East Tennessee State University CSCI-1100 PROFICIENCY Exam Study Guide

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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 tis 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, phising,
* 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 phising 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 define 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