

The networking elements of the MSc will consist of four modules, each will be worth 15 credits. Half of each of the modules will consist of material from the Cisco Academy and the other half will consist of flexible distance learning material, as given in Table 1.

Table 1: Proposed course structure

Stage	Cisco Material	Flexible Study Material
1	Cisco Semester 1 (See WWW site)	Distributed Systems. Introduction, Data Communications (Fundamentals), Compression (JPEG/MPEG/AC-3/MP-3/etc), Distributed System Elements, Operating Systems, Processes and Scheduling, Data representation (XDR/ASCII/etc), Distributed Processing (RPC), Distributed File Systems (NFS), DCOM/CORBRA.
2	Cisco Semester 2 (See WWW site)	Networks Fundamentals. Fundamentals of Networks, Network Types and Cables, Ethernet, ATM. Networking Connections, WAN/LAN/Structure of the Internet.
3	Cisco Semester 3 (See WWW site)	Networking Protocols. IP (v4, v6), ICMP, TCP/UDP, Routing Protocols (RIP, OSPF, IGRP, EGP/BGP), TCP/IP Commands, TELNET/FTP/TFTP, DNS/BOOTP/Named Server, PPP, PAP/CHAP, Routing, SNMP, RMON, EASE, WINS and DHCP, Time Servers (SNTP), WAP.
4	Cisco Semester 4 (See WWW site)	Networking Elements. Electronic Mail (SMTP/MIME/POP3/IMAP), HTTP/WWW, Agents, Firewalls, Proxy Servers and Security, Network Operating Systems (UNIX, Microsoft Windows NT/2000 and Novell NetWare), Encryption. Electronic Commerce (SMIME/SHTTP/PKCS/SSL/etc).

All the Cisco Academy material is studied on-line. Further information can be found at:

<http://www.dcs.napier.ac.uk/CISCO.htm>

and the syllabuses for each of the Cisco modules can be found at:

http://www.dcs.napier.ac.uk/~bill/cisco_sem1.pdf

http://www.dcs.napier.ac.uk/~bill/cisco_sem2.pdf

http://www.dcs.napier.ac.uk/~bill/cisco_sem3.pdf

http://www.dcs.napier.ac.uk/~bill/cisco_sem4.pdf

A Cisco Certified Networking Associate (CCNA) certificate will be awarded on the completion of the four Cisco modules. The rest of the material for the networking elements of the MSc is contained in the textbook:

Handbook of the Internet (with CD-ROM), W.Buchanan, Kluwer, 2000.