

LEARNING OUTCOMES:

Chapter 1 Digital Technologies Exploring a Wealth of Possibilities

When you finish this chapter, you'll be able to:

- 1.1 Recognize the types of digital devices available today
- 1.2 Differentiate the four categories of computer and how technological convergence has impacted the functions of computers
- 1.3 Describe how digital devices are being used and how digital devices provide various career opportunities
- 1.4 Explain the information processing cycle and identify and differentiate data and information

Chapter 2 The Internet Gateway to a World of Resources

When you finish this chapter, you'll be able to:

- 1.1 Describe how the Internet and the web have changed the ways in which people interact with each other.
- 1.2 Describe the Internet and the web in terms of the Internet's infrastructure and the web's phases of evolution
- 1.3 Select the services, equipment, and software you need to connect to and browse the Internet.
- 1.4 Describe the organization of web pages and how they are accessed.
- 1.5 Distinguish between appropriate and inappropriate use of intellectual property and copyright as they apply to the web.
- 1.6 Differentiate between the three types of e-commerce.
- 1.7 Compare various Internet services and applications such as email, instant messaging, and audio and video conferencing.
- 1.8 Describe ways in which the Internet and the World Wide Web have changed or will change in the future how individuals interact with others and perform activities related to their personal, school, or work routines.
- 1.9 Explain the terms Internet, Web, Web 2.0, and Web 3.0.
- 1.10 List the equipment and software needed to connect and browse the Internet.
- 1.11 Understand the role of a service provider and types of Internet services.
- 1.12 List common browsers used to explore the Internet.
- 1.13 Know how a computer is identified on the Internet using both numeric and text addressing systems.
- 1.14 Browse web pages and search for information using basic and advanced search techniques.
- 1.15 Choose an appropriate search engine for finding various types of information both specific and general in nature.
- 1.16 Recognize a plug-in or player that is needed to view content on the Internet.
- 1.17 Evaluate the validity and accuracy of information located on the Internet.
- 1.18 Identify content on the Internet that is protected by copyright laws.
- 1.19 Identify resources included in the invisible Web and how searching the invisible Web would be beneficial.
- 1.20 List and describe the three main types of e-commerce conducted on the Internet.
- 1.21 Contrast other services available on the Internet such as email and Internet voice services.

CHAPTER 3 – Computer Hardware and Peripherals: Your Digital Toolbox

When you finish this chapter, you'll be able to:

- 3.1 Identify the functions of the major components of the computer system.
- 3.2 Identify the parts of the motherboard.
- 3.3 Explain the different types of expansion cards.
- 3.4 Recognize the different types of ports.

- 3.5 Understand how a computer uses memory.
- 3.6 List the various options for storing digital information.
- 3.7 Differentiate between input and output devices.
- 3.8 List the types of input devices.
- 3.9 List the types of output devices.
- 3.10 Evaluate various computer needs to make an informed computer purchase.
- 3.11 Explain how processor speed influences a computer.
- 3.12 Explain the difference between the different types of RAM.
- 3.13 Differentiate between the various OS.

CHAPTER 4 – System Software: The Control Center of Your Computer

When you finish this chapter, you'll be able to:

- 4.1 Explain the characteristics and types of system software.
- 4.2 Describe the steps a computer goes through as it boots.
- 4.3 Understand the history of operating systems (OS).
- 4.4 Distinguish between command-line and GUI operating systems.
- 4.5 Describe the key characteristics of the Microsoft Windows, Macintosh, UNIX, and Linux platforms.
- 4.6 Identify the main functions that any operating system serves.
- 4.7 Describe how a driver helps an OS interact with hardware.
- 4.8 Explain how virtual memory helps an OS run better.
- 4.9 Describe the relationships between processors, RAM, caches, and buses.
- 4.10 Explain how an OS routes data between applications and devices.
- 4.11 Define File Allocation Table (FAT) and explain its role in file management.
- 4.12 Know what information can be found in an OS's Help system, and how to access it.
- 4.13 Understand the functions of various Windows and Macintosh system utilities in keeping the OS running smoothly and efficiently.
- 4.14 Be able to send a computer to sleep or shut it off without losing data.
- 4.15 Explain the difference between a mobile OS and an OS for a personal computer.
- 4.16 List several common mobile operating systems and mobile computing devices.

