Module Title **Introduction To Database Systems** **Keywords** Conceptual Modelling, Relational Modelling, Sql, Dbms Issues	Reference CM2020 SCQF Level SCQF 8 SCQF Points 15 ECTS Points 7.5 Created May 2002 Approved April 2005 Amended September 2012 Version No. 5

This Version is No Longer Current

The latest version of this module is available here

Prerequisites for Module

None, in addition to course/programme entry requirements.

Corequisite Modules

None.

Precluded Modules

None.

Aims of Module

To provide the student with the ability to explain the techniques of database design and to implement such designs on a relational database management system (DBMS).

Learning Outcomes for Module

Mode of Delivery

Key concepts are introduced and illustrated through lectures. The understanding of the student is tested and further enhanced through interactive tutorials. In the laboratories the students will progress through a sequence of exercises to develop sufficient knowledge of a relational DBMS environment to enable them to complete the practical implementation of a relational database application.

Assessment Plan

	Learning Outcomes Assessed
Component 1	1,2,3,4
Component 2	5

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

1. Describe, analyse and apply a conceptual database modelling technique.
2. Describe, analyse and apply techniques for obtaining a logical model from a conceptual model.
3. Describe and apply SQL's data definition and manipulation languages.
4. Describe and evaluate the structure and underlying principles of a relational DBMS.
5. Implement and test a database application with suitable interface using a relational DBMS.

Indicative Module Content

Introduction to relational database management systems.
The relational model: relations, keys and relational algebra.
Conceptual and logical modelling with:
Entity-Relationship modelling and normalisation techniques.
SQL: data definition and manipulation language.

Indicative Student Workload

Contact Hours Full Time

Component 2 - Coursework

Component 1 - This is a closed book examination.

Indicative Bibliography

1. CONNOLY, T. and BEGG, C. 2014 Database Systems - A Practical Approach to Design, Implementation and Management. 6th edition. Addison Wesley.
2. RITCHIE, C.,2008. Database Principles and Design. Cengage Learning
3. ELMASRI, R. and NAVATHE, S., 2015. Fundamentals of Database Systems. 7th Ed. Addison Wesley.
4. FEUERSTEIN, S., 2014. Oracle PL/SQL Programming. O?Reilly
5. LEBLANC, P., 2013. Microsoft SQL Server 2012 Step by Step. Microsoft Press

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