ALLEN COMMUNITY COLLEGE
COMMON COURSE OUTLINE
CIS 215 ETHICAL HACKING

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I. COURSE INFORMATION

A. Computer Science 215 Ethical Hacking
B. 3 credit hours
C. Simpson, Michael. *Hands-On Ethical Hacking and Network Defense*. 3rd. MA: Cengage, 2017
D. Prerequisites: CIS 113 and CIS 125 or CIS 241 or instructor approval

II. 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.

LEARNING OUTCOMES

A. Describe the role of ethical hacker
B. Describe the different types of malicious software and what damage they can do
C. Describe methods of protecting against malware attacks
D. Identify physical security attacks and vulnerabilities
E. Evaluate best practices in security concepts to maintain confidentiality, integrity and availability of computer systems
F. Describe cyber defense tools, methods and components

III. MAJOR CONTENT AREAS

A. Ethical hacking overview
B. TCP/IP concepts review
C. Network and computer attacks
D. Footprinting and social engineering
E. Port scanning
F. Enumeration
G. Programming for security professionals
H. Desktop and server OIS vulnerabilities
I. Embedded operating systems: the hidden threat
J. Hacking web servers
K. Hacking wireless networks
L. Cryptography
M. Network protection systems

IV. ASSIGNMENTS

A. Chapter and final exams
B. Lab assignments
C. Network testing assignments

V. EVALUATION METHODS

A. Written objective and/or subjective exams
B. Practical laboratory assignments