COURSE SYLLABUS

Data Analytics Certification Online

Gain comprehensive, hands-on training in the core tools of modern data analytics. This program covers Excel, SQL, Tableau, and Power BI, equipping you with the practical skills for the official exams.

Group classes (Live Online) and onsite training are available for this course. For more information, email onsite@graduateschool.edu or visit: https://www.graduateschool.edu/certificates/data-analytics-certification



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Course Outline

This package includes these courses

- Beginner Excel Course (6 Hours)
- Intermediate Excel Course (6 Hours)
- Advanced Excel Course (6 Hours)
- SQL Bootcamp (18 Hours)
- Tableau Bootcamp (12 Hours)
- Power BI Bootcamp (12 Hours)
- Power BI Advanced Course (6 Hours)

Beginner Excel Course

In this beginner Excel course, you will learn the essentials of Microsoft Excel, including calculations, basic functions, graphs, formatting, and printing.

- Become familiar with the interface and data entry
- Learn essential formulas and functions
- Format and print your work
- Create charts, including line, column, and pie charts
- Learn tips and tricks for easy workbook management
- Review key concepts in a final project

Intermediate Excel Course

Learn intermediate Excel functions like VLOOKUP and SUMIFS, and how to summarize data with Pivot Tables, Sort and Filter databases, and split and join text.

- Learn to split and join text, add data validation, and use named ranges
- Use database functions such as VLOOKUP and HLOOKUP

- Add logical statements, including AND, OR, and IF statements
- Create PivotTables to quickly summarize large databases
- Use statistical functions such as RANK, COUNTIFS, and SUMIFS
- Create advanced combo charts from multiple charts
- Review key concepts by creating a final project

Advanced Excel Course

Learn all of the most complex features of Microsoft Excel in this advanced training course.

- Understand cell management, including cell locking, auditing, and hotkeys
- Learn special formatting for calculating dates
- Use advanced functions, such as nested IF statements
- Learn advanced analytical tools for data consolidation, conditions to exclude data, and PivotCharts
- Use advanced database functions, such as MATCH, VLOOKUP-MATCH, and INDEX-Double MATCH
- Record macros and relative reference macros for ad-hoc reporting
- Create a project that applies key concepts from the class

SQL Bootcamp

Learn how to extract, filter, and manipulate data using SQL. This course covers PostgreSQL fundamentals, database querying, table joins, and advanced techniques for handling large datasets.

- Explore information stored in a database (tables, columns, rows, etc.) using the graphical interface of DBeaver, a popular free database app.
- Write SQL queries to retrieve data from tables in the database
- Combine information from multiple tables using JOIN statements
- Filter data, group it, and sort it to extract the specific information you need
- Master advanced techniques, including subqueries, string functions, and IF-Else logic with CASE
- Learn how to use views and functions with parameters instead of directly querying tables

Tableau Bootcamp

Develop the skills to turn raw data into compelling visual stories with Tableau, the industry-leading data visualization platform.

- Connect to datasets in various formats and clean, filter, and structure the data for visual storytelling
- Create a variety of visualizations, including bar charts, line charts, treemaps, heat maps, and dual-axis charts
- Use Tableau's calculation tools to build custom fields, apply aggregates, and enhance data analysis
- Format charts with labels, tooltips, colors, and axes to improve clarity and visual impact
- Work with geographic data to build interactive map visualizations, including choropleths and proportional-symbol maps
- Customize dashboards and stories for different audiences and devices using Tableau's interactivity tools
- Integrate external map services and use advanced visualization types such as spider maps and alluvial diagrams
- Publish your work to Tableau Cloud and export dashboards for professional sharing and collaboration

Power BI Bootcamp

- Import and clean data from multiple sources, including Excel, CSV, and online databases, using Power Query

- Create interactive visualizations, such as charts, maps, cards, and slicers, to explore trends and patterns
- Use DAX (Data Analysis Expressions) to build measures, calculated columns, and custom aggregations
- Design visually engaging reports by adding titles, logos, and formatting options for a professional finish
- Understand and manage relationships between tables to create dynamic, filterable reports
- Share and collaborate on reports via the Power BI Service, including exporting, commenting, and app integration
- Set up dashboards and explore the differences between dashboards and reports for business presentations
- Schedule data refreshes and manage reusable datasets to keep reports up-to-date and scalable

Power BI Advanced Course

This advanced Power BI course focuses on building more reliable data models using proper relationships, filter flow, fiscal and calendar date tables, Row-Level Security, and more.

- Build better data models by understanding relationships, cardinality, and cross-filter direction
- Design reliable data models and avoid common modeling mistakes
- Create and use hierarchies to organize and drill into data
- Control visual order with custom sort columns
- Create reusable date tables supporting fiscal and calendar years
- Add parameters to make reports interactive and flexible
- Implement Row-Level Security (RLS) with Static and Dynamic roles