

## Data Modelling

### Module Information

2022.01, Approved

#### Summary Information

Module Code	4204COMP
Formal Module Title	Data Modelling
Owning School	Computer Science and Mathematics
Career	Undergraduate
Credits	10
Academic level	FHEQ Level 4
Grading Schema	40

#### Teaching Responsibility

LJMU Schools involved in Delivery
Computer Science and Mathematics

#### Learning Methods

Learning Method Type	Hours
Lecture	11
Practical	11

#### Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
JAN-CTY	CTY	January	12 Weeks

#### Aims and Outcomes

Aims	To introduce the fundamentals of manipulating and presenting data.To manipulate and present data using spreadsheet and database based applications.To evaluate the advantages and disadvantages of spreadsheet and database based applications.
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**After completing the module the student should be able to:**

**Learning Outcomes**

Code	Number	Description
MLO1	1	Construct spreadsheet based applications from a given set of requirements.
MLO2	2	Create logical and physical entity relationship models from a given set of requirements.
MLO3	3	Construct database based applications from logical and physical entity relationship models.

**Module Content**

Outline Syllabus	Data Domains, Models & Abstraction Spreadsheet Dev. Manipulating & Presenting Data Pivot Tables & Charts Limitations Logical Data Modelling Entities, Attributes & Keys Relationships (Cardinality & Optionality) Physical Data Modelling Tables Columns Data Types Keys Nullability Functional Dependency & Normalisation 1NF - 2NF - 3NF Database Dev. Designers & Query-By-Example
Module Overview	The module develops your ability to model data in various differing scenarios. You are initially required to manipulate and present data in spreadsheet based applications. Then, you are required to solve problems using a data modelling methodology (e.g. entity relationship models/normalisation), ultimately leading towards the construction of database based applications.
Additional Information	The module imparts upon students the ability to model data in various differing scenarios. Students are initially required to manipulate and present data in spreadsheet based applications. The students are then required to solve problems using a data modelling methodology (e.g. entity relationship models / normalisation), ultimately leading towards the construction of database based applications.

**Assessments**

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Essay	Data Modelling Scenario	100	0	MLO1, MLO2, MLO3

**Module Contacts**

**Module Leader**

Contact Name	Applies to all offerings	Offerings
Yun Sheng	Yes	N/A

**Partner Module Team**

Contact Name	Applies to all offerings	Offerings
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