University of Arkansas - Fort Smith
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General Syllabus

CSCE 20503 Foundations of CyberSecurity

Credit Hours: 3 Lecture Hours: 3 Laboratory Hours: 0

Prerequisite(s): CSCE 10104 Foundations of Programming I and CSCE 10404 Foundations of Networking

Effective Catalog: 2020-2021

I. Course Information

A. Catalog Description

Examines the business continuity mandate for securing computing assets, including physical versus logical security, categorization and analysis of threats, organizational security policies, and identification of security measures.

II. Student Learning Outcomes

A. Subject Matter

Upon successful completion of this course, the student will be able to:

1. Discover, categorize and rank the risks to organizational technology assets.
2. Research, analyze and implement appropriate measures to ensure the safeguarding of organizational technology assets.
3. Detect and evaluate security incidents.
4. Explain policies and procedures related to security incidents and investigations in the context of industry best practices and ethics.

B. University Learning Outcomes

This course enhances student abilities in the following area:

Analytical Skills
Critical Thinking Skills
Students will research and evaluate security risks and evaluate the possible responses to those risks. Students will synthesize knowledge of risks with knowledge of risk responses to prepare, assess and justify appropriate policies and technological procedures in support of those policies.

Ethical Decision Making

Students will identify ethical dilemmas and affected parties while preparing security policies. They will apply ethical frameworks to resolve ethical dilemmas while assessing and justifying security policies.

III. Major Course Topics

A. Security and Risk Management
B. Confidentiality, Integrity, and Availability
C. Operating System / Application Updates and Patches
D. Authentication
E. Authorization
F. Networking and Protocols
G. Disaster Recovery and Business Continuity
H. Cryptography and Information States
I. Security Policy
J. Threat Analysis Model