CHAPTER 5 – Application Software: They Key to Digital Productivity

When you finish this chapter, you'll be able to:

- 5.1 Describe the role of application software.
- 5.2 Explain the uses of application software.
- 5.3 List the major types of application software.
- 5.4 Identify organization software.
- 5.5 Describe the different types of graphics software and how they are used.
- 5.6 Identify the various types of multimedia software and how they are used.
- 5.7 Identify entertainment and personal use software.
- 5.8 Recognize financial application software.
- 5.9 Know how business process software is used in today's business environment.
- 5.10 Understand how custom and enterprise software is used in the workplace.
- 5.11 Identify the various types of mobile applications and how they are used.
- 5.12 Describe the software development life cycle.
- 5.13 Identify how software is delivered to the user.
- 5.14 Recognize the difference between freeware, shareware, and open source software.
- 5.15 Understand how application software is priced.
- 5.16 Define cloud computing.

- 5.17 Explain the terms import, exports, object linking and embedding, and an embedded object.
- 5.18 Know how handwriting recognition and speech recognition software is used.
- 5.19 List the common share features used in application software.

CHAPTER 6 – Communications and Network Technologies: Connecting Through Computers

When you finish this chapter, you'll be able to:

- 6.1 Define computer networking and its uses at work and home.
- 6.2 Describe a communications system and the process that enables a sender and a receiver to exchange data.
- 6.3 Differentiate between analog and digital signals for data transmission.
- 6.4 Explain the roles of frequency and bandwidth in data throughput.
- 6.5 Distinguish the various types of transmission media for wired and wireless networks.
- 6.6 Distinguish between twisted-pair, coaxial, and fiber-optic cable.
- 6.7 Distinguish between cellular, microwave, and satellite wireless communication.
- 6.8 Recognize the role that network standards and protocols play in communications.
- 6.9 Name the organizations that govern data transmission standards.
- 6.10 Describe and differentiate among various networking devices and software that enable you to send and receive data.
- 6.11 Classify networks according to geographic area, computer roles, and physical arrangement.
- 6.12 Differentiate between client/server and peer-to-peer networking.
- 6.13 Describe the bus, ring, and star network topologies.
- 6.14 Describe the function of a modem, and differentiate between types of modems.
- 6.15 List and differentiate between the types of physical connection devices used in a network.
- 6.16 Explain the importance of network security.
- 6.17 Describe what is meant by cloud computing.

CHAPTER 7 – The Social Web Opportunities for Learning, Working, and Communicating

When you finish this chapter, you'll be able to:

- 7.1 Describe how the evolution of social technologies have changed or will change in the future how individuals interact and connect with each other.
- 7.2 Describe how social technology will impact how personal, school, or work activities have changed due to social technology.
- 7.3 Explain the terms social Web, social networking, social bookmarking, and social media.
- 7.4 Understand the various roles of the social web.
- 7.5 List the various ways to connect to the social web, cell phone, Internet, and gaming devices.
- 7.6 Know the social web is used for social causes, businesses for marketing, political and social issues, education, create art and/or music by sharing media and collaborating with others.
- 7.7 Understand how to protect one's identity on the social web.
- 7.8 Describe the various ways blogs are used.
- 7.9 List the common types of blogs, microblogs, and videoblogs.
- 7.10 Evaluate different types of social networks, including MySpace, Facebook, Ning, LinkedIn, ELGG, Bebo, and Wetpaint.
- 7.11 Identify the advantages of social bookmarking.
- 7.12 Describe the different ways wikis are used to share information such as coordinating projects, trips, parties, online stores, encyclopedia, journalism, and research.
- 7.13 Recognize an authentic or flawed wiki posting.
- 7.14 Describe how individuals are using social media to share and connect.
- 7.15 Identify how media sharing content can be protected.

CHAPTER 8 – Digital Defense: Securing Your Data and Privacy

When you finish this chapter, you'll be able to:

- 1.1 Define data loss prevention (DLP).
- 1.2 Understand the costs of computer data loss to industries and individuals.
- 1.3 Explain authentication and its role in computer security.
- 1.4 Explain encryption and its role in network and data security.
- 1.5 Explain the process of public key encryption for transmitting data.
- 1.6 Define virus and explain how a virus attacks.
- 1.7 Define worm and explain how a worm attacks; differentiate it from virus.
- 1.8 Describe how a Trojan horse gains access to a system.
- 1.9 Explain how a macro virus infects a system.
- 1.10 Define rootkit and explain how it infects a system.
- 1.11 Define and differentiate between spyware and adware.
- 1.12 Understand how to identify a trusted online site.
- 1.13 Define cookie and explain the benefits and risks of its use.
- 1.14 Understand security risks associated with mobile devices and strategies to reduce them.
- 1.15 List and explain several security tools and services used by businesses.
- 1.16 Define and explain the use of biometrics in security.
- 1.17 Explain the risk of Denial of Service attacks and the ways to combat them.
- 1.18 Explain the roles of cold, warm, and hot servers in data backup.
- 1.19 Define firewall and explain how it helps protect a computer.
- 1.20 Explain the importance of regularly updating virus definitions.
- 1.21 Describe the qualities of a strong password.

