



CERULIUM EDUCATION COURSE CATALOG

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

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[TERADATA PHYSICAL DATABASE IMPLEMENTATION AND PERFORMANCE TUNING \(*\)](#)

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(*) = Custom Cerulium Course

(**) = Future Course Offering

JOB/ROLE DESCRIPTION

APPLICATION SPECIALIST

The application specialist is responsible for developing and maintaining business applications, as well as Extract, Transform, and Load (ETL) applications.

BUSINESS USER

The business user uses the data from the data warehouse in support of their business organization. The business user may access the warehouse using a BI tool, a specialized application, or SQL.

DATA MODELER

The data modeler transforms business information requirements into a relational data model that becomes the foundation of the data warehouse. The data modeler may also create analytical models for base on advanced data mining requirements.



DATABASE ADMINISTRATOR

The DBA may be responsible for monitoring and maintaining the entire production system, or may only be responsible for a business unit's use of the system. DBA duties may include capacity planning, application and system tuning, security, backup and recovery, creating, altering, and dropping database objects, and scheduling and performing maintenance.

DATABASE ARCHITECT / DESIGNER

The data warehouse architect/designer is responsible for identifying the hardware and software for the data warehouse, which includes things like protocols, product technical requirements, interfaces, standards, and services.

PROJECT / PROGRAM MANAGEMENT

The project/program manager is responsible for the ongoing management of the Teradata warehouse implementation.

TECHNICAL SPECIALIST

The technical specialist transforms a logical data model into a high performance physical model for the Teradata data warehouse. This may include creating and testing table structures, partitioned and non-partitioned indexes, views, triggers, etc. The technical specialist also designs and constructs the extract, data transforms, and data loads from external systems.

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BUSINESS USERS CURRICULUM

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DATA MODELER CURRICULUM



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DATABASE ADMINISTRATOR CURRICULUM

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DATABASE ARCHITECT / DESIGNER CURRICULUM



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PROJECT / PROGRAM MANAGEMENT CURRICULUM

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TECHNICAL SPECIALIST CURRICULUM

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CERULIUM TERADATA COURSE OFFERING - DESCRIPTIONS

CER001 - 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.

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CER002 - 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.

Custom Cerulium Course. Please consult your Cerulium education specialists who will assist you in determining the best course(s) based on your Teradata experience and learning requirements.

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CER003 - TERADATA PHYSICAL DATABASE IMPLEMENTATION & PERFORMANCE TUNING (*):

(2-3 Days - 60% Lecture / 40% 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. 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. The EXPLAIN facility is also introduced and will be used in analyzing query performance.

Custom Cerulium Course. Please consult your Cerulium education specialists who will assist you in determining the best course(s) based on your Teradata experience and learning requirements.

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CER004 - TERADATA LOAD UTILITIES (*):

(1-3 Days - 10% Lecture / 90% Hands on)

Course highlights include how to use BTEQ, FASTLOAD, FASTEXPORT, MULTILOAD, TPUMP, and TPT 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.

Custom Cerulium Course. Please consult your Cerulium education specialists who will assist you in determining the best course(s) based on your Teradata experience and learning requirements.

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CER005 - TERADATA SQL FOR ADVANCED USERS (*):

(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.

Custom Cerulium Course. Please consult your Cerulium education specialists who will assist you in determining the best course(s) based on your Teradata experience and learning requirements.

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CER006 - 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, DBS Control Utility, TASM, Recovery Manager, Recovery Utilities, Archive, Permanent Journals, Dual systems and Viewpoint.

Custom Cerulium Course. Please consult your Cerulium education specialists who will assist you in determining the best course(s) based on your Teradata experience and learning requirements.

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**CER007 - TERADATA BOOT-CAMP COURSE:**

(5 days: 25% Lecture / 75% Hands on)

The 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 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.

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CER008 - 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

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CER009 - 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 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.

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CER010 - TERADATA PARALLEL TRANSPORTER (TPT):

(2 Days - 20% Lecture / 80% Hands on)

This course provides detailed training of the features and functions of Teradata Parallel Transporter (TPT). It explores the product capabilities and analyzes how the product fits into your environment as a load/unload tool. Training also demonstrates the performance expectations of the 'operators' provided by TPT along with the seamless features that fit into your enterprise environment. It also explores and demonstrates the features and flexibilities of a single scripting language for all loading and unloading operations along with discuss how these tools are incorporated into your environment.

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CER011 - DATA SCIENCES USING GCP BIGQUERY ML – TRAINING COURSE ():**

This course applies real world knowledge, expertise, and best practices when leveraging the most advanced analytics functions, processes, and data visualization. This focused approach enables us to address and resolve customers' business problems with practical solutions. This data scientist training highlights nPath, Sampling, NaiveBayes, Kmeans, Decision Tree, GLM, and PCA.



Custom Cerulium Course. Please consult your Cerulium education specialists who will assist you in determining the best course(s) based on your experience and learning requirements.

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CER012 - INTRODUCTION TO GCP BIGQUERY - FUNDAMENTAL COURSE (*):

This course provides high-level architecture overview of GCP BigQuery. Course topics include MPP Architecture, Processing Slots, Storage, and Table DDLs. This course also covers a base understanding of features such as storage, partitioning, project types, and navigation tips utilizing BigQuery Studio along with review how to use the SQL translator.

This course can be further customized to include a high-level architecture comparison of Teradata versus BigQuery including differences in DDL, data types, and SQL Standards.

Custom Cerulium Course. Please consult your Cerulium education specialists who will assist you in determining the best course(s) based on your GCP BigQuery experience and learning requirements.

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CER013 - GCP BIGQUERY SQL BRIDGE COURSE – TERADATA --> GCP (*)

This course covers A high-level comparison of SQL syntax differences between Teradata and BigQuery offering practical, hands-on experience with retrieving and manipulating data with BigQuery Structured Query Language (SQL) utilizing ANSI standard conventions. 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 BigQuery.

Custom Cerulium Course. Please consult your Cerulium education specialists who will assist you in determining the best course(s) based on your GCP BigQuery experience and learning requirements.

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CER014 - GCP BIGQUERY ADVANCED SQL COURSE (*)

This course is designed for advanced level developers, programmers, and power users who write queries utilizing the more advanced features of BigQuery SQL. In addition, this course has been updated to reflect the latest features and functions of BigQuery. Subjects include Sub Queries, Joins, Intersect Operators, OLAPs, and Common Table Expressions (CTEs).

Custom Cerulium Course. Please consult your Cerulium education specialists who will assist you in determining the best course(s) based on your GCP BigQuery experience and learning requirements.

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