

Course Outcome Guide (COG)

Course:	CIS 142	Credits:	3	Instructor:	Ken Quamme
Course Description:	This course provides an in-depth understanding of how to effectively protect computer networks. Students will learn the tools and penetration testing methodologies used by ethical hackers. In addition, the course provides a thorough discussion of what and who an ethical hacker is and how important they are in protecting corporate and government data from cyber attacks. Students will learn updated computer security resources that describe new vulnerabilities and innovative methods to protect networks. Also covered is a thorough update of federal and state computer crime laws, as well as changes in penalties for illegal computer hacking.				
Concepts and Issues	Process Skills	Assessment Tasks	Intended Outcomes		
			Course	General Education or Program	Institutional
<p>This course teaches how to perform computer crime investigations. The course covers the recovery and analysis of digital evidence, addressing legal and technical issues.</p> <p>Forensic examination techniques of Windows and Unix systems are used to illustrate typical investigative processes. Pre-requisite is CIS 141.</p>	<p>Technical foundation of cracking and ethical hacking</p> <p>Aspects of security, importance of data gathering, foot printing and system hacking</p> <p>Evaluation of computer security</p> <p>Practical tasks will be used to re-enforce and apply theory to encourage an analytical and problem based approach to ethical hacking</p>	<p>Participation</p> <p>Case studies</p> <p>Packet Tracer Simulations</p> <p>Individual and group projects</p> <p>Individual/group projects and presentations</p> <p>Completion of Chapter Assessments</p> <p>Final Assessment</p> <p>Labs</p> <p>Skills-Based Assessment</p> <p>Course Feedback</p>	<p>Identify and analyze the stages an ethical hacker requires to take in order to compromise a target system.</p> <p>Identify tools and techniques to carry out a penetration testing.</p> <p>Critically evaluate security techniques used to protect system and user data.</p> <p>Demonstrate systematic understanding of the concepts of security at the level of policy and strategy in a computer system.</p>	<p>Assemble the components of a PC and install one or more operating systems resulting in a functioning PC.</p> <p>Identify major telecommunications media types, including coaxial cable, UTP and fiber optic cable.</p> <p>Design a small or medium sized computer network including media types, end devices and interconnecting devices.</p> <p>Design basic wide area networks and work with a number of WAN encapsulations.</p>	<p>Students will demonstrate effective communication skills.</p> <p>Students will use reasoning skills to analyze and solve problems.</p>

				<p>Perform basic configuration on routers and Ethernet switches.</p> <p>Perform basic tasks expected of a Network Administrator, including management of user accounts, shared resources and network security.</p> <p>Work in a UNIX environment and successfully create and manage files.</p> <p>Create a database, query a database, and output reports from a database in a database program.</p> <p>Write a sample program in at least one programming language.</p> <p>Effectively use the Internet for learning and tech support.</p> <p>Have a basic understanding of TCP/IP.</p>	
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