



## TERADATA COURSE DESCRIPTIONS

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*Cerulium Corporation has provided quality Teradata education and consulting expertise for over seven years. We offer customized solutions to maximize your warehouse.*

**Prepared by:**

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## **CERULIUM TERADATA COURSE OFFERING - DESCRIPTIONS**

### ***INTRODUCTION TO TERADATA ARCHITECTURE (BASICS):*** (1 Day - Lecture)

- This course will provide a basic understanding of how Teradata works. Course topics include Teradata Architecture, AMPs, PEs, BYNET, Data Modeling, Primary Key, Primary Index, Data Layout, Hashing, and Row ID. This course also covers a base understanding of features such as RAID, Secondary Indexes, spool files, partitioning, data protection, and Teradata utilities.

### ***TERADATA SQL COMPLETE COURSE (\*):*** (1-4 Days - 10% Lecture / 90% Hands on)

- This course offers practical, hands-on experience with retrieving and manipulating data with Teradata Structured Query Language (SQL) utilizing both ANSI standard conventions and Teradata extensions. (\*) Based on the requirements and duration of days, this course can be customized as a Teradata SQL Basic or Intermediate Course.

### ***TERADATA DATABASE DESIGN AND IMPLEMENTATION:*** (2-3 Days - 60% Lecture / 40% Hands on)

- This course provides a comprehensive and thorough understanding on how Teradata operates. Topics include hardware configurations, software components, DB Objects, data distribution, indexing, join strategies, EXPLAINS, statistics, spool files, de-normalization, partitioning, and data protection. This course also reviews the Teradata utilities, tools, macros, stored procedures, triggers, and UDF's along with providing the methodology for transitioning a logical to physical model.

### ***TERADATA LOAD UTILITIES:*** (1-2 Days - 10% Lecture / 90% Hands on)

- Course highlights include how to use BTEQ, FASTLOAD, FASTEXPORT, MULTILOAD, and TPUMP as batch inserts, updates and deletes. This course will also cover how to use and understand the strengths and performance capabilities of each; choosing the best utility for any given application or set of production requirements.

### ***TERADATA ADVANCED SQL:*** (1-3 Days - 10% Lecture / 90% Hands on)

- This course is designed for advanced level developers, programmers, and power users who write queries utilizing the more advanced features of SQL. In addition, this course has been updated to reflect the latest features and functions of Teradata.

### ***TERADATA PHYSICAL DATABASE TUNING:*** (2 days: 25% Lecture / 75% Hands on)

- This course focuses on performance and tuning functions Teradata, and provides an in-depth examination of the processes and procedures to follow once a Teradata Database is in production. Key areas include troubleshooting performance issues and tuning the various system components for maximum performance. Additional topics include locking levels, PPI (partitioned primary indexes), join strategies, Statistics, Secondary Indexes, Join Indexes, Hash Indexes, Aggregate Join Indexes, Global and Volatile Temporary tables. The EXPLAIN facility is also introduced and will be used in analyzing query performance.

**TERADATA APPLICATION DESIGN AND DEVELOPMENT:** (1-3 Days - 60% Lecture / 40% Hands on)

- The course covers the various tools, utilities, and built-in features available in Teradata to assist in application development. At the completion of the course, the student will have solid foundation of the application development tools available and their application uses in order to help optimize performance. In addition, the course will provide a base understanding of the steps in the development life cycle along with comparing the strengths and functionality of the various tools. Other topics covered include join strategies, referential integrity, triggers, stored procedures and identity columns along with understanding how these features impact and optimize this parallel architecture.

**TERADATA WAREHOUSE ADMINISTRATION:** (2-3 Days - 20% Lecture / 80% Hands on)

- This course provides an in-depth study of various administrative activities associated with Teradata administration. Subjects covered include understanding databases, users, space allocation, and external connectivity to the Teradata system. Additional topics will include access rights, roles, profiles, and built in accounting functions. This course will also address several administrative utilities such as: DBW, Ferret, Checktable, and Recovery Manager. This course will also include the Recovery Utilities, Archive, Permanent Journals, and Dual systems.

