Module Proforma

Approved, 2022.02

Summary Information

Module Code	6529CSWUC
Formal Module Title	Applied Data Science
Owning School	Computer Science and Mathematics
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 6
Grading Schema	40

Module Contacts

Module Leader

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

Module Team Member

Contact Name	Applies to all offerings	Offerings
Carl Chalmers	Yes	N/A

Partner Module Team

Contact Name	Applies to all offerings	Offerings

Teaching Responsibility

LJMU Schools involved in Delivery
LJMU Partner Taught

Partner Teaching Institution

Institution Name
West Kirby Grammar School

Learning Methods

Learning Method Type	Hours
Lecture	22
Practical	22

Module Offering(s)

Offering Code	Location	Start Month	Duration
SEP-PAR	PAR	September	12 Weeks
SEP_NS-PAR	PAR	September (Non-standard start date)	12 Weeks

Aims and Outcomes

Aims	To investigate the role and functionality of data warehouses in support of business intelligence.To gain insights into the process of extract, transform & loading in the construction of data warehouses.To study various platforms available for business intelligence reporting.To experience the development of service-oriented applications that support business intelligence dashboards.

Learning Outcomes

After completing the module the student should be able to:

Code	Description
MLO1	Critically review methods for the construction of data warehouses in support of business intelligence
MLO2	Apply appropriate design methods in the development of complex reporting solutions for business intelligence
MLO3	Plan and implement a set of business intelligence dashboards to solve a business analysis problem

Module Content

Outline Syllabus
Introducing Business Intelligence & OLAP-Analytical Limitations of OLTPMulti-Dimensional Modelling-Star & Snow Flake Schemas-Cubes-Aggregations-MOLAP, ROLAP & HOLAPAnalytical Extensions of SQLExtracting, Transforming & LoadingPlatforms for Reporting-Web Based Reporting Services-Supporting XML & JSONPlatforms for Business Intelligence Dashboards -Object Relationship Mapping-Web Services -Serializing & De-Serializing Objects-Manipulating & Presenting Data

Module Overview

Additional Information
The module works with a growing area of database systems, that of the analytical database. The module begins by exploring the rapid growth of business intelligence data and the complex data models that are needed to support it. The module continues by exploring the platforms and processes that report such data through both web based and service oriented platforms.

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Learning Outcome Mapping
Technology	Data Warehousing	40	0	MLO1
Technology	Business Intelligence Dashboard	60	0	MLO3, MLO2