TITLE: Database Systems Development
CODE: CIF202
CREDITS: 20
LEVEL: 2
SCHOOL: COMPUTING AND TECHNOLOGY
MODULE BOARD: IFS
PRE-REQUISITES: CIF102
CO-REQUISITES: NONE
LEARNING HOURS: 200, the nature of which is specified in the module guide

LEARNING OUTCOMES
Upon successful completion of this module, students will have demonstrated

1. Analysis of distributed/client-server strategies
2. Knowledge of issues relating to interactive systems, such as database administration, e.g tuning, optimization, indexing and security strategies
3. An understanding of advanced data models, e.g. OR.

and the ability to

4. Design, specify, implement and evaluate business applications, using an enterprise secure client-server database system, e.g. ORACLE , with a Web database connectivity approach, e.g. JDBC, ODBC, PHP.

CONTENT SYNOPSIS
Students will explore a range of database connectivity approaches including some web-based environments to gain a better appreciation and understanding of their usage and implementation. The database model and various database administration topics will be examined, e.g. tuning, optimization, indexing and security strategies. Features of an enterprise secure database product such as ORACLE, including its user interface, SQL and programming language will be used to develop a working system. Some advanced database theory will be introduced

TEACHING AND LEARNING METHODS:
This module will be taught using a combination of lectures, practical sessions and self study.

Lectures	27 hours
Practicals	54 hours
Self Study	119 hours

ASSESSMENT METHODS
Summative assessment.

a) Two individual assignments, one research based to cover learning outcome 1 (20% of final mark), the other a database development assignment to cover learning outcome 4 (40 % of final mark). Together, these assignments will contribute 60% of final module mark.
b) One individual examination covering learning outcomes 1, 2 and 3 contributing 40% of final module mark.

INDICATIVE READING LIST

1. Database Systems (Fourth Ed), Connolly & Begg, Pearson Addison Wesley, 2005
2. Database Systems Using Oracle (Second Edition), Shah, Pearson Prentice Hall, 2005
3. PHP and MySQL Manual, Stobart & Vassileiou, Springer Professional Computing, 2004

PROGRAMMES USING THIS MODULE AS CORE/OPTION:
?
Franchised: ?

MODULE AUTHOR
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Supplementary Information

Module : Database Systems Development

AMPLIFIED CONTENT

Some lecture sessions will be used to examine theory and practice to do with database connectivity approaches with some supporting tutorial time being used to allow students to explore this issue further in order to gain a better appreciation and understanding of the usage and implementation. The first assignment will expect them to explore this issue further as a research topic and comment critically on their usage and implementation.

Early lectures will examine the database model in some depth. Later lecture session will explore various issues to do with database administration, e.g. tuning, optimization, indexing and security strategies.

Most of the tutorial time will be used to explore aspects of views, SQL data definition, and SQL data manipulation, the user interface and programming language features of an enterprise secure database product such as ORACLE. The second assignment will require students to apply the SAD techniques gained at level One to enable them to design, develop, implement and evaluate a system using the database product that they have been exploring.

The Final few lectures will spend a little time introducing some advanced database theory as preparation for the Level Three Advanced DataBase Concepts module.

The final examination will expect students to display they knowledge and understanding of the various theoretical strands that have been covered by the lectures.

READING LIST

1. Database Solutions (Second Edition), Connolly & Begg, Pearson Addison Wesley, 2004
2. Fundamentals of Databases (Fourth Edition), Elmasri & Navathe, Pearson Addison Wesley, 2004
3. Inside Relational Databases, Whitehorn & Marklyn, Springer, 1998
4. Learning SQL, Bagui & Earp, Pearson Addison Wesley, 2004
5. Database System Concepts (Fourth Ed), Silberschatz, Korth & Sudarshan, McGraw Hill, 2002
6. Database Systems (Third Edition), Benyon-Davies, Palgrave MacMillan, 2004

Relevant articles from current literature, and associated on-line resources, will be identified at the time of delivery.

SPECIALISED RESOURCE REQUIREMENTS

Standard CAT computing facilities.