storage).	Lesson 1: Computing Fundamentals - What Is a Computer?
1.1.3: Describe uses of computers (i.e. home, school, business).	Lesson 1: Computing Fundamentals - How Computers Are Used?
1.1.4: Identify the main types of computers (i.e. supercomputer, mainframe, microcomputer, notebook, tablet, handheld).	Lesson 1: Computing Fundamentals - Types of Computers
1.1.5: Describe the four parts of a computer (i.e. hardware, software, data, user).	Lesson 1: Computing Fundamentals - Computer Systems
1.1.6: List computer input and output devices (i.e. monitor, printer, projector, speakers, mice, keyboards) and describe their uses.	Lesson 1: Computing Fundamentals - Input Devices - Output Devices
1.2: Explain networking types and uses at home, school and work.	
1.2.1: Define "network," and explain network usage (i.e. home, school, work).	Lesson 1: Computing Fundamentals - What Is a Network?
1.2.2: Identify types of networks (i.e. LAN, WAN, MAN, VPN, intranet, extranet, the internet).	Lesson 1: Computing Fundamentals - What Is a Network?
Domain 2: Explain how the Internet, Web browsers, and Email function and used to communicate.	
2.1: Explain how the Internet functions to enable communications (i.e. connection types, domains, servers, techniques).	
2.1.1: Define the term "cloud computing" and describe the differences of creating or storing files "in the cloud," or on a physical location.	Lesson 2: Communication Fundamentals - Application software

ICT Fundamentals Objective	ICT Fundamentals Courseware Lesson(s) and Section(s)
2.1.2: Define "Internet," and how it enables computers to communicate.	Lesson 2: Communication Fundamentals - What Is the Internet?
2.1.3: Describe various Internet connection types (e.g., dial-up, cable, DSL, broadband, wireless, fiber-optic).	Lesson 2: Communication Fundamentals - Connecting to the Internet
2.1.4: Describe the differences between the Internet and the World Wide Web.	Lesson 2: Communication Fundamentals - What Is the Internet? - What Is the World Wide Web?
2.2: Explain how Web browsers and Search engines function, communicate and provide information.	
2.2.1: Explain how Web browsers function	Lesson 2: Communication Fundamentals - What Is the World Wide Web?
2.2.2: Use various tools to navigate and access the Web (i.e. hyperlinks, Web page, browsers, "How to Google").	Lesson 2: Communication Fundamentals - Navigating the Web
2.3: Demonstrate effective and appropriate communication using Email and other technologies.	
2.3.1: Define "email" and explain functions and advantages for communicating.	Lesson 2: Communication Fundamentals - Introduction to Email
2.3.2: Identify components of email messages (i.e. sender and recipient addresses, subject body, reply, forward, etc.)	Lesson 2: Communication Fundamentals - Sending and Receiving Email Messages
2.3.3: Identify various communication tools and explain their purposes (i.e. Twitter, Instagram, Snapchat, etc.).	Lesson 2: Communication Fundamentals - Social Networking and My Privacy
2.3.4: Explain etiquette and safe practices when using email and other communication platforms.	Lesson 2: Communication Fundamentals - Email Etiquette
Domain 3: Demonstrate foundational skills using word processing and spreadsheet applications.	
3.1: Describe the appropriate purpose of various applications used in cloud computing or physical location implementation.	
3.1.1: Describe commonly used word-processing software applications, including benefits and features.	Lesson 3: Application Fundamentals - What Is a Word Processor? - Getting Started with Word Processing
3.1.2: Explain the differences of creating and storing files (any kind) online versus a physical location.	Lesson 3: Application Fundamentals - Storing Your Documents on the Cloud
3.1.3: Describe commonly used spreadsheet software applications, including benefits and features.	Lesson 3: Application Fundamentals - Spreadsheet Basics
3.2: Explain how to use various word processing application features and functions (i.e. new, open, save, bold, italics, print, font and size, copy, paste, margins, alignment).	
3.2.1: Demonstrate how to use common functions in a word processing application (i.e. new file, open file, save, save as, print)	Lesson 3: Application Fundamentals - Formatting Documents in a Word Processor
3.2.2: Demonstrate basic document formatting features (i.e. bold, italics, font style and size, page margin, etc.).	Lesson 3: Application Fundamentals - Formatting Documents in a Word Processor

ICT Fundamentals Objective	ICT Fundamentals Courseware Lesson(s) and Section(s)
3.3: Explain how to use various spreadsheet features and functions (i.e. new, open, save, print, font and size, copy, paste, basic calculations, columns, rows, cells, worksheet, workbook).	
3.3.1: Explain the purpose of cell, row and column, worksheet and workbook, and describe how they work together in a spreadsheet application.	Lesson 3: Application Fundamentals - Spreadsheet Basics
3.3.2: Demonstrate how to use functions of spreadsheets (i.e. new file, open file, save, save as, print, change font style and size, copy, paste).	Lesson 3: Application Fundamentals - Creating and Managing Spreadsheet Data
3.3.3: Demonstrate proper use of basic calculations in spreadsheets (i.e. SUM, AVG).	Lesson 3: Application Fundamentals - Using Common Spreadsheet Formulas
Domain 4: Demonstrate foundational skills of CyberSecurity.	
4.1: Describe Internet safety practices and risks associated with the Internet.	
4.1.1: Describe risks associated with Internet activity (e.g. social media, online gaming, etc.)	Lesson 4: CyberSecurity Fundamentals - Managing Online Risks
4.1.2: Identify ways to reduce risks associated with Internet activity (e.g. social media, online gaming, etc.)	Lesson 4: CyberSecurity Fundamentals - Managing Online Risks
4.1.3: Describe how to prevent dangers such as cyberbullying and identity theft.	Lesson 4: CyberSecurity Fundamentals - Managing Online Risks
4.2: Identify ethical and legal issues related to Internet content (e.g. music, videos, photographs, etc.), and how to apply guidelines for copyright and fair use.	
4.2.1: Discuss ethical and unethical actions of downloading music, videos or photographs from the Internet.	Lesson 4: CyberSecurity Fundamentals - Copyright and Fair Use
4.2.2: Discuss legal and illegal actions of downloading music, videos or photographs from the Internet.	Lesson 4: CyberSecurity Fundamentals - Copyright and Fair Use
4.2.3: Describe rules for copyright and fair use guidelines application for schools and educational purposes.	Lesson 4: CyberSecurity Fundamentals - Copyright and Fair Use
4.3: Describe security issues and how to secure various devices (e.g. mobile phone, tablet, laptop, etc.).	
4.3.1: Describe strong password practices.	Lesson 4: CyberSecurity Fundamentals - Securing your Computer
4.3.2: Identify security issues related to mobile phones (e.g. securing personal information and physical devices)	Lesson 4: CyberSecurity Fundamentals - Securing your Computer