SYLLABUS

DATE OF LAST REVIEW: 02/2013

CIP CODE: 47.0104

SEMESTER: Departmental Syllabus

COURSE TITLE: TCP/IP Networking for Server+

COURSE NUMBER: CRTE0207

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): CRTE0206 Physical Components of a Network for Server+

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

COURSE DESCRIPTION:
In this course the student will learn how the layers of the TCP/IP work together to communicate on a network, how addresses are assigned, and how a computer name is translated into an IP address and back again. Additionally, the functions performed by each of the major protocols that compose the TCP/IP protocol suite will be discussed.

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. History of TCP/IP
   A. Origins and growth of TCP/IP
   B. The TCP/IP network model
   C. TCP/IP and network operating systems

II. IP Addressing
   A. IPv4 addressing
   B. IPv4 addressing overview
   C. Class A addresses
   D. Class B addresses
   E. Class C addresses
   F. Class D and E addresses
   G. The IPv4 address crisis
   H. Subnetting

III. Name Resolution
   A. Overview of name resolution
   B. Hostnames and host tables
   C. The domain name system
   D. Name services and the NOS
   E. WINS

IV. TCP/IP Protocols
   A. Overview of TCP/IP protocols
   B. Address Resolution Protocol (ARP)
   C. Internet Control Message Protocol (ICMP)
   D. Transmission Control Protocol (TCP)
   E. User Datagram Protocol (UDP)
   F. DHCP services
G. Hypertext Transport Protocol (HTTP)
H. File Transfer Protocol (FTP)
I. Telnet
J. SMTP
K. POP3
L. IMAP

EXPECTED LEARNER OUTCOMES:
A. The student will be able to describe the history of TCP/IP
B. The student will be able to describe IP Addressing.
C. The student will be able to describe Name Resolution.
D. The student will be able to describe TCP/IP Protocols.

COURSE COMPETENCIES:
Upon successful completion of this course:

The student will be able to describe the history of TCP/IP.
1. The student will be able to describe the origins and growth of TCP/IP.
2. The student will be able to describe the TCP/IP network model.
3. The student will be able to describe TCP/IP and Network Operating Systems.

The student will be able to describe IP Addressing.
4. The student will be able to describe IPv4 addressing
5. The student will be able to describe the application of IPv4 addressing.
6. The student will be able to describe Class A addresses.
7. The student will be able to describe Class B addresses.
8. The student will be able to describe Class C addresses.
9. The student will be able to describe Class D and E addresses.
10. The student will be able to describe the IPv4 address crisis.
11. The student will be able to demonstrate basic subnetting

The student will be able to describe Name Resolution.
12. The student will be able to describe Name Resolution.
13. The student will be able to describe Hostnames and host tables.
14. The student will be able to describe how DNS refers to Name Resolution.
15. The student will be able to describe Name Services and NOS.
16. The student will be able to describe WINS.

The student will be able to describe TCP/IP Protocols.
17. The student will be able to describe the most common TCP/IP Protocols.
18. The student will be able to describe ARP.
19. The student will be able to describe ICMP.
20. The student will be able to describe TCP.
21. The student will be able to describe UDP.
22. The student will be able to describe DHCP.
23. The student will be able to describe HTTP.
24. The student will be able to describe FTP.
25. The student will be able to describe Telnet.
26. The student will be able to describe SMTP.
27. The student will be able to describe POP3.
28. The student will be able to describe IMAP.

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.

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