

CIST 1001 - Computer Concepts (version 201216L)

Standard Institutionally Developed College: N/A

EDGE Compatible: No

Pre-requisites: None

Co-requisites: None

Course Description

Provides an overview of information systems, computers and technology. Topics include: Information Systems and Technology Terminology, Computer History, Data Representation, Data Storage Concepts, Fundamentals of Information Processing, Fundamentals of Information Security, Information Technology Ethics, Fundamentals of Hardware Operation, Fundamentals of Networking, Fundamentals of the Internet, Fundamentals of Software Design Concepts, Fundamentals of Software, (System and Application), System Development Methodology, Computer Number Systems conversion (Binary and Hexadecimal), Mobile computing.

Course Length

	Minutes	Contact Hour	Semester Credit
Lecture:	1500	30	
Lab 2:	3000	60	
Lab 3:	0	0	
Practicum/Internship:	0	0	
Clinical:	0	0	
Total:	4500	90	4
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Semester Credit Hours:			4

Competencies

Order	Description	Lecture	Lab2	Lab3	Practicum/ Internship	Clinical	Total Minutes	Semester Credit Hrs
1	Information systems and Technology Basics	200	0	0	0	0	200	
2	The System Unit	200	250	0	0	0	450	
3	Data Representation and Data Storage Concepts	300	250	0	0	0	550	
4	Software	300	1000	0	0	0	1300	
5	Networking	100	500	0	0	0	600	
6		200	500	0	0	0	700	

Order	Description	Lecture	Lab2	Lab3	Practicum/ Internship	Clinical	Total Minutes	Semester Credit Hrs
	Information Security and Information Ethics							
7	The Internet and Computing in Today's World	200	500	0	0	0	700	
	Totals for Course CIST 1001 - Computer Concepts (version 201216L):	1500	3000	0	0	0	4500	4

Learning Outcomes

Information systems and Technology Basics

Order	Description	Learning Domain	Level of Learning
1	Compare and contrast IS and IT.	Cognitive	Synthesis
2	Identify devices used in the information world.	Cognitive	Knowledge
3	Discuss the evolution of computer hardware and software.	Cognitive	Comprehension
4	Identify future trends in IS and IT.	Cognitive	Knowledge

The System Unit

Order	Description	Learning Domain	Level of Learning
1	Explain how the CPU operates.	Cognitive	Comprehension
2	Differentiate between the many types and models of CPUs.	Cognitive	Analysis
3	Describe the purpose and types of memory (RAM,ROM, etc.)	Cognitive	Knowledge
4	Identify components of the motherboard including registers, adapter cards, buses, and ports.	Cognitive	Knowledge
5	Identify common input and output devices.	Cognitive	Knowledge
6	Discuss the boot process.	Cognitive	Comprehension

Data Representation and Data Storage Concepts

Order	Description	Learning Domain	Level of Learning
1	Demonstrate an understanding of decimal, binary, and hexadecimal number systems by performing conversion from one to another.	Cognitive	Application
2	Describe different character-encoding schemes such as ASCII, EBCDIC, and Unicode.	Cognitive	Comprehension
3	Define Bits, Bytes, Words, and Nibbles.	Cognitive	Knowledge
4	Describe different types of storage media including magnetic, optical, and solid state.	Cognitive	Knowledge

Software

Order	Description	Learning Domain	Level of Learning
1	Define the function of OS software.	Cognitive	Knowledge
2	Compare and Contrast popular OS software including MS, OS, Mac, and Linux.	Cognitive	Evaluation
3	Demonstrate knowledge of OS interaction through CLI and GUI.	Cognitive	Application
4	Discuss the different types of application software including business software, productivity tools, and utility tools.	Cognitive	Comprehension
5	Describe video and audio editing software.	Cognitive	Comprehension
6	Identify steps involved in system development.	Cognitive	Knowledge
7	Demonstrate simple principles of Pseudo coding, flowcharting, and OO design.	Cognitive	Application
8	Define software piracy and the legalities involved.	Cognitive	Knowledge

Networking

Order	Description	Learning Domain	Level of Learning
1	Describe wired technologies in LAN.	Cognitive	Knowledge
2	Describe wireless technologies in LAN.	Cognitive	Knowledge
3	Identify devices and technologies used to connect a WAN.	Cognitive	Knowledge
4	Discuss devices and methods of providing security within the networked world.	Cognitive	Comprehension
5	Identify job responsibilities of personnel in the information security fields.	Cognitive	Knowledge

Information Security and Information Ethics

Order	Description	Learning Domain	Level of Learning
1	Discuss the need for and develop an information technology code of ethics.	Cognitive	Comprehension
2	Identify the legal obligations of IT personnel.	Cognitive	Knowledge
3	Describe the difference between Freeware,shareware,payware,and open source software.	Cognitive	Knowledge
4	Identify the need for information security.	Cognitive	Knowledge
5	List the means used to provide information security including firewall,passcodes, biometrics, and other methods.	Cognitive	Knowledge
6	Describe the job responsibilities of personnel in the information security fields.	Cognitive	Knowledge

The Internet and Computing in Today's World

Order	Description	Learning Domain	Level of Learning
1	Describe the evolution of the internet and explain the differences between Web, Web2, and Internet2.	Cognitive	Knowledge
2	Compare various Web browsers including IE, Firefox, and Google Chrome.	Cognitive	Analysis
3	Identify the means of conducting business via the internet.	Cognitive	Knowledge
4	Demonstrate the use of different search engines	Cognitive	Application
5	Describe the methods used by websites to track usage.	Cognitive	Knowledge
6	Describe how to clean /prevent Spywares,viruses,grayware,malware, and Phishing.	Cognitive	Knowledge
7	Demonstrate proper usage of email.	Cognitive	Application
8	Establish Group communication tools such as Wiki's and Blogs.	Cognitive	Application
9	Describe how to setup and receive Podcasts and RSS feeds.	Cognitive	Knowledge
10	Discuss cybercrime, cyber bullying, cyber stalking, and netiquette.	Cognitive	Comprehension

References

Order	Reference Type	Description
1	Book with Author(s) Listed	Alan Evans, Mary Anne Poatsy, Kendall Martin. (2010). Technology in Action. (). : Prentice Hall.
2	Book with Author(s) Listed	Skelly and Vermatt. (2009). Discovering Computers in 2010: Living in a Digital World. (2009). xxx: Course Technology.