

# Database Design and Implementation

## Module Information

2022.01, Approved

### Summary Information

Module Code	4542NCCG
Formal Module Title	Database Design and Implementation
Owning School	Computer Science and Mathematics
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 4
Grading Schema	40

### Teaching Responsibility

LJMU Schools involved in Delivery
LJMU Partner Taught

### Partner Teaching Institution

Institution Name
Nelson and Colne College Group

### Learning Methods

Learning Method Type	Hours
Lecture	60

### Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
JAN-PAR	PAR	January	12 Weeks
SEP-PAR	PAR	September	12 Weeks

SEP_NS-PAR	PAR	September (Non-standard start date)	12 Weeks
------------	-----	-------------------------------------	----------

## Aims and Outcomes

Aims	The aim of this module is to give students opportunities to develop an understanding of the concepts and issues relating to database design and development, as well as to provide the practical skills to translate that understanding into the design and creation of complex databases.
------	--

**After completing the module the student should be able to:**

### Learning Outcomes

Code	Number	Description
MLO1	1	Use an appropriate design tool to design a relational database system for a substantial problem.
MLO2	2	Develop a functional relational database system, based on an existing system design.
MLO3	3	Test the system against user and system requirements
MLO4	4	Produce technical and user documentation.

## Module Content

Outline Syllabus	The role of database systems Determining user and system requirements. Design tools and techniques for a relational database system. Logical design for relational databases Data integrity, data validation, data security and data controls. Overview of object-oriented databases and their design tools Software development options for developing the relational database system. Implementation of a physical data model based on the logical model. Data stores, internal storage and external storage. Implementation of security elements in databases. Relational database validation Data manipulation using appropriate query tools. Database maintenance and data manipulation System reports using report writing tools Testing against designs and user and system requirements. Functional and system testing Technical and user documentation.
Module Overview	
Additional Information	

## Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Report	Assignment	100	0	MLO3, MLO4
Competency	NCC Group Pass/Fail			MLO2

## Module Contacts

### Module Leader

Contact Name	Applies to all offerings	Offerings
--------------	--------------------------	-----------

Silvester Czanner	Yes	N/A
-------------------	-----	-----

**Partner Module Team**

Contact Name	Applies to all offerings	Offerings
--------------	--------------------------	-----------