Module Title **Business Intelligence** **Keywords** Data Management, Data Warehousing, Online Analytical Processing (OLAP), Data Mining	Reference CM4019 SCQF SCQF Level 10 SCQF Points 15 ECTS Points 7.5 Created March 2007 Approved August 2007 Amended September 2012 Version No. 2

This Version is No Longer Current

The latest version of this module is available here

Prerequisites for Module

CM2020 Introduction to Databases (or equivalent)

Corequisite Modules

None.

Precluded Modules

None.

Aims of Module

To introduce the main concepts and key components of business intelligence techniques and applications including data management and warehousing, OLAP and data mining.

Data Mining: The main features of, and techniques associated with, data mining operations. The relationship between data mining and data warehousing.

Indicative Student Workload

Contact Hours	Full Time
Assessment	12
Laboratories	18
Lectures/Tutorials	18
Directed Study	
Coursework Preperation	10
Directed Reading	30
Private Study	
Private Study	62

OLAP and data mining.

Learning Outcomes for Module

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

1. Identify and explain the main concepts and key components of a business intelligence application.
2. Describe, analyse and apply a methodology for designing a business intelligence application.
3. Explain and analyse the key techniques of business intelligence applications.
4. Design, implement and evaluate a business intelligence application.

Indicative Module Content

Data Management and Warehousing: The main concepts and benefits associated with data management and warehousing. Architecture of a data warehouse. Methodology for designing data warehouses.

OLAP: The relationship between OLAP and data warehousing. Key features of OLAP applications. Representing multi-dimensional data. OLAP

Mode of Delivery

Key concepts are introduced and illustrated through lectures and directed reading. The understanding of students is tested and further enhanced through interactive tutorials. In the laboratories the students will progress through a sequence of exercises to further their understanding and gain practical experience of data warehousing, OLAP and data mining.

Assessment Plan

	Learning Outcomes Assessed
Component 1	1,2,3
Component 2	4

Component 2 - Coursework.

Component 1 - This is a closed book examination.

Indicative Bibliography

1. CONNOLLY, T., BEGG, C. and STRACHAN, A., 2010. Database Systems - A Practical Approach to Design, Implementation and Management. Addison - Wesley.

extensions to the SQL standard.

2. VAISMAN, A. and ZIMANYI, E., 2014. Data Warehouse Systems: Design and Implementation. Springer.
3. VAN DER LANS, R., 2012. Data Virtualisation for Business Intelligence Systems. Morgan Kaufmann.