Database Design for Business Intelligence Training Course

Professional Development Training Course Outline

Category	Business Intelligence	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

Database design is a critical component of business intelligence, enabling organizations to transform raw data into actionable insights. In today's data-driven world, organizations require professionals skilled in designing databases that optimize performance, ensure data integrity, and support advanced analytics. Database Design for Business Intelligence Training Course equips learners with comprehensive knowledge and practical skills to create robust, scalable, and efficient database structures tailored for business intelligence applications. Participants will gain hands-on experience with relational databases, dimensional modeling, data warehousing, and advanced BI tools, ensuring they can meet the demands of modern data-driven enterprises.

The course is designed for both technical and business professionals seeking to bridge the gap between data management and decision-making. Through a combination of theory, practical exercises, and real-world case studies, learners will develop the ability to design databases that enhance reporting, forecasting, and analytical capabilities. Emphasizing trending technologies and industry best practices, this training prepares participants to implement high-performance database solutions that support enterprise-wide business intelligence initiatives and drive strategic decision-making.

Programme Curriculum

Database Design for Business Intelligence Training Course

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Course Objectives

1. Understand relational database design principles and best practices for BI.
2. Develop dimensional models to support efficient data analysis.
3. Design scalable and high-performance data warehouses.
4. Implement data normalization and denormalization strategies.
5. Ensure data integrity, consistency, and security across databases.
6. Apply ETL (Extract, Transform, Load) techniques for BI systems.
7. Optimize database performance for large-scale BI queries.
8. Utilize SQL for complex queries and data manipulation.
9. Integrate BI tools with databases for real-time analytics.
10. Design schema for OLAP cubes and multi-dimensional analysis.
11. Implement data governance practices in database design.
12. Analyze business requirements and translate them into database structures.
13. Apply modern BI trends including cloud databases, big data integration, and AI-ready architectures.

Organizational Benefits

- Improved data quality and reliability across the organization.
- Enhanced decision-making through optimized database structures.
- Faster query processing and reporting for business intelligence.
- Scalable databases to accommodate growing data volumes.
- Reduced operational costs due to efficient database design.
- Better integration with BI tools and analytics platforms.
- Streamlined ETL processes for faster insights.
- Reduced data redundancy and improved storage utilization.
- Stronger compliance with data governance policies.
- Competitive advantage through actionable business insights.

Target Audiences

- Business Intelligence Developers
- Data Analysts and Data Scientists
- Database Administrators
- IT Managers and Project Managers
- Software Developers focusing on BI systems
- Enterprise Architects
- Reporting Analysts
- Business Consultants

Course Duration: 5 days

Course Modules

Module 1: Fundamentals of Database Design for BI

- Introduction to relational databases and BI concepts
- Key database design principles and methodologies
- Data modeling techniques for BI systems
- Understanding entity-relationship diagrams
- Best practices for BI-ready databases
- Case Study: Designing a database for a retail sales BI solution

Module 2: Dimensional Modeling and Star Schemas

- Overview of dimensional modeling concepts
- Designing star and snowflake schemas
- Fact and dimension tables for BI
- Handling slowly changing dimensions
- Performance optimization in dimensional models
- Case Study: Creating a star schema for a healthcare analytics system

Module 3: Data Warehousing Design

- Introduction to data warehousing concepts
- Architectural components of data warehouses
- Designing scalable data warehouses
- ETL integration with warehouse design
- Aggregation strategies and indexing
- Case Study: Building a data warehouse for a logistics company

Module 4: SQL for BI Database Design

- Writing complex SQL queries for BI analysis
- Query optimization techniques
- Joins, subqueries, and set operations in BI contexts
- Stored procedures and views for reporting
- Handling large datasets efficiently
- Case Study: Optimizing SQL queries for financial analytics

Module 5: ETL and Data Integration

- Extract, Transform, Load concepts for BI
- Integration of multiple data sources
- Data cleansing and transformation techniques
- Scheduling and automation of ETL processes
- Ensuring data consistency and accuracy
- Case Study: Implementing ETL for a multi-source sales dashboard

Module 6: Data Governance and Security in BI Databases

- Importance of data governance in BI

- Database security best practices
- Role-based access and permissions
- Audit trails and compliance monitoring
- Data privacy and regulatory requirements
- Case Study: Securing a BI database for a financial institution

Module 7: Performance Tuning and Optimization

- Database indexing strategies for BI
- Query performance analysis and optimization
- Partitioning and materialized views
- Handling high-volume transactional data
- Monitoring and troubleshooting performance issues
- Case Study: Performance tuning for an e-commerce analytics platform

Module 8: Advanced BI Database Trends

- Cloud database design for BI
- Big data and distributed database architectures
- Real-time analytics and streaming data integration
- AI and machine learning-ready database structures
- Emerging tools and platforms for BI database design
- Case Study: Implementing a cloud-based BI database for global operations

Training Methodology

- Interactive lectures with real-world examples
- Hands-on labs and practical exercises
- Group discussions and problem-solving activities
- Case studies to illustrate industry best practices
- Live demonstrations of database design and BI integration
- Continuous assessment through quizzes and exercises

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Online	$1,000
23 Nov 2026	27 Nov 2026	Physical	$1,500
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

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Register Online Now

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