CSC 355 - NETWORK ADMINISTRATION

CREDIT HOURS: 3
PREREQUISITES: CSC 202
GRADE REMINDER: Must have a grade of C or better in each prerequisite course.

CATALOG DESCRIPTION

Network Administration principles, tools, and techniques.

PURPOSE OF COURSE

The purpose of this course is to enable the student to develop an understanding of the principles of networks and the skills required to install, configure, and manage those networks. The concepts, terminology, techniques, and tools of computer networking will be presented. Responsibilities and legal, ethical, and professional issues will be addressed. Current practices and platforms will be explored.

EDUCATIONAL OBJECTIVES

Upon successful completion of the course, students should be able to:

1. Demonstrate an understanding of the computer networking field through identification of models, concepts, and technologies.
2. Demonstrate a thorough understanding of the procedures required to install, configure, and maintain computer networks.
3. Identify user requirements and activities.
4. Identify the tools and techniques of computer networking.
5. Describe relevant current practices, procedures and policies in the computer networking field.

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Hubs, bridges, switches
IP: network to network ................................................................. 6
  Interface: ARP/RARP
  ICMP, ping
  IP addressing, subnetting
  Routing, packet header: TTL, addresses

TCP: host to host ........................................................................... 6
  Connectionless/connection-oriented, datagram/streams
  Error correction, flow control
  Interface: Ports

Application: message to packet ...................................................... 7
  Packetizing, headers
  DNS, DHCP, FTP, Telnet/SSH, Mail
  SNMP

Wireless LANs ................................................................................ 3

Security .......................................................................................... 2
  Packet sniffers/Protocol analyzers

Process and Policies ........................................................................ 2
  Administration and User Responsibilities
  Applications – Installation and Configuration
  Training
  Analysis and Tuning

Exams (plus final) ............................................................................ 3

TOTAL 45

REFERENCES


Halsall, F., Computer Networking and the Internet, 5th Ed., Addison-Wesley, 2005
  http://www.aw-bc.com/catalog/academic/EZPrint_Product/0,2989,0321263588,00.html


http://www.aw-bc.com/catalog/academic/EZPrint_Product/0,2989,0201781344,00.html