COURSE SYLLABUS

Data Analytics Certification (Self-Paced)

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-self-paced



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Course Outline

This package includes these courses

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

Beginner Excel Course (Self-Paced)

In this beginner Excel workshop, you'll learn the essentials of Microsoft Excel, including calculations, basic functions, graphs, formatting, and printing. This basic Excel class is perfect for those with limited experience looking to expand their proficiency.

- 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 (Self-Paced)

- Learn to split and join text, apply data validation, and create named ranges
- Use database functions such as VLOOKUP and HLOOKUP
- Write logical formulas using AND, OR, and IF functions

- Create Pivot Tables to efficiently summarize and analyze large datasets
- Apply statistical functions such as RANK, COUNTIFS, and SUMIFS
- Build advanced combo charts by combining multiple chart types
- Reinforce key concepts through a guided final project

Advanced Excel Course (Self-Paced)

- Cell management, including cell locking, auditing, and hot keys
- Special formatting for calculating dates
- Use advanced functions and advanced analytical tools
- Record macros and relative reference macros for ad hoc reporting

SQL Bootcamp (Self-Paced)

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.

- Write SQL queries to retrieve, filter, and sort data efficiently.
- Use joins to combine information from multiple tables and establish relationships.
- Apply aggregate functions like SUM, COUNT, AVG, and GROUP BY to summarize data.
- Work with subqueries, conditional logic (CASE statements), and advanced string functions.
- Optimize queries using indexes, data type conversions, and best practices.
- Explore views and user-defined functions to streamline database management.

Tableau Bootcamp (Self-Paced)

Develop the skills to turn raw data into compelling visual stories with Tableau, the industry-leading data visualization platform. This hands-on bootcamp teaches you to explore, analyze, and publish dashboards that communicate insights clearly and effectively.

- Connect to datasets in various formats, then clean, filter, and structure the data for effective visual storytelling
- Create a range of visualizations, including bar charts, line charts, treemaps, heat maps, and dual-axis charts
- Use Tableau’s calculation tools to create custom fields, apply aggregates, and deepen your data analysis
- Format charts using labels, tooltips, color, and axis adjustments to improve clarity and impact
- Work with geographic data to create interactive map visualizations such as choropleths and proportional symbol maps
- Customize dashboards and stories for various audiences and screen sizes using Tableau’s interactivity tools
- Integrate external mapping services and explore advanced visualization types like spider maps and alluvial diagrams
- Publish your work to Tableau Cloud and export dashboards for professional sharing and team collaboration

Power BI Bootcamp (Self-Paced)

- Import and clean data from multiple sources, including Excel, CSV, and online databases, using Power Query
- Build interactive visualizations like charts, maps, cards, and slicers to analyze trends and patterns
- Use DAX (Data Analysis Expressions) to create measures, calculated columns, and custom aggregations
- Design professional reports with titles, logos, and advanced formatting options
- Manage relationships between tables to produce dynamic, filterable reports

- Share and collaborate on reports via Power BI Service, including exporting, commenting, and app integration
- Create dashboards and understand their differences from reports for business presentations
- Schedule data refreshes and manage reusable datasets to keep reports current and scalable

Power BI Advanced Course (Self-Paced)

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