Liverpool John Moores University

Title: DATABASE SYSTEMS
Status: Definitive
Code: **5002DACOMP** (125354)
Version Start Date: 01-08-2021

Owning School/Faculty: Computer Science and Mathematics
Teaching School/Faculty: Computer Science and Mathematics

Team	Leader
Glyn Hughes	Y
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Academic Level:	FHEQ5	**Credit Value:**	20	**Total Delivered Hours:**	57
Total Learning Hours:	200	**Private Study:**	143		

Delivery Options
Course typically offered: Semester 1

Component	Contact Hours
Lecture	33
Practical	22

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Technology	AS1	SQL Based Database Development	50	
Exam	AS2	Examination	50	2

Aims

To implement relational database designs using modern database management systems.
To utilize database connectivity technologies in developing data driven applications.
To introduce database administration tasks and the key concepts of data management, quality and security.

To investigate database systems in the context of business intelligence.

Learning Outcomes

After completing the module the student should be able to:

1   Implement relational database designs and query them using SQL.
2   Develop data driven applications.
3   Perform database administration tasks.
4   Evaluate the role of database systems in supporting business intelligence.

Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

SQL Development   1   2

Exam   3   4

Outline Syllabus

DBMS Architecture

SQL
Components & DDL (for Tables)
DML (for basic SELECT)
DML (for JOINS & INSERT - UPDATE - DELETE)
Views & Indices (DDL & DML)
SPROCs & Triggers (DDL & DML)

Connectivity
Client Server vs Embedding DBs
Connectivity APIs

DBMS Administration
Security
Availability
 Optimization

Business Intelligence
Alternate DBMS / Big Data

Learning Activities

Learning activities include lectures and tutorials where students are encouraged to ask questions / discuss scenarios and supported labs where students are encouraged to put theory gained though lectures and tutorials into practice. Directed reading against appropriate industry and research sources further reinforces

learning.
This module will be delivered online.

Notes

This module explores the implementation of database systems through an examination of modern database management systems, the SQL language and database connectivity APIs. The module continues by exploring the managerial considerations of large scale database systems as well as the emergent fields of business intelligence and data analytics.