



Computer Technology I

EXAM INFORMATION

Items

49

Points

59

Prerequisites

BASIC KEYBOARDING SKILLS

Grade Level

9-12

Course Length

ONE SEMESTER

Career Cluster

BUSINESS MANAGEMENT AND
ADMINISTRATION
INFORMATION TECHNOLOGY

Performance Standards

INCLUDED

Certificate Available

YES

DESCRIPTION

Computer literacy is a foundational element of success in today's technology-driven world. This course is intended for students to learn concepts associated with key application software, basic computing fundamentals, and ethics and appropriate behavior while using technology as a tool in the classroom and in life. This course is aligned with national and international standards to prepare students across multiple levels of skills.

EXAM BLUEPRINT

STANDARD	PERCENTAGE OF EXAM
1- Technology Operations & Concepts	25%
2- Productivity Applications	35%
3- Communication Networks, Internet, & Digital Citizenship	23%
4- Electronic Communication & Collaboration	10%
5- Course Integration	7%



STANDARD 1

STUDENTS WILL BE INTRODUCED TO AND BE ABLE TO DEMONSTRATE A SOUND UNDERSTANDING OF COMPUTER TECHNOLOGY: WHAT TYPES OF TECHNOLOGY EXISTS, HOW TYPES OF TECHNOLOGY FUNCTION, WHAT COMPONENT PARTS WORK WITH SPECIFIC TECHNOLOGIES.

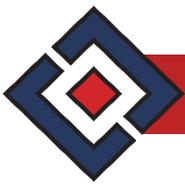
- Objective 1** Demonstrate understanding of computer hardware, peripherals and troubleshooting.
1. Explore various computers available in current technology.
 2. Identify and understand components and peripherals, including input-output devices: cameras, printers, scanners, game-controllers, etc.
 3. Explore and demonstrate knowledge of how to maintain computer equipment and solve common hardware problems.
- Objective 2** Understand, evaluate, and use computer software.
1. Use software tools for creating, finding, organizing, and communicating information.
 2. Popular software: word processing, spreadsheets, presentation software, databases, graphic and multimedia programs, etc.
 3. Transfer knowledge of how software and hardware work together to perform computing tasks (Information Processing Cycle: Input, Output, Processing, Storage, Communication)
 4. Understand software types and be able to access updates.
- Objective 3** Explore and demonstrate understanding of managing operating systems.
1. Select and/or use the following effectively and productively: windows, folders, files and shortcuts; install, uninstall and run various applications; solve common problems.
 2. Critically discuss and select operating systems and capabilities.
 3. Use an operating system to manipulate a computer's desktop, files, and disks.
 4. Identify how to change system settings, install, and remove software. Describe the different roles and rights of users on a computer.
 5. Identify the different purposes and power states of an operating system.
 6. Manage (create, delete, move, duplicate, etc.) computer files.
 7. Understand directories, file extensions, and associations.

Standard 1 Performance Evaluation included below (Optional)

STANDARD 2

STUDENTS WILL UNDERSTAND AND EFFECTIVELY USE THE COMMON APPLICATION FUNCTIONS WITH WORD PROCESSING, SPREADSHEETS, AND PRESENTATION SOFTWARE AND ROUTINELY INTERACT, COLLABORATE, AND PUBLISH WITH PEERS/ONLINE COMMUNITIES USING THESE TOOLS AND FUNCTIONS.

- Objective 1** Understand and integrate common application functions.
1. Be able to start and exit an application, identify, and modify interface elements.
 2. Assess and use sources of online help.
 3. Create new blank files and files from templates.



4. Learn and perform common editing, formatting, and personalization functions.
5. Learn and perform common printing/outputting functions.
6. Search effectively in a data file.
7. Change views within a data file.
8. Use and manipulate multimedia files in a file (e.g. rotate, crop, resize, insert, and delete).

Objective 2 Identify the major components of microcomputers in the following categories and determine how each contributes to a computer's performance:

1. Be able to effectively create and format text and documents (Use automatic formatting tools).
2. Be able to use word-processing tools to automate processes: document review, security, collaboration.
3. Use and modify tables and different lists.
4. Use and modify page layout options (e.g. numbering, columns, margins, and alignment of text in paragraphs and tables, tabs and rulers, and orientation).

Objective 3 Effectively use and understand spreadsheet features for application in simulated and real world situations.

1. Modify, organize and manage worksheet data, structure and formatting (e.g. budgets, statistics, and inventory).
2. Modify cells, columns, and rows (e.g. insert, delete, adjust the width/height, change alignment, locate, merge and unmerge cells).
3. Sort, calculate and manipulate data using formulas and functions and create/build simple, effective charts.
4. Apply knowledge of spreadsheets to create and modify charts and graphs.

