
Topic Outline

The **dbt Analytics Engineering Certification Exam** has been designed to assess the following topics and sub-topics.

Topic 1: Developing dbt models

- Identifying and verifying any raw object dependencies
- Understanding core dbt materializations
- Conceptualizing modularity and how to incorporate DRY principles
- Converting business logic into performant SQL queries
- Using commands such as run, test, docs and seed
- Creating a logical flow of models and building clean DAGs
- Defining configurations in dbt_project.yml
- Configuring sources in dbt
- Using dbt Packages
- Utilizing git functionality within the development lifecycle
- Creating Python models
- Providing access to users to models with the “grants” configuration

Topic 2: Understanding dbt models governance

- Adding contracts to models to ensure the shape of models
- Creating different versions of our models and deprecating the old ones
- Configuring model access

Topic 3: Debugging data modeling errors

- Understanding logged error messages
- Troubleshooting using compiled code
- Troubleshooting .yml compilation errors
- Distinguishing between a pure SQL and a dbt issue that presents itself as a SQL issue
- Developing and implementing a fix and testing it prior to merging

Topic 4: Managing data pipelines

- Troubleshooting and managing failure points in the DAG
- Using dbt clone
- Troubleshooting errors from integrated tools

Topic 5: Implementing dbt tests

- Using generic, singular, custom, and custom generic tests on a wide variety of models and sources
- Testing assumptions for dbt models and sources
- Implementing various testing steps in the workflow

Topic 6: Creating and Maintaining dbt documentation

- Updating dbt docs
- Implementing source, table, and column descriptions in .yml files
- Using macros to show model and data lineage on the DAG

Topic 7: Implementing and maintaining external dependencies

- Implementing dbt exposures
- Implementing source freshness

Topic 8: Leveraging the dbt state

- Understanding state
- Using dbt retry
- Combining state and result selectors