Module: Database Administration 251

Module name:	Database Administration 251
Code:	DBA251
NQF level:	6
Type:	Fundamental – Diploma in Information Technology (Infrastructure stream)
Contact Time:	30 hours
Structured time:	6 hours
Self-directed time:	34 hours
Notional hours:	70 hours
Credits:	7
Prerequisites:	DBD151

Purpose

The student will learn the basics of the administration of a relational database system that is used in medium to large enterprises. The course covers the basics of creating a database through various methods, the implication of having multiple users working on a single centralised database system and the management of these users and connections.

Outcomes

Upon successful completion of this module, the student will be able to demonstrate:

- Detailed knowledge of the main areas of database administration, including an understanding of, and the ability to apply the key terms, concepts, principles, and theories of database administration, to new but relevant contexts; and knowledge of how that knowledge relates to database implementation.
- The ability to evaluate, select and apply appropriate backup and restore plans in the application processes within a given context.
- The ability to identify, analyse and solve problems in unfamiliar contexts, gathering evidence and applying solutions based on diagnostics and procedures appropriate to the creation and management of database users, roles, and privileges that fit within the given context.
- The ability to present and communicate complex information reliably and coherently using appropriate professional conventions, formats, and technologies for the implementation of a selected database model.
- The ability to make decisions and act appropriately in familiar and new contexts, demonstrating an understanding of how the changes made to the logical and/or physical database model will affect other areas of a system.

Assessment

- Continuous evaluation of theoretical work through written assignments, a formative, and a summative test.
- Final assessment through a written examination.

Teaching and Learning

Learning materials

Prescribed Book

- Database Administration 251 (2015, IT without frontiers series)

Additional Material

📖 Roebuck, K. (2011). *Database Administration.*Tebbo. (ISBN:97817430488771)

Learning activities

The teaching style will combine practical and theory elements into the daily activities during this module. It is a collaborative teaching model, with a practical approach, with two mandatory assignments which must be completed during the module.

Notional learning hours

Activity	Units	Contact Time	Structured Time	Self-Directed Time
Lecture		27.0		13.0
Formative feedback		3.0		
Project				
Assignment	2			6.0
Test	2		4.0	8.0
Exam	1		2.0	7.0
		30.0	**6.0**	**34.0**

Syllabus

- Implementation of physical database design with SQL
- Security system of Database engine
- Concurrency Control
- Planning & Implementing Backup & Restore strategy with SQL
- Data Replication.