MAGNA SKILLS DEVELOPMENT INSTITUTE

Capacity Building • Professional Training • Organisational Development

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Course Profile Document

ICT and Security Management

Microsoft SQL Server Administration

Prepared as a professional course profile for delegate review, sponsorship approval and organisational training planning.

COURSE CODE	DELIVERY	DURATION	PREPARED FOR
MSD3013	**Online / Face-to-Face**	**Flexible**	**Organisation Approval**

Register for this Course

View Online Course Page

Course Overview

Handling complex Databases is a skill that is very much in demand all around the world. Validating that you have that skill with a certification such as SQL server certification will take your career to new heights. Here, In this blog, I will provide you with all the necessary details you need to know about SQL Certification and how it can help you grab your dream job.

Microsoft SQL Server continues to be one of the world's most popular and top databases. Database is a heart of IT which is needed to stored all critical data and information.

If you want to become SQL database administrator then this is the course for YOU.

This training course will provide you all the necessary skills you need to be a successful database administrator. Plus, this course will prepare you for the SQL Server MCSA certification.

Course Outcomes

- By the end of this course you will be a professional SQL database administrator and be able to apply for SQL jobs
- Administration of SQL database through Microsoft Windows
- You will learn 150+ SQL queries
- You will be able to troubleshoot everyday SQL related issues
- You will manage SQL servers in a corporate environment
- You will write basic to advance SQL queries
- Troubleshoot everyday SQL database related issues
- Know how to answer specific business questions by using SQL’s aggregate functions
- Students will be able to run reports for management so they can make financial decisions

Course Outline / Curriculum

Section 1 - Introduction

- Introduction to Database
- RDBMS
- What is SQL?
- Top 5 RDBMS
- Introduction to MS SQL Server
- Different editions of MS SQL

Section 2 - Download, Install and Configure Windows

- MS SQL Server prerequisite
- Lab setup
- What is virtualization?
- Download and Install VMWare Workstation Player
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Optional - Download and Install Oracle Virtualbox

- Create a Virtual Machine
- Download and Install Windows Server
- Virtual Machine Management

Section 3 - Download, Install and Configure MS SQL Server

- Prerequisites for MSSQL Installation
- Download MSSQL and SQL Server Management Studio
- Install and Configure MSSQL
- Install SQL Server Management Studio
- Download and Install AdventureWorks Database

Section 4 - Database Fundamentals and Design

- What is Data and Database?
- How is data stored?
- What is a Table, COLUMN and ROW ?
- What is a key? primary, foreign, unique keys etc.
- What is Relational Database and Relational Database Management System (RDBMS)?
- What is a Transaction and ACID properties?
- Database Normalization AND Different forms of Database Normalization
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Create your first Database, Table and Populate table with data...

Section 5 - Introduction to SQL Commands

- Welcome to Basic SQL Commands
- What is a SQL Statement and types of SQL statements
- DML Statement with examples
- DDL Statements with examples
- DCL Statement with examples
- TCL Statement with examples

Section 6 - Query and Manipulation of Data using SQL

- Create TABLE(s) and Temp Table(s)
- What Is a View?
- SELECT Statement in detail
- Operators, Expressions and Conditions
- WHERE Clause, ORDER BY, HAVING BY, GROUP BY Clause
- Select from two tables – JOINS
- Different Types of JOINS
- What is a Sub Query?
- INSERT, UPDATE, DELETE and Truncate Statements
- What is a Store Procedure?
- Function, Trigger and INDEX
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Clustered ,Non-clustered Indexes and Index Design considerations

- Index Fragmentation and Lab for Index

Section 7 - Microsoft SQL Database Administration

- Overview of MSSQL Management Tools
- Exploring SQL Server Management Studio (SSMS)
- Exploring SQL Server Configuration Manager
- MSSQL System Databases, DO's and DONT's of System databases
- What is master, etmpdb, msdb and other system databases?

