



EAST TENNESSEE STATE UNIVERSITY  
CSCI-1100 PROFICIENCY EXAM STUDY GUIDE

2019 Academic Year

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## PURPOSE OF THIS STUDY GUIDE

The purpose of this study guide is to highlight criteria critical to the understanding of concepts covered in CSCI-1100. Concepts noted in this document include, but are not limited to:

- Computer hardware, operating systems, and software applications
- General computer safety, proper computer safety techniques, and identification of security risks
- Microsoft Office Suite Applications (Word, Excel, PowerPoint, and Access)
- File structure creation and navigation
- Identification, evaluation, and use of accredited online information sources

## MICROSOFT WORD

### GENERAL INFORMATION

- Identify the ribbon, tabs, and commands
- Identify misspellings, grammatical errors, and sentence structure errors
- Define the purpose of Word

### DOCUMENT CREATION

- Create, save, and rename Word documents
- Manipulate the theme, style, and design of a Word document
- View and manage the properties of a Word document

### TEXT MANIPULATION

- Bold, italicize, and underline text
- Highlight text background
- Alter text font, color, and size
- Align text both horizontally and vertically
- Adjust both line and paragraph spacing
- Manipulate the design of a Word document
- Proper use of page-breaks and indentation
- Proper date formatting
- Creation and proper use of bullet points
- Proper use of the rulers and their respective purposes

### REFERENCING

- Creation and proper use of endnotes and footnotes
- Creation and proper use of citations
- Proper designation of citation style
- Creation and proper use of tables of contents and bibliographies

## IMAGE MANIPULATION

- Insert an image into a Word document
- Manipulate the height and width of an image
- Manipulate the styling of an image
- Manipulate the alignment of an image
- Insert WordArt, Shapes, and SmartArt

## DOCUMENT FORMATTING

- Manipulate Word document margin size

## MICROSOFT EXCEL

### GENERAL INFORMATION

- Identify the ribbon, tabs, and commands
- Define the purpose of Excel

### WORKBOOK CREATION

- Create, save, and rename Excel workbooks
- View and manage the properties of an Excel workbook
- Alter tab names

### FORMATTING

- Manipulate cell styles
- Manipulate cell number formatting (percentage, currency, decimal point)
- Adjust the width of a column
- Adjust the height of a row
- Apply conditional formatting
- Manipulate cell text color
- Manipulate cell background color
- Apply styles to specific cells

### ARITHMETIC

- Use formulas to perform calculations
- Use function to perform calculations
- Apply both relative and absolute cell references

### GRAPHS

- Insert graphs
- Manipulate the height and width of a graph
- Apply various stylings to a graph
- Utilize a graph to reference data within a range of cells

## MICROSOFT POWERPOINT

### GENERAL INFORMATION

- Identify the ribbon, tabs, and commands
- Define the purpose of PowerPoint

### LAYOUT

- Define slide layout and describe the differences for each layout
- Define transitions
  - What are they used for?
- Define the purpose of the slide sorter

### PRESENTATION

- Describe the Slide Show command
- Define the commands that can be used to change the stacking order for slides
- Define and describe the views offered by PowerPoint

## MICROSOFT ACCESS

### GENERAL INFORMATION

- Identify the ribbon, tabs, and commands
- Define the purpose of PowerPoint

### DATABASE USE AND PURPOSE

- Define and describe a database
- Define and describe the purpose of a database
- Define and describe a database query
- Define and describe a relational database

## MISCELLANEOUS MICROSOFT OFFICE

### FILE MANIPULATION AND NAVIGATION

- Define and identify different types of file extensions
  - What is the purpose of a file extension?
  - What happens if a file extension is removed?
- Understand the specific purpose from each Microsoft Suite application (Word, Excel, PowerPoint, Access)
- Understand the purpose of hot-key shortcuts for each Microsoft Suite application
- Understand the methods in which you navigate each Microsoft Suite application
- Define the purpose of the Office Clipboard

