Topics/Content outline:
Topics include: planning advanced IP addressing, designing WANs, evaluating latest protocols; analysing wireless networks; evaluating network security and management.

Expanded Outcomes
Outcome 1: Analyse and describe a selection of widely used LAN and WAN technologies and protocols. (Range: MPLS, Ethernet, switching, Broadband-ISDN, Fast Packet Switching, frame relay, ATM, SDH).
Outcome 2: Analyse and describe a selection of advanced wireless technologies, (Range: **WiFi,** WiMax, channel allocation in wireless LANs, and cellular).
Outcome 3: Demonstrate skills in planning advanced IP addressing (Range: Superneting, CIDR, VLSM).
Outcome 4: Analyse and describe network management, Internet, and network security. Discuss software and hardware used for such purposes.
Outcome 5: Critically evaluate alternative approaches using different network and data communication technologies and techniques in distributed data environments. (Range: beginning with small problem situations and ending with a comprehensive case study).
Outcome 6: Demonstrate skills in gathering information, assessing and implementing effective and efficient data communication techniques. (Students will submit and present a project based on a real life business networks) (Range: analysis of requirements, literature survey, appraisal of various network approaches and the implementation strategy for the suggested solution).

Assessment:

Weighting	Nature of assessment	Learning outcomes
10%	Quiz	1,2,3
40%	Assignment – report on a large company detailing and assessing network components	All
50 %	Final Exam (closed Book)	All

Learning and teaching approaches:
Lectures, Discussion, Practical - Research

Learning resources required:

Recommended Text: Refer to the current programme booklist.

Learning resources recommended: