Topics/Content/Outline:
Topics include: researching, planning, designing and implementing large network infrastructure technologies. Includes name resolution techniques, security, routing and voice over IP.

Expanded Outcomes
Outcome 1:   Design and Implement a Large Network Infrastructure.   • Introduction to large network infrastructure   • Analyse business requirements to justify network infrastructure   • Analyse technical requirements and explore issues regarding large network designs   • Introduction to Intranet, Internet and Extranet
Outcome 2:   Design and Implement Name Resolution Techniques.   • Implement and administer DHCP   • Integrate DHCP in a routed environment   • Design and implement Domain Name System   • Implement DNS security infrastructure   • Design Directory Services   • Implement fault tolerance   • Security Issues related to DHCP, DNS and Directory Services
Outcome 3:   Design and Implement a Wide Area Network Systems   • Design and implement a large TCP/IP network system   • Integrate DHCP, DNS and Directory Services   • Designing and implement Remote Administration   • Design and configuring Virtual Private Network   • Design and implement multiple domain environment
Outcome 4:   Design, Implement and Configure Network Security and Routers.   • Design and Implement IPSec   • Implement Public Key Infrastructure   • Deploying and Managing Certificates   • Implementing and Configuring IPSec   • Monitor and Optimize Security   • Introduction to Routers and Routing Tables   • Design and Implement Routers in Large networks.   • Configure Routing Interfaces.   • Exploring Issues regarding Information Routing.
Outcome 5:   Design and Implement Voice over IP solution   • Designing and deploying Voice over IP   • Exploring Issues regarding Voice over IP   • Administer, manage and troubleshoot Voice over IP

Assessment:

Weighting	Nature of assessment	Learning outcomes
40%	Exam	1, 2, 3, 4, 5
60%	Practical tests on common network design and implementation issues.	1, 2, 3, 4, 5

Learning and teaching approaches: Lectures, Discussion, Practical – Labs and Research

Learning resources required:
Required Texts: None

Learning resources recommended: Various appropriate websites and in class notes.

Saved on 12 July 2011