SYLLABUS

DATE OF LAST REVIEW: 02/2013

CIP CODE: 47.0104

SEMESTER: Departmental Syllabus

COURSE TITLE: Network Security for Server+

COURSE NUMBER: CRTE0221

CREDIT HOURS: 2

INSTRUCTOR: Departmental Syllabus

OFFICE LOCATION: Departmental Syllabus

OFFICE HOURS: Departmental Syllabus

TELEPHONE: Departmental Syllabus

EMAIL: KCKCC issued email accounts are the official means for electronically communicating with our students.

PREREQUISITE(S): CRTE0220 Troubleshooting the Operating System for Server+

REQUIRED TEXT AND MATERIALS: Please check with the KCKCC bookstore, http://www.kckccbookstore.com/, for the required texts for your particular class.

COURSE DESCRIPTION:
This course will detail the importance of developing a security policy in order to guard against the internal and external threats to a network. The student will learn the security measures to implement. Patching and upgrading the Network Operating System (NOS) will ensure that the system is current. Additionally, the student will gain an understanding of firewalls and proxies.

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. Developing a Network Security Policy
   A. Accessing security needs
   B. Acceptable use policy
   C. User name and password standards
   D. Virus protection standards
   E. Online security resources

II. Threats to Network Security
    A. Overview: Internal/external security
    B. Security vulnerabilities within Linux services
    C. Outside threats
    D. Denial of Service (DoS)
    E. Distributed Denial of Service (DDoS)
    F. Well known exploits
    G. Inside Threats

III. Implementing Security Measures
     A. File encryption, auditing, and authentication
     B. Intrusion Detection Systems
     C. IP Security
     D. Secure Sockets Layer (SSL)
     E. E-mail security
     F. Public/private key encryption

IV. Applying Patches and Upgrades
    A. Finding patches and upgrades
    B. Selecting patches and upgrades
    C. Applying patches and upgrades

V. Firewalls
   A. Introduction to firewalls and proxies
   B. Packet filtering
   C. Firewall placement
   D. Common firewall solutions
   E. Using a NOS as a firewall

EXPECTED LEARNER OUTCOMES:

A. The student will be able to describe Developing a Network Security Policy.
B. The student will be able to describe Threats to Network Security.
C. The student will be able to describe Implementing Security Measures.
D. The student will be able to describe Applying Patches and Upgrades.
E. The student will be able to describe Firewalls.
COURSE COMPETENCIES:
Upon successful completion of this course:

- The student will be able to describe Developing a Network Security Policy
  1. The student will be able to describe Accessing security needs
  2. The student will be able to describe Acceptable use policy
  3. The student will be able to describe User name and password standards
  4. The student will be able to describe Virus protection standards
  5. The student will be able to describe Online security resources

- The student will be able to describe Threats to Network Security
  6. The student will be able to describe Overview: Internal/external security
  7. The student will be able to describe Security vulnerabilities within Linux services
  8. The student will be able to describe Outside threats
  9. The student will be able to describe Denial of Service (DoS)
  10. The student will be able to describe Distributed Denial of Service (DDoS)
  11. The student will be able to describe Well known exploits
  12. The student will be able to describe Inside Threats

- The student will be able to describe Implementing Security Measures
  13. The student will be able to describe File encryption, auditing, and authentication
  14. The student will be able to describe Intrusion Detection Systems
  15. The student will be able to describe IP Security
  16. The student will be able to describe Secure Sockets Layer (SSL)
  17. The student will be able to describe E-mail security
  18. The student will be able to describe Public/private key encryption

- The student will be able to describe Applying Patches and Upgrades
  19. The student will be able to demonstrate the ability to Find patches and upgrades
  20. The student will be able to describe Selecting patches and upgrades
  21. The student will be able to demonstrate the ability to Apply patches and upgrades

- The student will be able to describe Firewalls
  22. The student will be able to describe Introduction to firewalls and proxies
  23. The student will be able to describe Packet filtering
  24. The student will be able to describe Firewall placement
  25. The student will be able to describe Common firewall solutions
  26. The student will be able to describe Using a NOS as a firewall

ASSESSMENT OF LEARNER OUTCOMES:
Student progress is evaluated by means that include, but are not limited to, exams, written assignments, and class participation.

SPECIAL NOTES:
This syllabus is subject to change at the discretion of the instructor. Material included is intended to provide an outline of the course and rules that the instructor will adhere to in evaluating the
student’s progress. However, this syllabus is not intended to be a legal contract. Questions regarding the syllabus are welcome any time.

Kansas City Kansas Community College is committed to an appreciation of diversity with respect for the differences among the diverse groups comprising our students, faculty, and staff that is free of bigotry and discrimination. Kansas City Kansas Community College is committed to providing a multicultural education and environment that reflects and respects diversity and that seeks to increase understanding.

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Kansas City Kansas Community College complies with the Americans with Disabilities Act. If you need accommodations due to a documented disability, please contact the Director of the Academic Resource Center in Rm. 3354 or call (913) 288-7670.