Business Analytics Science
CPD 0146

Overview

Master the skills of a Business Analyst. Get the employable skills, certifications, and hands-on practice you need to transform your career in this 10-week program. Successful completion of the program earns you a valuable Business Analytics Certificate of Completion. You also get hands-on technology experience and finish the program prepared to take the Tableau Desktop Specialist Certification Exam.

Delivered fully online, our Business Analytics Science Certificate Course is taught by industry experts. It covers the key areas required to utilize data effectively to help an organization optimize its business processes by making better, more informed decisions. In this 10-week course, you will learn key concepts and strategies, get hands-on practice (with feedback from experts) and earn in-demand credentials.

Learners

Our course attracts learners who are motivated to expand their knowledge and grow their careers. Our course is ideal for anyone who identifies with one of the following profiles:

- Individuals considering a career in an analytics-related capacity who want to build data-oriented skill sets and gain their Tableau Desktop Specialist Certification.
- Business-focused professionals looking to develop new skills to expand career opportunities or improve the potential for advancement (i.e., marketing, sales, finance, business operations, HR, or other related fields).
- Recent graduates seek to gain a "big picture" understanding of Business Analytics and build in-demand skills employers seek.
- Entrepreneurs looking to grow their business by utilizing skills in data extraction, modeling, and visualization.

Authors and Instructors

Megan Dixon - Megan currently works as a Senior Director of Data Science at ASSURANCE IQ, and prior to that worked at Fitbit where she designed and conducted key analyses to guide future product development that make progress towards achieving company goals, conducted user segmentation analysis to understand key segments for product development, marketing and provide deeper insights into underlying trends of the company KPIs, lead initiatives to design and improve our data infrastructure; ETL pipelines, dependency mapping and improving data quality and worked with product owners to design roll-out strategies for new feature launches including metrics to track, experiments to run and ensuring we are collecting the data required to answer key business questions. Megan holds a Bachelor's Degree in Economics (with Honors) from McMaster University.

Eric Johnson - Eric has worked as a Data Scientist at Facebook for 5 years, holds a BA in Biology and English from Lewis & Clark College, and received a PhD in Economic Sociology from Columbia University in the City of New York.

Tatiana Sorokina - Tatiana currently works as a Solution Director, Data Science & Artificial Intelligence at Novartis. Tatiana is an experienced data science and digital transformation leader building enterprise advanced analytics solutions that drive business impact in the healthcare and life science domain and has a proven track record in designing and managing data science product portfolios and collaborating with senior leadership across the organization to improve the topline growth and bring efficiencies to the business operation. Tatiana holds a B.S. in Economics from Lomonosov Moscow State University and an MS in Marketing Research & Analytics from Columbia University- Columbia Business School.

Annu Kristipati - Annu is a Startup Advisor, investor, and Customer Success/Professional Services leader with deep experience in Analytics/Business Intelligence. He is currently a Venture Advisor and Investment Committee member at Westwood Ventures, based in the SF Bay region. Annu has over 12+ years in the

Fintech space, a BA in Economics/International Area Studies & Specialization in Computing, and an MBA from UCLA, The Anderson School of Management.

Learning Outcomes

The learning outcomes for the modules are as follows:

- **Introduction to Business Analytics:** Identify the key fundamentals of Business Analytics, including roles and responsibilities.
- **Technical Introduction: Data Modeling:** Plan and optimize your dataset for success in an exploratory analysis.
- **Introduction to SQL:** Using introductory SQL skills to query the data to build your dataset.
- **Exploring SQL Clauses:** Expand your SQL queries using advanced SQL functions.
- **Data Visualization Fundamentals:** Best practices for data visualization, including common traps you can fall into.
- **Data Visualization Technology:** How to use tools like Microsoft Excel and Tableau for monitoring, analyzing, and creating visualizations.
- **Aligning Metrics and KPIs to your Business Objectives:** Identify and create a set of actionable KPIs and metrics aligned to your business objectives.
- **Extracting Actionable Data Insights:** Develop, plan, and test hypotheses to drive business innovation.
- **Planning and Measuring Business Impact:** Once you've found insights, we'll explore how and when to act on them.
- **Data Signal vs. Noise:** Build a set of tools and methodologies for confirming or iterating on your conclusions.

Curriculum

Section	Topics
Welcome	Welcome to Business Analytics ● Become familiar with the course details, expectations, and structure ● Set up the tools and technology needed for this course ● Discover tips for success and set your intention for the course
Module 1	Introduction to Business Analytics ● Explain the importance of business analytics in an organization ● Communicate how analytics differs from data science and data engineering ● Outline the analytics team function and the role of a business analyst ● Explore common use cases
Module 2	Technical Introduction: Data Modeling ● Identify data needed to answer key research questions ● Organize data for exploratory analysis ● Map data types and keys for a dataset ● Apply a Unified Modeling Language (UML) diagram to describe a set of data
Module 3	Introduction to SQL ● Understand SQL and why it is important ● Explain core concepts about SQL ● Query data using basic SQL functions ● Describe the types of business problems you can solve using basic SQL functions
Module 4	Exploring SQL Clauses ● Query data using advanced SQL functions ● Describe the types of business problems you can solve using advanced SQL functions

	● Compare and analyze data by referencing multiple data tables
Module 5	Data Visualization Technology ● Assess visualization tool capabilities ● Align visualization tools to key business tasks ● Use Microsoft Excel to explore, organize, analyze, and visualize data ● Use Tableau Public to load, explore, organize, analyze, and visualize data ● Create a Tableau eLearning account and begin earning your first badge
Module 6	Data Visualization Fundamentals ● Apply a structured process to create an effective data visualization ● Examine the needs of various stakeholders and audiences ● Effectively communicate insights using a visualization ● Tell a compelling data story
Module 7	Aligning Metrics and KPIs to Business Objectives ● Define SMARTER business objectives and KPI targets ● Obtain and measure KPIs from available data ● Track the progress towards KPIs and compare against set business objectives
Module 8	Extracting Actionable Data Insights ● Understand the data-driven mindset and root cause analysis ● Identify four types of biases that occur in data and analytics ● Describe the data analytics workflow ● Explain the data lifecycle and the components of an effective data question ● Examine the differences between observational and experimental studies

Module 9	Planning and Measuring Business Impact ● Identify primary, secondary, and guardrail metrics ● Define null and alternative hypotheses ● Develop an experimental plan ● Define Type I and Type II errors and link them to sizing metrics
Module 10	Data Signal vs. Noise ● Given a scenario, define the population, parameter, sample, and statistic ● Define a p-value and use it to draw a conclusion for an experiment ● Calculate summary statistics and use an online calculator to provide a p-value ● Define confounding variables and identify where they might exist in your experiment

Delivery

Fully online, on-demand learning with weekly 2-hour live/online interactive group sessions led by mentors with subject matter expertise. GreenFig uses Canvas as the learning management system (LMS).

Assessment

This course will include live sessions, quizzes, playbook assignments, readings, etc. A certificate of completion will be issued when the learner achieves at least 70% on the module assessments and successful completion of the playbook assignments.

Hours and Articulation

Learner hours for the module are as follows (includes on-demand asynchronous learning, 2-hour weekly online facilitator-led session, and playbook assignment completion):

1. Module 1 – 10 hours
2. Module 2 – 10 hours
3. Module 3 – 10 hours
4. Module 4 – 10 hours
5. Module 5 – 10 hours
6. Module 6 – 10 hours
7. Module 7 – 10 hours
8. Module 8 – 10 hours
9. Module 9 – 10 hours
10. Module 10 – 10 hours

Total Module Hours: 100 hours