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MODULE DESCRIPTOR

Module Title

Data Warehousing

Reference	CMM531	Version	4
Created	March 2022	SCQF Level	SCQF 11
Approved	April 2015	SCQF Points	15
Amended	July 2022	ECTS Points	7.5

Aims of Module

To introduce the main concepts and key components of business intelligence and data warehousing techniques and applications.

Learning Outcomes for Module

On completion of this module, students are expected to be able to:

- 1 Critically evaluate the main components of a business intelligence solution.
- 2 Apply a methodology for designing a business intelligence solution.
- 3 Analyse the key techniques of data warehousing applications and OLAP.
- 4 Design, implement and evaluate a data warehousing application.

Indicative Module Content

Business Intelligence systems and types of decisions managers face. Data Visualisation and Dashboard Techniques. Data Capture, data cleaning, data conformation, data integration, data federation and data virtualisation. Concepts and benefits associated with data warehousing. Conventional, spatial and temporal data warehouses. Architecture of a data warehouse. Data warehouse design. Tools for Data warehousing. State of the art in data warehousing, including data warehousing in the cloud. Data warehousing with big data. Case studies.

Module Delivery

Key concepts are introduced and illustrated through lectures and directed reading. In the laboratories the students will progress through a sequence of exercises to further their understanding and gain practical experience of business intelligence and data warehousing techniques and tools.

Indicative Student Workload

	Full Time	Part Time
Contact Hours	30	30
Non-Contact Hours	120	120
Placement/Work-Based Learning Experience [Notional] Hours	N/A	N/A
TOTAL	150	150
Actual Placement hours for professional, statutory or regulatory body		

ASSESSMENT PLAN

If a major/minor model is used and box is ticked, % weightings below are indicative only.

Component 1

Type:	Coursework	Weighting:	50%	Outcomes Assessed:	1, 2
Description:	This is an assessed lab where students will be applying business intelligence techniques to a given scenario.				

Component 2

Type:	Coursework	Weighting:	50%	Outcomes Assessed:	3, 4
Description:	This is a coursework involving the development of a data warehousing application.				

MODULE PERFORMANCE DESCRIPTOR**Explanatory Text**

The calculation of the overall grade for this module is based on 50% weighting of C1 and 50% weighting of C2. An overall minimum grade D is required to pass the module.

		Practical Exam:						NS
		A	B	C	D	E	F	
Coursework:	A	A	A	B	B	C	E	
	B	A	B	B	C	C	E	
	C	B	B	C	C	D	E	
	D	B	C	C	D	D	E	
	E	C	C	D	D	E	E	
	F	E	E	E	E	E	F	
NS		Non-submission of work by published deadline or non-attendance for examination						

Module Requirements

Prerequisites for Module	None.
Corequisites for module	None.
Precluded Modules	None.

INDICATIVE BIBLIOGRAPHY

- 1 KIMBALL,R., ROSS,M., 2013. The Data Warehouse Toolkit: The Definitive Guide to Dimensional Modeling (3rd Edition). John Wiley & Sons, Inc.
- 2 GUILLEVIN, T., 2019. Getting started with Tableau: effective data visualization and business intelligence. Apress.
- 3 VAISMAN, A., 2014. Data warehouse systems: design and implementation. Springer.
- 4 SHARDA R., 2017. Business Intelligence, Analytics and Data Science: A Managerial Perspective on Analytics. Pearson.
- 5 TANIAR, D., 2021. Data warehousing and analytics: fuelling the data engine. Springer.
- 6 DECKLER, G., POWELL, B., 2021. Microsoft Power BI Cookbook. Packt Publishing.