

MYSQL DEVELOPER COURSE

"Master the Foundations of Database Development and Optimization with MySQL"

Schedule

Date	Venue	Fees (Face-to-Face)
01 - 05 Jun 2026	Dubai, UAE	USD 3495 per delegate

► **Available delivery methods:** Face-to-Face & Online Training

Introduction

MySQL is one of the world's most widely used relational database systems—essential for developers, data analysts, and system architects in today's data-driven world. From designing schemas to writing advanced queries, this course provides comprehensive, hands-on training in MySQL development.

Participants will explore database creation, normalization, indexing, stored procedures, functions, triggers, and performance optimization. The training ensures a strong grasp of best practices in SQL development for robust and scalable applications.

Objectives

By the end of this course, participants will be able to:

- Design and create normalized MySQL databases
- Write optimized SQL queries for data manipulation and reporting
- Implement stored procedures, triggers, and user-defined functions
- Apply indexing and query optimization techniques
- Manage database users, privileges, and security
- Troubleshoot and improve performance in MySQL environments

Why Attend

- Gain in-depth, practical MySQL development skills
- Learn how to write efficient, scalable SQL code
- Understand database design principles and performance tuning
- Boost your ability to handle real-world MySQL-based projects
- Improve your career opportunities in software and data development

Target Audience

This program is designed for:

- Software developers working with MySQL databases
- Data analysts and engineers seeking SQL proficiency
- Web developers integrating MySQL into applications
- System administrators managing MySQL environments
- IT professionals transitioning into database roles

Individual Benefits

Key competencies that will be developed include:

- Strong SQL development and optimization skills
- Confidence in managing stored routines and triggers
- Ability to normalize and secure database structures
- Proficiency in troubleshooting performance issues
- Readiness for real-world MySQL project deployment

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Improved database performance and data access efficiency
- Enhanced development practices for scalable systems
- Increased data security and integrity through user management
- Streamlined reporting and query execution
- Support for enterprise-grade application development

Instructional Methodology

The course follows a blended learning approach combining theory with practice:

- Strategy Briefings - SQL design principles and database theory
- Case Studies - Common pitfalls and real-world optimization examples
- Workshops - Hands-on SQL writing and debugging
- Peer Exchange - Group exercises and knowledge sharing
- Tools - MySQL Workbench, CLI tools, EXPLAIN plans, and logs

Course Outline

Training Hours: 7:30 AM - 3:30 PM Daily Format: 3-4 Learning Modules | Coffee breaks: 09:30 & 11:15 | Lunch Buffet: 01:00 - 02:00

Day 1: MySQL Fundamentals and Data Modeling

- Module 1: Introduction to MySQL and RDBMS Concepts (07:30 - 09:30) • Overview of relational databases and MySQL architecture • Installation, MySQL client/server interaction • SQL vs NoSQL concepts
- Module 2: Database Design and Normalization (09:45 - 11:15) • Entity-Relationship modeling • Normal forms and integrity constraints • Designing robust relational schemas
- Module 3: Creating and Modifying Tables (11:30 - 01:00) • Data types, constraints, default values • Using CREATE, ALTER, and DROP statements • Handling NULLs and primary/foreign keys
- Module 4: Workshop - Design a Sample Business Database (02:00 - 03:30) • Hands-on ERD design and schema creation

Day 2: SQL Querying Techniques

- Module 1: Data Retrieval with SELECT (07:30 - 09:30) • Basic SELECT, filtering, sorting, aliases • Aggregate functions and grouping
- Module 2: Advanced Joins and Subqueries (09:45 - 11:15) • INNER, LEFT, RIGHT, and CROSS JOINS • Subqueries in WHERE, FROM, and SELECT
- Module 3: Data Manipulation (11:30 - 01:00) • Inserting, updating, and deleting data • Using transactions and rollback
- Module 4: Workshop - Query Practice and Optimization (02:00 - 03:30) • Writing efficient queries for various scenarios

Day 3: Programming with SQL - Functions, Views, and Indexes

- Module 1: Views and Virtual Tables (07:30 - 09:30) • Creating and updating views • Security and performance considerations
- Module 2: Built-in and User-defined Functions (09:45 - 11:15) • String, numeric, and date functions • Creating UDFs with parameters
- Module 3: Indexing and Query Performance (11:30 - 01:00) • Types of indexes and when to use them • Using EXPLAIN to analyze queries
- Module 4: Workshop - Optimize Queries Using Indexes (02:00 - 03:30) • Performance comparison with and without indexing

Day 4: Stored Routines and Trigger Programming

- Module 1: Stored Procedures and Parameters (07:30 - 09:30) • Creating, calling, and managing stored procedures • IN, OUT, and INOUT parameters
- Module 2: Triggers and Event Automation (09:45 - 11:15) • Defining BEFORE and AFTER triggers • Automating audit and log actions
- Module 3: Error Handling and Transactions (11:30 - 01:00) • Handling exceptions using DECLARE, HANDLER, and SIGNAL • Transaction control: COMMIT, ROLLBACK, SAVEPOINT
- Module 4: Workshop - Build a Full CRUD Stored Procedure Set (02:00 - 03:30) • Integrating routines and triggers into application logic

Day 5: Security, Administration, and Final Project

- Module 1: User Management and Security (07:30 - 09:30) • Creating users and assigning privileges • Access control, password policies
- Module 2: Backup, Recovery, and Maintenance (09:45 - 11:15) • Backup strategies and automation • Using mysqldump, logs, and replication basics
- Module 3: Final Project Presentation (11:30 - 01:00) • Participants develop and present a MySQL solution
- Module 4: Group Feedback and Wrap-Up (02:00 - 03:30) • Lessons learned, peer review, certification Q&A

Certification

Participants will receive a Certificate of Completion in MySQL Developer Course, verifying their technical capability in designing, developing, and optimizing MySQL databases for professional software and data environments.

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