ALLEN COMMUNITY COLLEGE
COMMON COURSE OUTLINE
CIS 110 CYBERSECURITY ESSENTIALS

Allen COMMUNITY COLLEGE
www.allencc.edu

I. COURSE INFORMATION

A. Computer Science 110 Cybersecurity Essentials
B. 3 credit hours
C. Whitman, Michael and Herbert J. Mattord. *Principles of Information Security.* 6th ed. Boston: Cengage, 2018
D. Prerequisites: None

II. COURSE DESCRIPTION

The Cybersecurity Essentials course develops foundational understanding of cybersecurity and how it relates to information and network security. The course introduces students to characteristics of cybercrime, security principles, technologies, and procedures to defend networks.

III. LEARNING OUTCOMES

A. Describe the cybersecurity world, criminals, and professionals
B. Describe tactics, techniques and procedures used by cyber criminals
C. Explain the types of malware, malicious code and social engineering
D. Outline technologies, products, and procedures used to protect confidentiality
E. Detail the purpose of digital signatures and certificates
F. Explain the need for database integrity enforcement
G. Represent how incident response plan and disaster recovery planning improves high availability and business continuity
H. Explain network infrastructure and end device protection
I. Discuss cybersecurity domain and controls
J. Explain ethics and cybersecurity laws

IV. MAJOR CONTENT AREAS

A. Cybersecurity domains
B. Cybersecurity criminals
C. Common cybersecurity threats
D. Cybersecurity countermeasures
E. IT security management framework
F. ISO cybersecurity model
G. Malware and malicious code
H. Types of encryption
I. Authentication methods
J. Types of security controls
K. Types of data integrity controls
L. Digitals signatures and certificates
M. Incident response
N. Disaster recovery
O. Defending systems and devices

V. ASSIGNMENTS

A. Chapter and final exams
B. Lab assignments
C. Packet tracer assignments
D. Multi-industry case studies

VI. EVALUATION METHODS

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