

**Snowflake SnowPro Advanced Data Engineer**

**Course Number:** SQL-716EC
**Duration:** 3 days

**Overview**

This Snowflake training takes attendees from data ingest to insightful analysis and prepares them for the SnowPro Advanced Data Engineer exam, an advanced-level certification. Participants also learn the real-world skills they need to manage, transform, and analyze data using Snowflake.

**Prerequisites**

* SnowPro Core training or equivalent experience.
* A working knowledge of restful APIs, SQL, and a solid programming background are ideal.

**Materials**

All Snowflake training students receive comprehensive courseware.

**Software Needed on Each Student PC**

All attendees will need access to a Snowflake SQL environment with Accelebrate’s sample data loaded.

**Objectives**

* Master Snowflake, including loading files, building pipelines, and sharing insights
* Craft lightning-fast queries and monitor performance
* Shape data with UDFs, external functions, and Snowpark's Python and Scala features
* Fortify your data with authentication, granular access control, and robust backup strategies
* Extract actionable insights and make data-driven decisions

**Outline**

* Introduction
* Data Movement
	+ Loading and unloading data
	+ Data formats and types
	+ Data pipelines
	+ Connectors
	+ Data sharing
	+ External tables and materialized views
	+ Partitioning
* Performance Optimization
	+ Query optimization
	+ Caching
	+ Monitoring continuous data pipelines
* Storage and Data Protection
	+ Time Travel
	+ Fail Sage
	+ Backups and Rollbacks
	+ Testing pre-deployment
* Security
	+ Authentication methods
	+ RBAC
	+ Data governance
	+ Column/Row-level security
* Data Transformation
	+ User Defined Functions (UDFs)
	+ SQL, JavaScript
	+ External Functions
	+ Transaction management
	+ Semi-structured data transformation
	+ Snowpark
* Conclusion