

MODULE: PRACTICAL NETWORKING

CODE: BSCH-3-2-10

Stage: III

Credit Points: 4 semester credits / 6 quarter units

Overview and Aims

This module seeks to give you an understanding and knowledge of networking fundamentals including the Open Systems Interconnect (OSI) seven layer model concepts, terminology and technologies using industry standard hardware and software.

Learning Outcomes

Upon successful completion of this module, you should be able to:

1. construct a peer to peer Ethernet LAN
2. solve Ethernet networking issues using switched LAN technology
3. configure a Cisco router for basic network connectivity
4. configure a Cisco switch
5. construct and implement a network addressing scheme
6. configure simple networks

understand basic security and wireless concepts

Module Content

Network Fundamentals

TCP/IP and OSI networking models, Data link layer fundamentals, Ethernet LANs, WAN fundamentals, Introduction to IP, TCP and UDP

Cisco Devices

Operating & basic configuration of Cisco Routers and switches

LAN Switching

Understand routing and switching fundamentals; LAN switch basics, VLANs and Trunking, LAN cabling & topologies

TCP/IP Routing

IP addressing and subnetting

Dynamic Routing Protocols, configuring RIPv2, static and default routing; implementing NAT and DHCP

WAN

Remote Access technologies: PSTN, modems, ISDN, DSL, cable modems