

# Data Mining

## Module Information

2022.01, Approved

### Summary Information

Module Code	7505BDSA
Formal Module Title	Data Mining
Owning School	Computer Science and Mathematics
Career	Postgraduate Taught
Credits	20
Academic level	FHEQ Level 7
Grading Schema	50

### Teaching Responsibility

LJMU Schools involved in Delivery
Computer Science and Mathematics

### Learning Methods

Learning Method Type	Hours
Lecture	45
Practical	30

### Module Offering(s)

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

### Aims and Outcomes

Aims	The course covers the concepts and techniques of data mining. It provides students with a detailed knowledge about descriptive and predictive data mining methods that can be used to extract hidden patterns from data such as visualization, classification, clustering, association, estimation, etc. Topics of handling missing data and dealing with outliers are also covered by the course.
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**After completing the module the student should be able to:**

### Learning Outcomes

Code	Number	Description
MLO1	1	Apply DM methodology (e.g. CRISP) to extract hidden patterns from large databases.
MLO2	2	Implement appropriate DM technique for real life cases.
MLO3	3	Interpret and critically evaluate results obtained from the application of DM techniques to take proper decisions accordingly.
MLO4	4	Conduct DM research (individually and in groups).
MLO5	5	Evaluate privacy, legal, and ethical issues related to DM.

### Module Content

Outline Syllabus	Introduction to DM Data Preparation Data Transformations Knowledge Representation Algorithms Evaluation Implementations Beyond Applications
Module Overview	
Additional Information	The module contributes to the master's aim to equip the student with the required abilities and skills to perform data science on real-world applications.

### Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Report	Assignments/Exercises	30	0	MLO1, MLO2, MLO3
Portfolio	Report & Presentation	30	0	MLO1, MLO2, MLO3, MLO4, MLO5
Exam	Final Examination	40	3	MLO1, MLO2, MLO3, MLO5

### Module Contacts

#### Module Leader

Contact Name	Applies to all offerings	Offerings
Sandra Ortega Martorell	Yes	N/A

#### Partner Module Team

Contact Name	Applies to all offerings	Offerings