

COURSE SYLLABUS

LAST REVIEW	Fall 2022
COURSE TITLE	Advanced Security Practitioner
COURSE NUMBER	CIST 0245
DIVISION	Career and Technical Education
DEPARTMENT	CIST
CIP CODE	24.0101
CREDIT HOURS	3
CONTACT HOURS/WEEK	Class: 3 Lab:
PREREQUISITES	CIST 0125

COURSE DESCRIPTION

This course provides the skills necessary to apply critical thinking and judgment to a broad spectrum of security disciplines. Students will be able create and implement strategist security solutions, analyze risk impact, respond to security incidents, and provide business with suggestions for needed security requirements. Students will be able to prepare contingency strategies for incident response, disaster response, and business continuity.

PROGRAM ALIGNMENT

This course is part of a program aligned through the Kansas Board of Regents and Technical Education Authority. For more information, please visit:

https://kansasregents.org/workforce_development/program-alignment

PROGRAM LEARNING OUTCOMES

1. Demonstrates the necessary skills to score at least a 70% in the Network 1 course.
2. Obtain the skills necessary to pass the Certification COMPTIA SEC+ certification.
3. Applies judicious and ethical offensive security techniques using knowledge gained through cyber security coursework.
4. Obtain the skills necessary to pass the NET+ certification.

TEXTBOOKS

<http://kckccbookstore.com/>

METHOD OF INSTRUCTION

A variety of instructional methods may be used depending on content area. These include but are not limited to lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs.

COURSE OUTLINE

- I. Enterprise Security
 - A. The Basics of Enterprise Security and Structure
 - B. Enterprise Security Requirements
 - C. Security implications associated with enterprise storage
 - D. Network security components, concepts, and architectures
 - E. Vulnerabilities and select appropriate security controls
- II. Enterprise Security Technology
 - A. Network Security Components and Technologies
 - B. Communications and Collaboration Security
 - C. Cryptographic Tools and Techniques
 - D. Advanced Authentication
- III. Risk Management and Incident Response
 - A. Analyze Security Risk
 - B. Implement Risk Mitigation Planning, Strategies and Controls
 - C. Implement Enterprise-Level Security Policies and Procedures
 - D. Prepare for Incident Response and Recovery
 - E. Security, privacy policies, and procedures organizational requirements
- IV. Research and Analysis
 - A. Industry Trends and Impact Analysis
 - B. Enterprise Security Analysis
 - C. Research methods to determine industry trends and impact
 - D. Methods and tools to conduct an assessment and analyze results
 - E. Analysis of scenarios to secure the enterprise
- V. Security Design and Solutions
 - A. Network Security Design
 - B. Conduct a Security Assessment
 - C. Host Security
 - D. Application Security Basics
 - E. Web Application Security
- VI. Integration of Computing and Communications
 - A. The Technology Life Cycle
 - B. Inter-Organizational Change
 - C. Integrate enterprise disciplines to achieve secure solutions
 - D. Achieving security goals for diverse business units
 - E. Appropriate control for securing communications
 - F. Implement security activities across the technology life cycle

COURSE LEARNING OUTCOMES AND COMPETENCIES

Upon completion of the course, the student will:

- A. Explain the concepts of enterprise security.
 - 1. Explain the basics of enterprise security and structure.
 - 2. Define the enterprise security requirements.
 - 3. Explain security implications associated with enterprise storage.
 - 4. Explain network security components, concepts, and architectures.
 - 5. Define vulnerabilities and select appropriate security controls.

- B. Explain the concepts of enterprise security technology.
 - 6. Explain network security components and technologies.
 - 7. Explain the concept communications and collaboration security.
 - 8. Explain cryptographic tools and techniques.
 - 9. Explain advanced authentication.

- C. Explain risk management and incident response.
 - 10. Analyze security risk.
 - 11. Implement risk mitigation planning, strategies and controls.
 - 12. Implement enterprise-level security policies and procedures.
 - 13. Prepare for incident response and recovery.
 - 14. Explain security, privacy policies, and procedures organizational requirements.

- D. Understand enterprise security research and analysis.
 - 15. Explain industry trends and impact analysis.
 - 16. Explain enterprise security analysis.
 - 17. Understand research methods to determine industry trends and impact.
 - 18. Explain methods and tools to conduct an assessment and analyze results.
 - 19. Explain analysis of scenarios to secure the enterprise.

- E. Explain the concepts of security design and solutions.
 - 20. Understand network security design.
 - 21. Conduct a security assessment.
 - 22. Explain host security.
 - 23. Explain application security basics.
 - 24. Understand web application security.

- F. Explain integration of computing and communications.
 - 25. Explain the technology life cycle.
 - 26. Explain inter-organizational change.
 - 27. Define explain integrate enterprise disciplines to achieve secure solutions.
 - 28. Achieve security goals for diverse business units.
 - 29. Explain appropriate control for securing communications.
 - 30. Implement security activities across the technology life cycle.

ASSESSMENT OF COURSE LEARNING OUTCOMES AND COMPETENCIES

Student progress is evaluated through both formative and summative assessment methods. Specific details may be found in the instructor's course information document.

COLLEGE POLICIES AND PROCEDURES

Student Handbook

<https://www.kckcc.edu/files/docs/student-resources/student-handbook-and-code-of-conduct.pdf>

College Catalog

<https://www.kckcc.edu/academics/catalog/index.html>

College Policies and Statements

<https://www.kckcc.edu/about/policies-statements/index.html>

Accessibility and Accommodations

<https://www.kckcc.edu/academics/resources/student-accessibility-support-services/index.html>.