NEW ZEALAND INSTITUTES OF TECHNOLOGY AND POLYTECHNIC QUALIFICATIONS IN INFORMATION & COMMUNICATIONS TECHNOLOGY

PRESCRIPTION: DB500 DATABASE MANAGEMENT SYSTEMS (DBMS)

AIM OF MODULE:	To introduce students to data models used by DBMSs, the issues related to the use of DBMSs and to provide them with the ability to perform common database functions.
CREDITS:	7
STUDENT LEARNING HOURS:	70
CONTENT REVISED:	2000
PRESCRIPTION EXPIRY DATE:	Nov 2011

Level and Assessment Schedule

	Highest Skill Level				Suggested Assessment Percentage
TOPICS	R	C	A	P	
1. DBMS Structures	*				5
2. DBMS Issues		*			30
3. Database Design and Implementation			*		65
					100

LEARNING OUTCOMES

The student will:

R   1   Outline the key features of at least three major categories of commercial database management systems.

C   2   Describe the advantages of using a database environment for the management of data rather than conventional file structures and outline the main activities and factors affecting performance when a DBMS is involved.

A   3   Design, implement and query a database which appropriately represents a given business situation.

CONTENT

This module has relational database structures as its main focus for exercises in design.

1   DBMS STRUCTURES

➢   Examples are relational, hierarchical, network, object oriented.

2   DBMS ISSUES

➢   Advantages include: data independence, data integrity, distributed database, centralised database, handling of security, recovery processes.

➢   Activities include: management of data such as audit, backup & archiving, maintenance and support, definition of schema/sub-schema, insertion, amendment, deletion and retrieval of data.

3   DATABASE DESIGN AND IMPLEMENTATION

➢   Design an appropriate database structure for a given business situation using methods such as entity relationship diagrams, schema depiction and normalisation to 3rd normal form.

➢   Implement an appropriately designed database structure using a commercial database management system such as Access, Interbase, Informix, Oracle, SQL Server.

➢   Perform functions such as data entry, queries and reports including linking from two or more tables.