## COMPUTER COMPONENTS

## HARDWARE

- Identify input and output devices and define their functions
- Identify computer storage mediums and define their function
  - Differentiate between a hard-disk and a solid state device (SSD)
- Identify random access memory (RAM) and define its function
  - Differentiate DDRAM and SRAM
- Differentiate between volatile and non-volatile memory
  - Differentiate which components house each type of memory
- Identify a central processing unit (CPU) and define its function
  - Define the function of an arithmetic processing unit (APU)
- Identify a motherboard and define its function
- Identify a PC ports (VGA, DVI, USB)
- Identify and define the basic functions of a computer
- Identify a graphics processing unit (GPU) and define its function
- Describe the purpose of a binary operating system (BIOS)
- Identify and describe binary notation

## SOFTWARE

- Describe system software and be able to identify several examples
- Describe application software and be able to identify several examples

## NETWORKING

- Describe the purpose of a network
- Define and differentiate a local area network (LAN) from other various networks
- Define and differentiate a wide access network (WAN) from other various networks
- Define and differentiate an intranet from other various networks
- Define and differentiate an internet from other various networks
- Differentiate the amount of data used from various types of communications (VoIP, SMS, Video)
- Define and differentiate WiFi from other various networks

## COMPUTER SAFETY

### COMPUTER ATTACKS

- Define and differentiate viruses, worms, DoS, DDoS, Trojan horse, malware, ransomware, phishing,
- Describe how to effectively defend or prepare for each attack type

### COMPUTER DEFENSE

- Differentiate between HTTP and HTTPS
- Differentiate between strong and weak passwords
- Define and describe social engineering
- Define and describe hacking
- Define and describe “key-logger”

- Define and describe a firewall
- Define and describe a “backdoor”
- Define and describe “shoulder-surfing”
- Define and describe and “exploit” in computer hardware and software

## RISK ASSESSMENT

- Differentiate between a phishing email and a safe email
- Describe the risk of using a unprotected network
  - Who can see your web traffic?
  - What web traffic can they see?
  - How is this dangerous?
- Define encryption and explain what it is useful
- Define and explain the “best practices” for handling a compromised computer

## WINDOWS OPERATING SYSTEMS

### ORGANIZATION

- Define and differentiate a directory from a file and folder
- Explain how to open a directory/folder
- Describe the implications when deleting a file from a hard-drive
- Describe the implications when deleting a file from the recycling-bin
- Define and describe compressing “zipping” a file
  - Explain why is it used
- Define and describe the purpose of an operating system (OS)
- Explain how access additional options when working with files or folders
- Define and describe a file-path
- Define and describe a device-driver
  - What is its purpose?
- Explain the lettering system that Windows uses to define drives
- Define the structure of a windows file system (directory, folder, file)

### TOOLS

- Define the purpose of the Taskbar
- Define the purpose of the Snipping Tool
- Define and describe the graphics user interface (GUI)
- Define the purpose of the File Explorer
- Define the purpose of a short-cut icon (tile)
- Define the purpose of the Address Bar
- Define the purpose of the Search Bar

### MAINTENANCE

- Explain why it is important to regularly update software



## ONLINE RESOURCES

### COPYRIGHT AND INTELLECTUAL PROPERTY

- Define intellectual property
- Explain the implications for violating copyright
- Explain the implications for claiming, distributing, or selling intellectual property that is not your own

### WEB ORGANIZATION

- Define and describe an internet domain
- Define and describe a website
- Define and describe a URL
- Define and describe a search engine
- Define and describe an internet protocol
- Define and describe the purpose of an IP address

### SEARCHING THE WEB

- Define and describe Google's Search Operators (-, AND, OR)
- Differentiate between a specific search statement and a non-specific search statement

### INFORMATION CREDIBILITY

- Differentiate between credible and non-credible information sources
- Define factors that make a source of information credible
- Describe how an information provider may introduce bias into their statements

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## REVISIONS HISTORY

### ACADEMIC YEAR 2019 - 2020

- UIT Director: Edward Hall
- Graduate Assistant: David Schmidt



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