**TERADATA WAREHOUSE MANAGEMENT:** (2 days: 50% Lecture / 50% Hands on)

- This course focuses on the usage of tools available to Database Administrators to effectively manage their Teradata system. Included in the course is an in-depth study of the installation and use of the Teradata Manager suite of tools. This class will also provide a solid understanding of the various ways to monitor performance in the system. Topics include: PMON, ResUsage, and Teradata Manager. Also covered in this course is Teradata Active Systems Management which includes Priority Scheduler, and the DBS Control Utility.

**TERADATA SQL V2R6.x FEATURES OVERVIEW:** (1 day: Lecture)

- This course provides a comprehensive overview of the features and functionality in the latest release of Teradata. In addition, this course will highlight the differences between Teradata and ANSI SQL for those individuals who are familiar with standard, non-Teradata SQL. This course will also identify the Teradata differences to ANSI SQL and how these commands function in a parallel processing environment. Note: The above courses will be updated to reflect the latest updates.

**TERADATA SYSTEMS PERFORMANCE – RELEASE 12:** (1-3 days: 10% Lecture / 90% Hands on)

- This course addresses the tuning and performance functions of the Teradata 12 database, and provides an in-depth examination of the processes and procedures once the Teradata database is in production. Troubleshooting performance issues and tuning the various system components for maximum performance. Key topic areas also covered are coding strategies for joins and the various indexes. The EXPLAIN facility is introduced its use in analyzing query performance is explored.

**TERADATA V2R6.x Differences:** (1 day: Lecture)

- This course provides details on the new features and functions of Teradata V2R6.x. Topics include tools, utilities; Backup, Archive and Restore, Write Ahead Logging, Big Integer and Large Decimal Support, Optimize NUSI / USI Maintenance and Rollback Performance, New Password Encryption Algorithm, security enhancements, and UDF Packaging. For each new feature, the course provides a description, its business value, how to implement and configure the new features.

**INTRODUCTION TO LOGICAL DATA MODELING:** (1-3 days: 70% Lecture / 30% Hands on)

- This course covers the basics of Logical Data Modeling (LDM). The student will learn the theory and rules used to design, develop, and deploy logical data models. Additional topics covered include Entities, Attributes, Normalization, and reading and interpreting a simple (LDM). This class will also describe the importance of creating good logical data models in order to solve both technical and business problems.

**TERADATA BOOT-CAMP COURSE:** (5 days: 25% Lecture / 75% Hands on)

- This primary objective of this course is to provide students with a solid understanding and base knowledge of Teradata Data Warehouse system. Topics include Introduction to Teradata Architecture (Basics) (1 day), Teradata SQL (3 days), and Teradata Application Utilities (1 day). Complete with hands-on training, continuous interaction, and real world examples, the goal is to make everyone attending this training Teradata ready.

**TERADATA SQL FOR INTERMEDIATE USERS:** (2 Days - 10% Lecture / 90% Hands on)

- This course offers practical, hands-on experience with retrieving and manipulating data with Teradata Structured Query Language (SQL) utilizing both ANSI standard conventions and Teradata extensions. This course is designed for business users, developers, programmers, and power users who write queries using basic SQL techniques. In addition, this course has been updated to reflect the latest features and functions of Teradata

**TERADATA SQL FOR BUSINESS USERS:** (3 Days - 20% Lecture / 80% Hands on)

- This course is focused on the Business Users and Data Analysts of the data warehouse who want to efficiently access and manipulate data from the data warehouse. The training covers data distribution, access, storage and Teradata terminology. It also focuses on how to use the Teradata SQL Assistant to submit SQL statements along with how to integrate the result sets with Excel. It also offers practical, hands-on experience with retrieving and manipulating data with Teradata SQL using both ANSI standard conventions and Teradata extensions to the language.