excelerate
DATA TELLS A STORY. BE THE STORYTELLER

Data Analytics

Training Curriculum

What will the training cover?

This boot camp will help students learn the cycle of data analytics from start to finish while utilizing **SQL, Excel, and Power BI**. First, students will learn the basics of extracting data via **SQL**. Next, students will level up their beginner to intermediate SQL skills to more **advanced SQL functions**. In this portion of the training, students will be able to go from writing **one-page queries to up to 3-page queries**.

Once students master how to extract complex data from SQL, they will then streamline the queried data into **Excel summary reports** via formatting and popular analysis functions, such as **SUMIFS, SUBTOTALS, and conditional formatting** etc.

Finally, we will round out the training by **connecting your SQL database and Excel datasets** in **Power BI to build dashboards**. You will be able to create dynamic dashboards from queried SQL data and Excel data sources and publish your dashboard reports online.

Part 1: Beginner to Intermediate SQL Training Topics

During this portion of the training, you will receive 28 hours of training that will cover core beginner to intermediate SQL training topics that will educate you on how to comfortably extract data from a database.

- Database structure
- Order By
- Where
- Aggregate functions
- Date functions
- Joins
- Calculated fields
- Cast* (Subject to schedule)
- Text, dates, and numeric data types

Part 2: Advanced SQL Training Topics

During this portion of the training, you will receive 28 hours of training that will cover core advanced SQL training topics that will educate you on how to ramp up your SQL skills to the next level. After this portion of the training, you will be able to write up to 3-page queries.

- Group By
- Advanced filtering
  - Having statements
  - Partial conditionals
  - Multiple OR conditions in one WHERE statement
- Unions
  - Compile multiple query results into one
- Subqueries
  - Write multiple queries within a query
  - FROM Statement Subqueries
  - WHERE Statement Subqueries
- Compiling multiple complex queries into one
- Complex joins
  - Left joins
  - Right joins
  - Combination of various joins type in one FROM statement

Part 3: Microsoft Excel Reporting Training Topics

During this portion of the training, you will receive 18 hours of training that will teach you how to extract data from SQL to Excel and be able to build and format Excel-ready summary reports.

Prerequisites

▶ **Office 365**

▶ Creating new worksheets

▶ Hiding worksheets

▶ Deleting worksheets

▶ Locating a cell

▶ Data entry (inputting data into a cell)

▶ Know the difference between columns and rows

▶ Copying and pasting data

▶ Opening a workbook

▶ Know the difference between a workbook vs. worksheet

▶ Saving a workbook

    ▶ Inserting and deleting rows and columns

Topics

- SQL data connection

- Filtering

- Branding

- Formatting

  - Conditional formatting

- Cell referencing

- Mathematical operations and calculations

  - Sum

  - Average

  - Min

  - Max

  - Counta

  - Addition

  - Subtraction

  - Division

  - Multiplication

- Sumifs

Part 4: Power BI Dashboard Training Topics

IMPORTANT NOTE: PC Laptops or MAC parallel systems ONLY

During this portion of the training, you will receive 24 hours of training that will teach you how to streamline your data flow from SQL and Excel into Power BI. In the training, you will learn how to manipulate your data in Power BI and build interactive dashboards.

Prerequisites

IMPORTANT NOTE: All students are required to use a **PC laptop or a Macbook with a parallel system** during the training.

No prior knowledge of Power BI is required. Students will be provided prerequisite self-paced videos prior to the start of the boot camp.

Data Visualization

▶ Data source connections

▶ Data import

▶ Chart selections

▶ Filtering and sorting data

▶ Formatting (Colors, themes, branding, fonts, logos)

▶ Groupings

▶ Manual entry table

▶ Dynamic dashboards

▶ Web Services upload (upload dashboards to web browsers)

▶ Aggregations

▶ Data types

Data Sourcing and Modeling

- Data refresh and data source connection from Excel and SQL

  - Data streamline from Excel and SQL

- Relationships

- Cardinality

- DAX measures vs. columns

- Intermediate formulas

  - Calculate

  - Filter

  - Aggregates (SUM, COUNT, AVG, etc.)

- Data transformation via Power Query