Objective 4 Effectively use and understand presentation software.

1. Insert and modify text, tables, multimedia, charts, and shapes on a slide.
2. Add, remove, and modify the order of slides.
3. Add and modify animations and transitions.
4. Understand the changing history of presentation software and its place in the modern workplace and academic setting.
5. Design, manage, modify and present presentations for a variety of audiences and purposes.

Objective 5 Understand basic database interactions.

1. Create and run basic reports.
2. Use and modify a basic query.
3. Add, delete, and modify data in a database.

Standard 2 Performance Evaluation included below (Optional)

STANDARD 3

STUDENTS WILL UNDERSTAND AND BE ABLE TO EFFECTIVELY USE AND NAVIGATE NETWORKS AND THE INTERNET.

Objective 1 Interact with and be a part of using computers.

1. Use computers as powerful tools for finding, sharing, and storing information around the globe.
2. Explore the risks of computing and study the negative impacts on society.
3. Advocate and practice safe, legal, and responsible use of information and technology



4. Identify the differences between the Internet, World Wide Web, and browsers.
5. Classify domains, hyperlinks, homepages, favorites/bookmarks, plugins, tabs, browser history, and downloads/uploads.

Objective 2 Identify network fundamentals.

1. Understand and evaluate different networks and how they transmit different types of data.
2. Understand and identify the roles of clients and servers in a network
3. Understand the fundamental principles of security in regards to networks.
4. Demonstrate an understanding of network speeds, wireless communication, firewalls, and gateways.
5. Define PSNs, DNSs, IP addresses, LANs, WANs, and VPNs.
6. Solve connectivity and common network problems.

Objective 3 Demonstrate skills for digital citizenship.

1. Categorize the difference between personal and professional communication.
2. Define and explain spamming, flaming, cyber-bullying, libel, and slander.
3. Define and describe censorship, filtering, and intellectual property, and piracy, copyright, licensing, and creative commons.

STANDARD 4

STUDENTS WILL USE MULTIPLE PROCESSES OF COMMUNICATION. THEY WILL UNDERSTAND WHAT APPROPRIATE MEANS OF COMMUNICATION IS MOST BENEFICIAL FOR A GIVEN TASK'S PURPOSE AND AUDIENCE.

Objective 1 Interact with and identify different types of electronic communication/collaboration: email, cell phones, blogs, teleconferencing, social networks, email and other electronic devices/tools.

1. Demonstrate responsibility in choosing the appropriate means of communication for a given situation and audience.
2. Understand common problems and challenges with electronic communication. (e.g., delivery failure, junk mail, fraud, viruses, etc.).

Objective 2 Search effectively

1. Use effective search terms in a search engine to get specific information from reputable sources.
2. Evaluate information from forums, knowledge bases, and articles.
3. Determine the validity of information.
4. Use advanced features of a search engine to filter information by file, media, category, and size.

Objective 3 (Computer and the Use of the Internet within Society) Students recognize ways by which human lives interact with and utilize computers.

1. Analyze and discuss various societies' uses of computing (e.g., work, school, government, home and social interaction)
2. Identify the risks of using computer hardware and software safely, ethically and legally.
3. Explain how to protect identity online (e.g. personal firewalls, cookies, virus and spyware protection, updating programs, and operating systems).
4. Investigate the purpose of ergonomics with monitors, computer mice, chair settings, lighting, and posture.

Standard 4 Performance Evaluation included below (Optional)

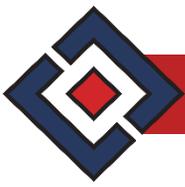


STANDARD 5

STUDENTS WILL USE THEIR DOCUMENT PROCESSING, SPREADSHEET, AND/OR ELECTRONIC PRESENTATION SKILLS TO COMPLETE A CROSS CURRICULAR PROJECT DURING THE SEMESTER (OR TRIMESTER, ETC.,) IN WHICH THEY ARE ENROLLED IN THE COMPUTER TECHNOLOGY COURSE.

Objective 1 Students will use any or all of the following in a project to be presented to the Computer Technology teacher and a cross-curricular teacher: document-processing, spreadsheet, electronic presentation.

