Course Outcome Guide (COG)

Course:	CIS 141	**Credits:**	3	**Instructor:**	Ken Quamme
Course Description:	This course will provide an introduction to concepts related to Cybersecurity. Students will learn safe practices which can be deployed to secure computer systems. Students will gain an understanding of different tools which can be used to defend attacks on computer systems. Special emphasis will be given to systems and applications that non-CS majors will likely to encounter in daily life. In addition to lecture classes, security lab exercises will be conducted to perform hands-on experiments on safe security practices.				

Concepts and Issues	Process Skills	Assessment Tasks	Intended Outcomes		
			Course	General Education or Program	Institutional
The course does not assume any prior knowledge of computer security and can be enjoyed by anyone interested in improving the security of their digital information.	Explain basic cyber security terminology; have skills for keeping up to date on cyber security issues; and be able to identify information assets. Identify main malware types; awareness of different malware propagation methods; and skills for preventing malware infections. Describe cryptography terminology; be able to use cryptography for email; be aware of applications of cryptography.	• Participation • Case studies • Packet Tracer Simulations • Individual and group projects • Individual/group projects and presentations • Completion of Chapter Assessments • Final Assessment • Labs • Skills-Based Assessment Course Feedback	Think critically Communicate effectively with both verbal and written forms Identify the major threats to a network system and assess the risks Evaluate best practices in security concepts to maintain confidentiality, integrity and availability of computer systems	Assemble the components of a PC and install one or more operating sytems resulting in a functioning PC. Identify major telecommunications media types, including coaxial cable, UTP and fiber optic cable. Design a small or medium sized computer network including media types, end devices and interconnecting devices. Design basic wide area networks and work with a number of WAN encapsulations. Perform basic configuration on routers	1. Students will demonstrate effective communication skills. 2. Students will use reasoning skills to analyze and solve problems.

	Describe basic authentication mechanisms; have skills to improve their password security; and be aware of alternative authentication methods. Describe legal and regulatory issues relating to cyber security; and understand how to recover from security failures. Explain basic networking concepts; be aware of network security challenges; and have knowledge of key networking standards. Demonstrate understanding of firewalls, virtual private networks and network intrusion detection and prevention technologies. Apply basic risk analysis and management techniques.			and Ethernet switches. Perform basic tasks expected of a Network Administrator, includin g management of user accounts, shared resources and network security. Work in a UNIX environment and successfully create and manage files. Create a database, query a database, and ouput reports from a database in a database program. Write a sample program in at least one programming language. Effectively use the Internet for learning and tech support. Have a basic understanding of TCP/IP.	