

# Database Systems

## Module Information

2022.01, Approved

### Summary Information

Module Code	5502CSMM
Formal Module Title	Database Systems
Owning School	Computer Science and Mathematics
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 5
Grading Schema	40

### Teaching Responsibility

LJMU Schools involved in Delivery
LJMU Partner Taught

### Partner Teaching Institution

Institution Name
Auston College Myanmar, Yangon, Myanmar

### Learning Methods

Learning Method Type	Hours
Lecture	22
Practical	22

### Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
APR-PAR	PAR	April	12 Weeks
JAN-PAR	PAR	January	12 Weeks

SEP-PAR	PAR	September	12 Weeks
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## Aims and Outcomes

Aims	To implement relational database designs using a Relational Database Management System (RDBMS) To employ database connectivity technologies in developing data driven applications. To investigate the administration of a RDBMS. To critically evaluate and implement alternative / non-relational database designs using NoSQL.
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**After completing the module the student should be able to:**

### Learning Outcomes

Code	Number	Description
MLO1	1	Implement relational database designs.
MLO2	2	Develop data driven applications.
MLO3	3	Critically evaluate the advantages & disadvantages of NoSQL.
MLO4	4	Implement alternative / non-relational database designs.

## Module Content

Outline Syllabus	Introducing RDBMS SQL Components & DDL (for Tables) DML (for SELECT) DML (for JOINS & INSERT - UPDATE - DELETE) Views & Indices (DDL & DML) SPROC's & Triggers (DDL & DML) Connectivity Client Server vs Embedded DBs Connectivity APIs Administration of RDBMS Security & Permissions Replicating Data Optimizing Queries NoSQL Key-Value & Document Store
Module Overview	
Additional Information	The module begins by exploring the operation of database systems through a scrutiny of modern RDBMS (Relational Database Management Systems), the SQL (Structured Query Language) and database connectivity APIs (Application Programming Interfaces). The module continues by exploring some of the managerial considerations of large-scale RDBMS. The module concludes by exploring the operation of emerging NoSQL (Not Only SQL) database systems. This module thusly represents the logical follow-on to NQF4's Data Modelling module.

## Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Technology	Technology	60	0	MLO1, MLO2
Report	Report	40	0	MLO3, MLO4

## Module Contacts

### Module Leader

Contact Name	Applies to all offerings	Offerings
Glyn Hughes	Yes	N/A

**Partner Module Team**

Contact Name	Applies to all offerings	Offerings
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