Standard 5 Performance Evaluation included below (Optional)



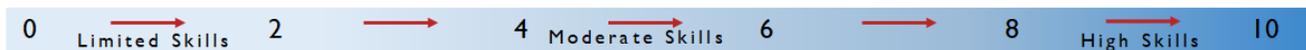
Computer Technology I Performance Standards (Optional)

Performance assessments may be completed and evaluated at any time during the course. The following performance skills are to be used in connection with the associated standards and exam. To pass the performance standard the student must attain a performance standard average of **8 or higher** on the rating scale. Students may be encouraged to repeat the objectives until they average **8 or higher**.

Students Name _____

Class _____

PERFORMANCE RATING SCALE



STANDARD 1 Technology Operations & Concepts

Score:

- Demonstrate a sound understanding of computer technology.
 - Understand what types of technology exist, how types of technology function, what component parts work with specific technologies
 - Demonstrate understanding of computer hardware, peripherals and troubleshooting
 - Understand, evaluate, and use computer software
 - Explore and demonstrate understanding of managing operating systems

STANDARD 2 Productivity Applications

Score:

- Create new blank files and files from templates.
- In word processing software, create, use and modify tables and different lists.
- Apply knowledge of spreadsheets to create and modify charts and graphs.
- Apply knowledge of presentations to create and modify a presentation.

STANDARD 4 Electronic Communication & Collaboration

Score:

- Use effective search terms in a search engine to get specific information from reputable sources.

STANDARD 5 Course Integration

Score:

- Students will use any or all of the following in a project to be presented to the Computer Technology I teacher and a cross-curricular teacher:
 - Document processing
 - Spreadsheet
 - Electronic presentation

PERFORMANCE STANDARD AVERAGE SCORE:



Keyboarding Technique Check			
Name _____	DATE:	DATE:	DATE:
Period _____			
Eyes on copy or screen--not on hands or keyboard.			
Fingers curved and oriented to home row.			
Correct fingers used for keystrokes.			
Key with smooth rhythm and quiet hands (fingers do the reaching).			
Forearms parallel to the slant of the keyboard; wrists low but not resting on any surface.			
<i>Proper sitting posture:</i> body centered to the "h" key, back straight, feet positioned (on floor) for balance, elbows hang naturally at sides of body.			
EACH TECHNIQUE WORTH 10 POINTS 60 POINTS POSSIBLE			
"KEY BY TOUCH" RANKING	4 3 2 1	4 3 2 1	4 3 2 1

4 = Mastery Level

- The student knows the correct reaches and keys by touch.

3 = Near Mastery Level

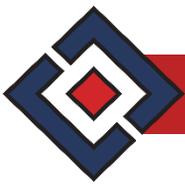
- The student looks at the keys a limited number of times.

2 = Partial Mastery Level

- The student looks at the keys most of the time.

1 = Minimal Mastery Level

- The student is dependent on looking at the keys.



Computer Technology I Vocabulary List

RAM
ROM
Input devices
Output devices
Printer
Projector
Central Processing Unit (CPU)
Maintenance
Upgrading
Operating System
Application Software
Worksheets
Sorting
Formulas
Functions
Speaker notes
Graphics
Virus
Adware
Spyware
Web conferencing software
Administrative rights
Files
Folders
File properties
Icons
Shortcuts
File corruption
Menu bar
Scroll bar
Vies
Magnification/zoom
Help
Undo
Redo
Repeat
Print Preview
Ruler
Tabs
Line spacing
Non-printing characters
Bulleted lists
Numbered lists
Multi-level lists
Symbols
Special characters
Header
Footer
Styles
Columns
Tables
Cells
Rows
Columns
Document protection
Number formats
Borders
Shading
Alignment
Filter
Absolute cell address
Relative cell address
SUM
MIN
MAX
Average
AutoSum
Slide layout
Transitions
Animations
Networks
Client
Server
LAN
WAN
High Speed
Broadband
Wireless
Wifi
Attachments
Spam
Embedding
URL
Netiquette
Internet
World Wide Web
HTML
Domain
Home page
Wiki
Bookmarked/Favorite sites
Blogs
Podcasts
Advanced search tools
Copyright
Trademark
Plagiarism



Computer Technology I Textbooks and Resources

Publishers:

EMC Paradigm

John L. Carr johncarr@xmission.com
(800) 404-7915

Glencoe/McGraw Hill

Will Iverson wil_iverson@mcgraw-hill.com
Phone: (435) 723-0375

Prentice Hall/DDC Publishing

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Phone: (317) 705-6162
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South-Western & Course Technology

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Phone: (435) 940-1057

Computer-Based Training:

SkillsPro USA for IC³

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Phone: (949) 855-9660 or 1-800 455-1313
www.clcus.com

Learnkey

Ron Hansen rhansen@learnkey.com
Phone: (801) 362-2133