

Module Details	
Module Title:	Computer Communications and Networks
Module Code:	COS5025-B
Academic Year:	2019-20
Credit Rating:	20
School:	Department of Computer Science
Subject Area:	Computer Science
FHEQ Level:	FHEQ Level 5
Pre-requisites:	
Co-requisites:	

Contact Hours	
Type	Hours
Lectures	24
Tutorials	12
Laboratory	12
Directed Study	152

Availability	
Occurrence	Location / Period
BDA	University of Bradford / Semester 2 (Feb - May)

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)

Learning Outcomes

1	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.
2	Develop, design, analyse and monitor communication networks.
3	Demonstrate analytical and problem solving skills.

Learning, Teaching and Assessment Strategy

A combination of lectures/tutorials/directed study. Concepts, principles & theories explored in formal lectures, practised & demonstrated in tutorials. Oral feedback is given during tutorials. Coursework will assess the application of practical skills to the knowledge base of the module using a combination of ITGuru, Java Programming and Wireshark labs. The examination will assess this and an understanding of the theoretical issues.

Mode of Assessment

Type	Method	Description	Length	Weighting
Summative	Examination - practical/laboratory	Cisco Packet Tracer based lab test	1 hour	30%
Referral	Examination - closed book	Examination - closed book	2 hours	100%
Summative	Examination - closed book	Examination - closed book	2 hours	70%

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.