

Module Specification

Module Summary Information

1	Module Title	Database Development and Implementation
2	Module Credits	20
3	Module Level	5
4	Module Code	CMP5342

5	Module Overview
<p>Rationale</p> <p>In the modern business environment, the use of data to store and process information to improve business processes is becoming more important than ever. Having the people with the skills and knowledge to develop information systems is essential. This module aims to provide a comprehensive introduction to a vitally important core IT topic (database technology) that is found in almost every IT installation in the world and as such provides extremely good transferable skills. The module introduces the student to database implementation skills and knowledge, optimization, security and database administration. Once mastered, these database skills will provide a firm foundation for higher-level academic study or a rewarding IT career in the field of big data analytics or mainstream operational databases.</p> <p>Alignment with Programme Philosophy and Aims</p> <p>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.</p> <p>In the context of Information Systems this means ability to: solve problems in a real world context; gain industry relevant practical skills; and work to a defined problem brief. The research element will investigate ways to design robust, secure database which meets the needs of the organisation?</p> <p>Learning and Teaching Strategy</p> <p>The module will be taught using a combination of lectures, interactive seminars and lab sessions. A case study approach to learning and teaching will be utilised throughout the module and assessment. During the module students will work individually and in groups to design and develop a secure and optimised database system.</p> <p>Flipped learning methods will be used throughout the module whereby you are expected to study theoretical aspects in your own time and the practical learning takes place in class within an interactive dynamic environment. Independent learning will be supported by a range of materials and activities delivered using Moodle such as:</p> <ul style="list-style-type: none"> • Flipped learning methods will be used throughout the module by providing theory on Moodle (VLE) before each interactive tutorial. • Details of each tutorial and case-based 	

- Recommended reading to broaden understanding of the theory and practice introduced in the module.

Guidance on how to approach the assessment and opportunities to submit draft work for formative feedback.

6	Indicative Content
	<ul style="list-style-type: none"> Creating database tables using SQL Populating database tables using SQL SQL functions Database optimisation techniques: Indexes, Clusters and Partitions Database Security: Users, privileges, roles

7	Module Learning Outcomes
	On successful completion of the module, students will be able to:
	1 Implement a database using SQL
	2 Modify, test and query a database system.
	3 Communicate the results of implementing a range of database optimization techniques appropriate for a business owner.
	4 Implement a range of database security mechanisms.

8	Module Assessment		
Learning Outcome			
	Coursework	Exam	In-Person
1.2.3.4	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	72
Private Study (PS) includes preparation for exams	80
Total Study Hours:	200