

Module Title Data Warehousing	Reference CMM531 SCQF SCQF Level 11 SCQF Points 15 ECTS Points 7.5
Keywords Data Management, Data Warehousing, Online Analytical Processing (OLAP), Data Virtualisation and Federation, Big Data.	Created October 2014 Approved April 2015 Amended April 2016 Version No. 2

This Version is No Longer Current

The latest version of this module is available [here](#)

Prerequisites for Module

CMM532/ CMM022 Data Management or equivalent.

Corequisite Modules

None.

Precluded Modules

None.

Aims of Module

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

Learning Outcomes for Module

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.

Assessment Plan

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

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

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

Indicative Module Content

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.

Indicative Student Workload

	Full Time	Part Time
<i>Contact Hours</i>		
Laboratories	24	24
Lectures	24	24

Component 2 - This is a coursework involving the development of a data warehousing application worth 50% of the total module assessment.

Component 1 - This is a closed book examination worth 50% of the total module assessment.

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.

Directed Study

Assessment	3	3
Coursework Preparation	20	20
Directed Reading	30	30

Private Study

Private Study	49	49
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