Expanded Outcomes
Outcome 1: Describe a selection of network components and protocols. • Identify the components for serial communication networks, and the functions of these components (Range: USB, Firewire & fibre channel). • Identify and evaluate the components for inter-networking of LANs and WANs (Range: NetBios, repeaters, switches, bridges, routers, gateways, hubs). • Addressing (MAC, IP subnetting) • Identify and evaluate routing protocols (OSPF, RIP). • Describe the OSI and network model and compare/relate its structure and layer functions to other communication protocols. • Describe TCP/IP suite of protocols (TCP, IP, USP, ARP, DNS, SNMP, ICMP). • Wireless LAN protocols, Cellular.
Outcome 2: Evaluate a selection of network configurations, apply planning and design issues to a given situation. • Evaluate a selection of different network configurations (Range: point to point, multipoint, circuit switching, packet switching, other available PDN services). • Evaluate the function and utilisation of different protocols Fast Ethernet, Gigabit Ethernet, Frame Relay, ISDN, and ATM. • Describe and evaluate High Speed LAN and WAN configurations. • Analyse a given case, and with a clear line of reasoning, recommend a plan and a design of a LAN and a WAN based on appropriate considerations of site, volume of traffic, data type, response time.
Outcome 3: Evaluate the use and function of a selection of data communication technologies. • Multiplexing techniques: FDM, TDM, STDM, and WDM. • VPN, VLAN • PABX, VOIP, Centrex. • Remote access
Outcome 4: Demonstrate skills in gathering information, understanding data communication techniques. (Students will submit and present a project based on a real life business) (Range: analysis of requirements, describing a read network, literature survey).

Assessment:

Weighting	Nature of assessment	Learning Outcomes
10%	Quiz	1,2
40%	Assignment: Create a report detailing the network of a medium to large company. Present findings to class.	1,3,4
50%	Final exam	1, 2, 3

Learning and teaching approaches:
Lectures, Discussion, Research

Learning resources recommended:

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