

CIST 1001 - Computer Concepts (version 201216L)

Course Title	Course Development	Learning Support
Computer Concepts	Standard	No

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.

Pre-requisites

Pre-requisites: None

Co-requisites

Co-requisites: None

Course Length

	Minutes	Contact Hour	Semester Credit	WLU
Lecture:	1500	30		
Lab 2:	3000	60		
Lab 3:	0	0		
Total:	4500	90	4	
Semester Credit Hours:			4	142.5
Breakout Detail of Lab 3				
Practicum/Internship	0	0		
Clinical	0	0		

Competencies & Outcomes

Order	Description	Lecture	Lab 2	Lab 3	Total Min	Credit Hrs	Pract Intern	Clinical
1	Information systems and Technology Basics	200	0	0	200	0	0	0
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	
2	The System Unit	200	250	0	450	0	0	0
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

3 **Data Representation and Data Storage Concepts** 300 250 0 550 0 0 0

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

4 **Software** 300 1000 0 1300 0 0 0

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

5 **Networking** 100 500 0 600 0 0 0

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

6 **Information Security and Information Ethics** 200 500 0 700 0 0 0

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

7 **The Internet and Computing in Today's World** 200 500 0 700 1 0 0

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

Competency Totals:	Lecture 1500	Lab 2 3000	Lab 3 0	Total Min 4500	Cred Hrs 4	Pract Intern 0	Clinical 0
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