Module Specification

Module Summary Information

1	**Module Title**	WAN and Advanced Infrastructure Technologies
2	**Module Credits**	20
3	**Module Level**	6
4	**Module Code**	CMP6177

5	**Module Overview**

The module gives you the opportunity to learn and critically reflect on the skills required in Wide area networks and infrastructure. This module builds on the knowledge and underpinning theory of networking modules and reviews the requirements from within a large-scale network deployment-engineering context.

The module consists of:

- Subject specific lectures/laboratory sessions to introduce knowledge and skills relevant to network and information systems, along with communication architecture.
- Lectures/ laboratory sessions to introduce principles and techniques for information communication within a network and ensuring effective communication.
- Global view on information system communication.

Relationship to programme philosophy:

This module provides an opportunity for the student to develop knowledge and skills, which will contribute to the acquisition of key BCU graduate attributes; creative problem solvers, global outlook, enterprising, professional and work ready. In the context of the information and data communication industries and at this academic level, this means an ability to: respond to a critical brief to find practical solutions to problems; evaluate and respond to the opportunities and challenges of interdisciplinary approaches to the realisation of a task; respond flexibly and imaginatively to a set, or group-determined brief within a fixed timescale.

6	**Indicative Content**

This module will enable you to understand the selection criteria of network devices and WAN technologies to meet network requirements. You'll learn how to troubleshoot and resolve common issues with data link protocols as well as developing the knowledge and skills needed to implement Network Address Translation (NAT), IPSec, and virtual private network (VPN) operations in a complex network.

7	Module Learning Outcomes On successful completion of the module, students will be able to:	
	1	Design and implement the required configuration code to install and configure layer 2 and 3 devices in multi-protocol enterprise networks.
	2	Critically evaluate the requirements needed to implement wired and wireless networks; and hence project manage the implementation of these networks.
	3	Design and implement a WAN installation for a given criterion.
	4	Develop strategies for testing, managing and troubleshooting WANs and LANs.

8	Module Assessment		
Learning Outcome			
	Coursework	**Exam**	**In-Person**
1-4	**X**		

9	Breakdown Learning and Teaching Activities
Learning Activities	**Hours**
Scheduled Learning (SL) includes lectures, practical classes and workshops, peer group learning, Graduate+, as specified in timetable	48
Directed Learning (DL) includes placements, work-based learning, external visits, on-line activity, Graduate+, peer learning, as directed on VLE	90
Private Study (PS) includes preparation for exams	62
Total Study Hours:	200