

## NIELIT Virtual Academy

### COURSE PROSPECTUS

**Name of the Course:** *Certificate Course in Structured Query Language using MySQL*

**Course Code:** SP32

**Mode of Conduction:** *Online[Self-Paced]*

**Duration:** 30 Hours

### Objective of the Course

MySQL is a relational database management system which uses Structured Query Language (SQL) to manage data. SQL is a powerful programming language that is used for manipulating data in databases. A working knowledge of databases and SQL is a must for anyone who wants to start a career in Data Engineering, Data Warehousing, Data Analytics, Data Science or Business Intelligence, etc. This course is to help you learn the foundation and also understand SQL at an advance level. In the process, you become familiar with many relational database (RDBMS) concepts which will increase the career opportunity for candidates and bridge the gap of Skilled Human requirements for the Industry.

### Outcome of the Course:

Provide the participants with in-depth knowledge and skills required in Database Design.

**Course Fee:** Rs: 600/-(inclusive of GST)

**Eligibility:** +2/12<sup>th</sup>

### Methodology:

- ✓ Teaching Mode: Self-Pace
- ✓ Access from anywhere anytime
- ✓ Content Access through e-learning portal
- ✓ Doubt Clearing Session
- ✓ Practical Oriented

**Registration Link:** <http://nva.nielit.gov.in>

### Contact Details:

- Course coordinator Name: Ms. Maithreyee S.
- Email: [trng.chennai@nielit.gov.in](mailto:trng.chennai@nielit.gov.in)
- Mobile number: 07598730125

## Contents:

### Module1. Introduction:

- ❖ What is a Database; Types of Databases; DBMS Vs, RDMS; Why SQL
- ❖ MySQL Installation, SQL Data Definition Language (DDL)
- ❖ CREATE, ALTER, DROP, RENAME, TRUNCATE, COMMENT
- ❖ SQL Data Manipulation Language (DML), SELECT
- ❖ INSERT, UPDATE, DELETE, MERGE, TCL
- ❖ COMMIT, ROLLBACK, SAVEPOINT, DCL-GRANT REVOKE

### Module 2. Clauses and MySQL Functions:

- ❖ Where Clause and conditions, constraints, NOT\_NULL, UNIQUE, CHECK, DEFAULT
- ❖ Keys, Primary Key, Foreign key, Composite key, Unique Key
- ❖ Distinct, Order By, Group by and Having, Group By, Order By, EXISTS
- ❖ Functions in SQL, String, Numeric, Date, SQL Advanced functions

### Module 3. Joins, Views, Subquery and Trigger

- ❖ SQL Joins- Inner, Left, Right, Cross, Self-Join, SQL Views -Create, Delete, Update View
- ❖ ACID Properties- Atomicity, Consistency, Isolation, Durability
- ❖ SQL Common Table Expressions (CTE)- WITH Clause, SQL Subquery
- ❖ SQL Triggers, SQL Window Functions- Aggregate, Value, Ranking

### Module 4: Project

#### Examination & Certification

| Category   | Theory           | Project |              | Total |
|------------|------------------|---------|--------------|-------|
| Paper Name | No. of Papers:01 | Project | Presentation |       |
| Marks      | 40               | 30      | 30           | 100   |

After successful completion of the course, candidate will get an online certificate with the following Grading Scheme:

| Marks Range                                         | Grade | Certificate Type |
|-----------------------------------------------------|-------|------------------|
| 85% and above                                       | S     | Graded           |
| 75-84%                                              | A     | Graded           |
| 65-74%                                              | B     | Graded           |
| 55-64%                                              | C     | Graded           |
| 50-54%                                              | D     | Graded           |
| <50%                                                | F     | Participation    |
| Attended the Course but not appeared in Examination | N     | Participation    |