WEB PAGE DESIGN USING WIX:

After completing this module you will be able to:

1. Use the skills necessary to design and to maintain a small business or personal hobby web sites use the WIX Website Builder.
2. Demonstrate knowledge of the Internet and its concepts.
3. Conduct searches, using multiple tools.
4. Be able to find information as required.
5. Create web pages using WIX Website Builder.
6. Identify problems in Web pages.

ELECTRONIC CV AND PORTFOLIO DESIGN USING WIX:

After completing this module you will be able to:

1. Use the skills necessary to design and to maintain your electronic CV and Portfolio web site use the WIX Website Builder.
2. Identify problems in Web pages and trouble shoot the problems
3. Create and maintain electronic portfolio that reflects on year(s) of education.
4. Compose and include a statement of your goals and files which showcase your best work.
5. Organize the electronic portfolio samples in an effective and attractive manner that invites viewing by prospective employers.
6. Create an electronic portfolio shows examples of different kinds of work, such as PowerPoint presentations, Excel files, digitally manipulated photograph examples, and Word documents.
7. Compose reflective statement to accompany each example that is an explanation of what a file demonstrates.

8. Create a reflection that includes the course for which the file was created, the time it took to create the file, a brief description of why the file has been included in the e-portfolio, and an explanation as to why this file demonstrates achievement.
9. Create an electronic CV and general cover letter to be included in the electronic portfolio web site.
10. Accompany all the electronic portfolio documents and work with an audio file.

TRANSFERABILITY:

NONE

EVALUATIONS:

Computer Time

Approximately four hours per week of computer time is recommended for successful completion of course requirements.

Grading

Final Grades will be calculated as follows:

Average of all end-of-chapter Concepts Checks and Projects	20%
Average of all Core Content quizzes	10%
Business or Hobby Website created with WIX	20%
Portfolio and CV Website created with WIX	30%
Final Exam	20%

GRADING CRITERIA:

Alpha Grade	4-point Equivalent	Percentage Guidelines	Alpha Grade	4-point Equivalent	Percentage Guidelines
A+	4.0	90-100	C+	2.3	67-69
A	4.0	85-89	C	2.0	63-66
A-	3.7	80-84	C-	1.7	60-62
B+	3.3	77-79	D+	1.3	55-59
B	3.0	73-76	D	1.0	50-54
B-	2.7	70-72	F	0.0	00-49

COURSE SCHEDULE/TENTATIVE TIMELINE:

Week	Chapter/Resource
1	Chapter 1 — Digital Technologies: Exploring a Wealth of Possibilities
2	Windows 7 Tutorials 1-7
	Windows 7 Tutorials 8-15
	Internet Explorer Tutorials 1-6
3	Chapter 2 — The Internet: Gateway to a World of Resources
4	Chapter 3 — Computer Hardware and Peripherals: Your Digital Toolbox
5	Chapter 4 — System Software: The Control Center of Your Computer
6	Chapter 5 — Applications Software: The Key to Digital Productivity
7	Chapter 6 — Communication and Network Technologies: Connecting Through Computers
8	Chapter 7 — The Social Web: Opportunities for Learning, Working, and Communicating
9	Chapter 8 — Digital Defense: Securing Your Data and Privacy
10	Business or Personal Hobby Website
11 & 12	WIX Business or Personal Hobby Website
13 - 15	WIX Electronic Portfolio and CV
16	Final Exam

STUDENT RESPONSIBILITIES:

Refer to https://www.gprc.ab.ca/files/forms_documents/StudentRightsandResponsibilities.pdf

**Note: all Academic and Administrative policies are available at

<https://www.gprc.ab.ca/about/administration/policies/>

STATEMENT ON PLAGIARISM AND CHEATING:

Cheating and plagiarism will not be tolerated and there will be penalties. For a more precise definition of plagiarism and its consequences, refer to the Student Conduct section of the College Admission Guide at <http://www.gprc.ab.ca/programs/calendar/> or the College Policy on Student Misconduct: Plagiarism and Cheating at www.gprc.ab.ca/about/administration/policies/**

**Note: all Academic and Administrative policies are available on the same page.