H8BID2: Business Intelligence and Data Warehousing II

Module Code:	H8BID2
Long Title	Business Intelligence and Data Warehousing II APPROVED
Title	Business Intelligence and Data Warehousing II
Module Level:	LEVEL 8
EQF Level:	6
EHEA Level:	First Cycle
Credits:	5
Module Coordinator:	Simon Caton
Module Author:	Simon Caton
Departments:	
Specifications of the qualifications and experience required of staff	

Learning Outcomes	
On successful completion of this module the learner will be able to:	
#	**Learning Outcome Description**
LO1	Distinguish and evaluate the methodological approaches to data warehousing for the preparation and implementation of data warehouse solutions.
LO2	Utilise and evaluate techniques and methods for extracting, transforming and loading structured data
LO3	Evaluate vendor solutions for implementing data warehouses.
LO4	Construct and evaluate data warehouse data models to meet business requirements

Dependencies		
Module Recommendations		
20650	H7BID	Business Intelligence and Data Warehousing I
Co-requisite Modules		
No Co-requisite modules listed		
Entry requirements		

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Module Content & Assessment

Indicative Content

Architecting the Data Warehouse
Business Requirements Engineering Architecture Types (e.g. Hub and Spoke, Centralised, Enterprise Data Warehouse, Independent Data Marts, Enterprise Service Bus, Federated) Design Methodologies (e.g. Top-down, and bottom-up) Vendor Implementations (e.g. SAP Hana, IBM Cognos, Terradata, Oracle Hyperion, Microsoft SQL Server)

Data Modelling
Dimensional Modelling Data Normalisation/Denormalisation Star and Snowflake Schemas Metadata

Data Staging
Designing the Staging Area Physical vs. Virtual Staging Permanent vs. Transitive Staging Managing ETL Processes

Extract, Transform, and Load (ETL)
ETL Pipelines for Structured Data Data Extraction Methods Data Transformation and Cleaning Techniques Data Loading (e.g. bulk loads, refresh loading etc.) Vendor ETL Tools

Query Optimisation
Planning for performance Pre-compilation, Aggregates ROLAP vs. MOLAP vs. HOLAP Vendor-specific optimisation examples

Assessment Breakdown	%
Coursework	60.00%
End of Module Assessment	40.00%

Assessments

Full Time

Coursework

Assessment Type:	Assignment	**% of total:**	40
Assessment Date:	n/a	**Outcome addressed:**	1,2
Non-Marked:	No		

Assessment Description:
Sample Assessment: Learners should design, implement, and populate a prototypical data warehouse solution using appropriate (vendor) tools. This assessment may be offered as a series of individual or group assessments.

End of Module Assessment

Assessment Type:	Terminal Exam	**% of total:**	60
Assessment Date:	End-of-Semester	**Outcome addressed:**	2,3,4
Non-Marked:	No		

Assessment Description:
End-of-Semester Final Examination

No Workplace Assessment

Reassessment Requirement

Repeat examination
Reassessment of this module will consist of a repeat examination. It is possible that there will also be a requirement to be reassessed in a coursework element.

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Module Workload				
Module Target Workload Hours 0 Hours				
Workload: Full Time				
Workload Type	*Workload Description*	*Hours*	*Frequency*	*Average Weekly Learner Workload*
Lecture	No Description	2	Every Week	2.00
Practical	No Description	1	Every Week	1.00
Independent Learning Time	No Description	7.5	Every Week	7.50
			Total Weekly Contact Hours	3.00
Workload: Part Time				
Workload Type	*Workload Description*	*Hours*	*Frequency*	*Average Weekly Learner Workload*
Lecture	No Description	2	Every Week	2.00
Practical	No Description	2	Every Week	2.00
Independent Learning Time	No Description	89	Every Week	89.00
			Total Weekly Contact Hours	4.00

Module Resources

Recommended Book Resources

Ralph Kimball, Joe Caserta. (2004), The data warehouse ETL toolkit, Wiley, Indianapolis, IL, p.528, [ISBN: 9780764567575].

W. H. Inmon. (2005), Building the data warehouse, Wiley, Indianapolis, Ind., p.576, [ISBN: 9780764599446].

Ralph Kimball... [et al.]. (2008), The data warehouse lifecycle toolkit, Wiley Pub., Indianapolis, IN, [ISBN: 9780470149775].

Supplementary Book Resources

Lawrence Corr, Jim Stagnitto. Agile Data Warehouse Design, DecisionOne Press, p.328, [ISBN: 9780956817204].

Robert Laberge. The Data Warehouse Mentor, McGraw-Hill Osborne Media, p.416, [ISBN: 9780071745321].

Paulraj Ponniah. Data Warehousing Fundamentals for IT Professionals, Wiley, p.534, [ISBN: 9780470462072].

This module does not have any article/paper resources

This module does not have any other resources

Discussion Note: