UNIVERSITY of BRADFORD

Module Descriptor

Database Systems

Module Code:	COS5020-B
Academic Year:	2018-19
Credit Rating:	20
School:	Department of Computer Science
Subject Area:	Computer Science
FHEQ Level:	FHEQ Level 5
Module Leader:	Dr Mumtaz Kamala

Additional Tutors:

Pre-requisites:

Co-requisites:

Contact Hours

Type	Hours
Lectures	12
Laboratory	24
Directed Study	164

Availability Periods

Occurrence	Location/Period
NLA	Namal College / Semester 2 (Feb - May)
BDA	University of Bradford / Semester 1 (Sep - Jan)

Module Aims

To provide a co-ordinated and consistent coverage of theory, design and development of database systems and their role in building software systems.

Outline Syllabus

The database approach: advantages and costs; how it contrasts with the conventional file oriented approach. The relational model: what a data model is; the structural part of the

relational model (structure of tables, attributes, tuple and keys); the relational algebra; entity and referential integrity rules; architecture of a relational database management system (RDBMS) and its relationship to the relational model; SQL: data query from single and multiple tables. Database design: entity relationship modelling; relational data design; functional dependence; normalisation; physical data design. Database housekeeping: security; concurrency; integrity; database administration. Use of a proprietary relational database management system.

Module Learning Outcomes

On successful completion of this module, students will be able to...

1 a) Analyse the database approach and design and application considerations of using a RDMS in the development of software systems.

b) Apply the theory underlying relational database systems.

2 a) Design a relational database

b) Apply SQL to query and modify data in a RDBMS.

3 Design relational database systems, and implement database systems using SQL.

Learning, Teaching and Assessment Strategy

The contact time consists of lectures (LO1), tutorials (LO2a) and laboratory study (LO2b). The remainder is given over to directed study comprising directed reading, unsupervised laboratory exercises, and coursework assignments. Oral feedback is given during labs & tutorials.

Students requiring supplementary assessment will repair deficiencies in the original assessments and/or undertake supplementary examination.

Mode of Assessment

Type	Method	Description	Length	Weighting	Final Assess'
Summative	Examination - practical/laboratory	LAN assessment involving the understanding of the design of a relational database system and practical use of SQL	1.5 hours	50%	No
Summative	Examination - MCQ	Examination	1.5 hours	50%	Yes

Legacy Code (if applicable)

CM-0229L and CM-0237D and (latter wef 2017/18)

Reading List

To view Reading List, please go to **rebus:list**.