

Module Details	
Module Title	Computer Communications and Networks
Module Code	COS5025-B
Academic Year	2020/1
Credits	20
School	Department of Computer Science
Subject Area	Computer Science
FHEQ Level	FHEQ Level 5
Pre-requisites	N/A
Co-requisites	N/A

Contact Hours	
Type	Hours
Directed Study	152
Laboratories	24
Online Lecture (Synchronous)	24

Availability	
Occurrence	Location / Period
BDA	University of Bradford / Semester 2

Module Aims
1. To introduce concepts of data communication with computer networks at different levels and applications. 2. To develop skill in network design and performance evaluation skills. 3. To reinforce the background knowledge with practical experience of computer networks.

Outline Syllabus
(1) Internetworking and the Internet (2) Protocol Architecture (3) Network Topology (4) LAN and W-LAN (5) High Speed LANs (6) Data Transmission (7) Signal Encoding Techniques (8) Data Link Control (9): Multiple Access Protocols (10) Network Layer (11) Subnetting (12) Routing (13) Transport Layer (14) Application Layer (15) Security in Computer Networks

Learning Outcomes	
Outcome Number	Description
01	Explain the function of data, signals and the different media used for data communication, signal encoding and multiplexing; data transmission with data link and transport protocols. Outline the common problems with transmission. Explain typical computer network topologies and their components derived through the modelling and evaluating of their performance in software and laboratory network.
02	Develop, design, analyse and monitor communication networks.
03	Demonstrate analytical and problem-solving skills.

Learning, Teaching and Assessment Strategy
A combination of online lectures/ Laboratory /directed study. Concepts, principles & theories explored in formal lectures, practised & demonstrated in online labs. Oral feedback is given during online Laboratory/Lectures. The Lab coursework questions will assess the application of practical skills to the knowledge base of the module using the CISCO Packet Tracer software. The theoretical coursework questions will assess this and an understanding of the theoretical issues.

Mode of Assessment				
Type	Method	Description	Length	Weighting
Summative	Coursework	Individual coursework (Cisco Packet Tracer lab questions (30%) and theoretical questions (70%))	N/A	100%

Reading List
To access the reading list for this module, please visit https://bradford.rl.talis.com/index.html

Please note:

This module descriptor has been published in advance of the academic year to which it applies. Every effort has been made to ensure that the information is accurate at the time of publication, but minor changes may occur given the interval between publishing and commencement of teaching. Upon commencement of the module, students will receive a handbook with further detail about the module and any changes will be discussed and/or communicated at this point.