H8BID2: Business Intelligence and Data Warehousing II

Module Code:		H8BID2					
Long Title		usiness Intelligence and Data Warehousing II APPROVED					
Title		usiness Intelligence and Data Warehousing II					
Module Level:		/EL 8					
EQF Level:							
EHEA Level:		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 modu	e the learner will be able to:					
#	Learning Outcome	Learning Outcome Description					
LO1	Distinguish and eval	nd evaluate the methodological approaches to data warehousing for the preparation and implementation of data warehouse solutions.					
LO2	Utilise and evaluate	ate techniques and methods for extracting, transforming and loading structured data					
LO3	Evaluate vendor solu	solutions for implementing data warehouses.					
LO4	Construct and evalua	ate 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 requirer	nents						

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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

% of total: 40 Assessment Type: Assignment 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: Assessment Date: End-of-Semester Outcome addressed: 2,3,4

Non-Marked:

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	1	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										
	ontact Hours	3.00													
Workload: Part Time															
Workload Type	Workload Description	1	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										
	ontact 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: