Internet Management

Course Description:
The aim of this course is to introduce the subject of Internet Management and provide a framework for the field of study including:

- Introduction to this field of study
- Network components
- Network topologies and cabling
- Security
- Management
- Auditing
- Intranets/Extranets/WANs
- Managing Users
- Security of data
- Capacity Planning
- Managing sites

Course Objective:

- Explain what the Internet is
- Relate the history of the Internet
- Internet organization from NAPs to End-users
- Define the term Internet Management
- Describe the various areas of Internet Management
- Outline reasons why an organization would be involved in Internet Management
- Identify network components such as routers, bridges and switches
- Look at various Server types used by organizations
- Describe the EIA/TIA building wiring standards
- List three different types of cable media and state their characteristics
- Select an appropriate cable media for a particular scenario
- Identify the correct cable connectors for use with a specific cable medium
- Explain the operation of a bus, ring or star network
- Identify network components within an organization that need securing
- Analyze the potential risks and recommend a strategy to minimize identified risks
- Be aware of related fields such as risk management, auditing and their relevance to networking
- Identify sources of info. & organizations about security related threats & issues
- Recognize Internet sites management
- Recognize Internet sites registration procedures
- Managing and maintaining web servers, web site hosting
- Identify Web Servers, & recognize site security and remote access procedures
- Practical use of several standard industry web servers
- Web sites registration procedures

**Teaching / Learning Methodology:**

Exam #1: 20%
Exam #2: 20%
Participation Assessment: 10%
Final Exam: 50%

**Course Contents:**

**Module 1:**
- Introduction to the Internet
- History of the Internet
- Internet Organization from NAPs to End-users
- Introduction to Internet Standardization Organizations
- Introduction to Internet Protocols

**Module 2:**
- Tour within the Internet NAPs web sites
- Tour within the Internet Traffic Watch web site
- Tour the National Science Foundation web site
- Tour within several of Internet DNS Servers web sites
- Tour within several of Regional Internet Registry web sites
- Tour within the Internet Corporation for Assigned Names and Numbers web site
- Tour within the Internet Assigned Numbers Authority web site
- Tour within the Internet Research Task Force web site
- Tour within the Internet Engineering Task Force web site
- Tour within the National Information Center web site
- Tour within Protocol Numbers and Assignment Services web site
- Tour within the Internet Society web site

**Module 3:**
- LANs basics
- LANs Components
- Network Segments
- Introduction to Cabling System
- Hubs
- Network Hubs
- Network Bandwidth
- OSI Layers
- MAC specifications
- IP addressing
- Bridges
- Routers

**Module 4:**
- Servers Types
- DNS
- DHCP
- WNS
- WINS
- FTP
- WWW
- ILS
- E-mail Servers
Module 5:
- Ethernet Switches
- Cut Through Switches
- Store Forward Switches
- Back Pressure Switches
- Repeaters

Module 6:
- Guide to building wiring
- Horizontal wiring
- Backbone wiring
- UTP cables
- Coaxial cables
- Fiber Optic Cables

Module 7:
- Networks Topologies
- Bus
- Ring
- Star
- FDDI

Module 8:
Identify sources of info. & organizations about security related threats & issues
Internet sites registration procedures
managing and maintaining web servers, web site hosting
Identify Web Servers
On-hand experience of several industry available web servers
Web sites registration procedures

Module 9:
- Security issues
- Digital Signatures, Microsoft Wallet, Microsoft Secure Sockets Layer
- Point to Point Tunneling Protocol
- Internet Security Protocols: Protecting IP Traffic: 1/e , Uyless Black
  References:
- How the Internet Works: 6/e,  Preston Gralla
- Internet Architecture: An Intro. to IP Protocols: 1/e,  Uyless Black
- Routing in the Internet: 2/e, Christian Huitema