

COSC 122
Computer Fluency

Computer Fluency Summary

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Computer Fluency

Fluency means that you are able to adapt to new applications and use computers efficiently.

We have studied the skills, concepts, and capabilities of IT.

- ◆ Although the detailed skills may be forgotten or change over time, the fundamental concepts and capabilities allow us to learn new skills as required.

Remember, the key to being an expert user is using your past knowledge to understand how to use new systems.

- ◆ No one remembers all details and skills.

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Computer Fluency Skills, Concepts, and Capabilities

Skills are the ability to use computers today to solve your problems.

- ◆ You have learned new applications: Word, Excel, Access, HTML editors and the ability to learn new applications.

Concepts are the fundamental principles that apply to many situations. They are the building blocks of future learning.

- ◆ Key concepts: how the Internet (TCP/IP) works, how a computer works (Fetch/Execute cycle), key components of programming (HTML/JavaScript), information representation, security

Capabilities are ways to expand your thinking.

- ◆ Thinking algorithmically, reasoning, debugging, designing, creating, searching and representing information.

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The Big IT Ideas

The big IT ideas essentially boil down to two things:

- ◆ **Information must be structured on the computer to be useful.** All information is represented as bits, so knowing the context is essential for understanding the meaning.
- ◆ **Programs encode algorithms to solve problems.** Algorithms represent intelligence on how to solve problems and provide the computer with the context and capability to perform all its advanced functions.
 - ⇒ Computer programming is the art and science of solving problems on the computer.

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Computers in Society

By understanding the technology, we have a better perspective on the role and influence of computers in society.

Like all technologies, information technology can be used for positive change and negative actions.

As users, and even designers, we have a role to play in shaping the effect of technology on this world. Displaying good ethics and protecting privacy is as important as building complex computer systems.

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Lifelong IT Learning

This course has prepared you for lifelong IT learning. Computer systems and technology **will** change (the skills), but it is the **attitude** that is most important.

How much information in the course will you remember?
How much do you **need** to remember to apply the concepts?
As an expert user, you are confident and ready to:

- ◆ Learn new systems with confidence by applying gained knowledge, experience, and fundamental concepts.
- ◆ Ask for help (when needed) by understanding key terminology and components of computers.
- ◆ Evaluate new systems that may improve your productivity.
- ◆ Protect yourself in the digital world by understanding the role, benefits, and issues of computer systems.

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Want more? Where to go from here?