Section 8 - Deep Dive into MSSQL Working

- What are Pages , Extents, Page Architecture and PFS?
- MSSQL Architecture
- MSSQL Database Architecture
- Operation and working of transaction log
- Configuring user Database
- Best practices while creating user Database

Section 9 - MSSQL Backup and Restore

- Backup of a Database, Importance for DBA and Different Media used for Backups
- Recovery Models in MSSQL and how that impact backups an restore
- Full and differential backups
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Transaction Log Backups, Log Backup Chain and Tail-log Backup

- Lab for Full, Differential and Transaction Log Backups
- Restore and Recovery Overview
- Full, Differential and Transaction Log database restore
- Point in time restore of a database
- Complete Backup , Restore and Restore in Time Lab
- MS SQL Server DBCC CHECKDB command
- Page Level Restore / Recovery using Full Backups
- Creating Maintenance Plan Backups/Re-indexing etc.

Section 10 - MSSQL User Management

- MSSQL Security Model
- MSSQL Server Authentication Modes
- Server Logins
- Server Roles
- Database Users
- Database Roles
- Permissions (GRANT , DENY, and REVOKE)

Section 11 - MSSQL Server Agent Management

- SQL Server Agent Introduction
- SQL Server Agent Jobs and Schedules
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- Agent Alerts
- Operators
- Database Mail
- Activity Monitor

Section 12 - Advanced SQL Server Administration Topics

- High Availability and its Types
- What Is Replication and Transactional Replication
- Transactional Replication Setup (LAB)
- Log Shipping and Configuring Log Shipping
- SQL Server Encryption and Encryption Types
- Transparent Data Encryption (TDE) and configuration

Target Audience

Key Course Benefits

Work-Ready Skills

Delegates leave with practical tools, templates and methods they can apply immediately at work.

Better Institutional Results

The programme supports stronger planning, reporting, compliance, accountability and service delivery.

Sponsor-Friendly

This document is designed to help supervisors, HR units and sponsors approve delegate participation quickly.

Professional Recognition

Delegates receive training documentation and a certificate of completion after successful participation.

Our Training Centres & Delivery Options

Magna Skills offers flexible delivery through face-to-face training centres across Africa and beyond, plus Online / E-Learning for delegates who prefer remote participation.

Southern Africa

Practical training destinations with strong travel access and delegate support.

- Pretoria, South Africa
- Vic Falls, Zimbabwe
- Livingstone, Zambia

East Africa

Popular regional centres for government, NGO and donor-funded project teams.

- Kigali, Rwanda
- Kampala, Uganda
- Nairob
- Zanzibar, Tanzania

West Africa & Islands

Strategic locations for regional networking and executive capacity building.

- Accra, Ghana
- Port Louis, Mauritius

International Executive Venue

Premium destination training for senior teams and international delegates.

- Dubai, United Arab Emirates

Online / E-Learning

Attend from anywhere through live online, blended or self-paced learning options.

- Online, E-Learning
- Remote Teams
- Flexib

Organisation-Based Training

Magna Skills can also arrange dedicated in-house training for ministries, NGOs and companies.

- Onsite
- Custom Dates
- Group Training

Ready to Nominate Delegates?

Use the links below to register, review the live course page or contact Magna Skills for organisation-based training support.

Register / Apply Online | **View Full Course Page**

About Magna Skills

Magna Skills Development Institute provides practical capacity building programmes for government departments, NGOs, public institutions, donor-funded projects and private sector professionals across Africa. Our training approach combines expert facilitation, real workplace case studies, practical tools, post-training support and professional documentation that helps organisations strengthen staff performance and service delivery.

Government Training | NGO Capacity Building | Corporate Workshops | Online Learning | Face-to-Face Training | Certifica

Approval & Authorisation Form

This section may be completed by the organisation, department, HR office, finance office or sponsor approving delegate participation. It can be attached to an internal memo, procurement request or training approval submission.

Organisation / Department	
Delegate Name(s)	
Approved Course	Microsoft SQL Server Administration
Preferred Delivery Mode	☐ Online ☐ Face-to-Face ☐ Organisation-Based Training
Preferred Training Venue / Date	
Estimated Number of Delegates	
Budget / Vote Number	
Contact Person	
Email / Mobile	

Authorised Name _____ Signature / Stamp _____ Date _____