QUEST
Professional Center

PROFESSIONAL TRAINING COURSE

Course No. 1263

Advanced Data Analytics Training Course

DATA SCIENCE & AI ANALYTICS
ARTIFICIAL INTELLIGENCE & APPLICATIONS

DURATION
5 Days

DELIVERY
Classroom

Course Overview

The Advanced Data Analytics Training Course is designed to equip professionals, managers, executives, and technical specialists with advanced knowledge and practical skills to transform enterprise data into strategic insights that drive informed decision-making, operational excellence, and sustainable business growth. As organizations increasingly rely on data as a strategic asset, advanced analytics has become essential for identifying trends, forecasting outcomes, improving operational performance, optimizing resources, managing risks, and supporting digital transformation initiatives. This course provides a comprehensive framework for applying advanced analytical techniques across multiple business functions to create measurable organizational value.

Modern organizations generate vast amounts of structured, semi-structured, and unstructured data from operational systems, digital platforms, customer interactions, IoT devices, financial transactions, and enterprise applications. Throughout the Advanced Data Analytics Training Course, participants will explore advanced analytical methodologies including descriptive analytics, diagnostic analytics, predictive analytics, prescriptive analytics, statistical modeling, data mining, business intelligence, Machine Learning fundamentals, and AI-assisted analytics. The course demonstrates how advanced analytics enables organizations to uncover hidden opportunities, anticipate business challenges, improve forecasting accuracy, and strengthen strategic planning.

The course combines internationally recognized analytical methodologies with practical business applications relevant to government entities, ministries, public sector organizations, financial institutions, oil and gas companies, healthcare organizations, manufacturing enterprises, telecommunications providers, logistics companies, utilities, and multinational corporations. Participants will learn how to collect, prepare, validate, analyze, visualize, and interpret complex datasets while developing executive dashboards, KPI frameworks, analytical reports, and decision-support models. The program also addresses enterprise data governance, data quality management, cybersecurity, privacy protection, regulatory compliance, ethical data usage, and analytical best practices to ensure secure and reliable business analytics.

Combining strategic concepts with practical implementation, this course enables participants to develop enterprise analytics capabilities that improve organizational agility, operational performance, and executive decision-making. Through practical workshops, business simulations, real-world case studies, and implementation exercises, participants will build the competencies required to lead advanced analytics initiatives, improve business intelligence, support enterprise performance management, accelerate digital transformation, and establish a culture of evidence-

based decision-making across the organization.

Objectives

- Analyze enterprise data environments to identify opportunities for advanced data analytics implementation during the course.
- Develop a comprehensive understanding of advanced analytical methodologies and enterprise data analytics frameworks.
- Evaluate structured, semi-structured, and unstructured data using advanced statistical and analytical techniques.
- Apply predictive analytics, business intelligence, Machine Learning fundamentals, and AI-assisted analytics to solve business challenges.
- Design enterprise analytics frameworks that support strategic planning, operational excellence, and informed decision-making.
- Improve forecasting accuracy, reporting quality, operational efficiency, and business performance through advanced analytics.
- Strengthen enterprise data governance, data quality, cybersecurity, privacy protection, regulatory compliance, and ethical data management practices.
- Implement KPI frameworks, executive dashboards, and enterprise performance measurement systems using advanced analytics.
- Assess organizational readiness for enterprise-wide advanced analytics adoption.
- Align advanced analytics initiatives with digital transformation strategies, innovation, operational excellence, and long-term organizational objectives.

Who Should Attend

The Advanced Data Analytics Training Course is designed for executives, department managers, digital transformation leaders, operations managers, finance managers, strategy managers, IT managers, business managers, project managers, business analysts, data analysts, business intelligence professionals, performance management specialists, and decision-makers responsible for improving organizational performance through advanced analytics.

The course is particularly valuable for professionals working in government entities, ministries, public sector organizations, central banks, commercial banks, financial institutions, insurance

companies, oil and gas organizations, healthcare providers, manufacturing companies, telecommunications providers, logistics organizations, utilities, educational institutions, and multinational corporations implementing enterprise analytics and digital transformation initiatives.

It is also suitable for data scientists, reporting professionals, BI developers, ERP specialists, database professionals, quality specialists, risk management professionals, management consultants, innovation managers, digital transformation teams, researchers, and professionals seeking to strengthen their expertise in advanced business analytics and enterprise data analysis.

Learning Outcomes

- By the end of the Advanced Data Analytics Training Course, participants will be able to:
- Explain the strategic role of advanced data analytics in organizational performance and digital transformation.
- Collect, prepare, validate, and manage enterprise data using industry best practices.
- Apply descriptive, diagnostic, predictive, and prescriptive analytics techniques to business scenarios.
- Develop advanced analytical models that support forecasting, planning, and executive decision-making.
- Design executive dashboards, KPI scorecards, and interactive analytical reports that communicate meaningful business insights.
- Integrate advanced analytics with Business Intelligence platforms, enterprise reporting systems, and decision-support solutions.
- Apply best practices for data governance, data quality, cybersecurity, privacy protection, regulatory compliance, and ethical data analytics.
- Measure organizational performance using analytical dashboards, KPIs, forecasting models, and performance reporting.
- Develop implementation roadmaps for enterprise advanced analytics initiatives.
- Lead enterprise analytics transformation that strengthens business intelligence, innovation, operational excellence, organizational agility, and sustainable business growth.

Course Outline

DAY 01

Foundations of Advanced Data Analytics

- Introduction to advanced data analytics and enterprise analytics
- The analytics lifecycle and business value
- Types of enterprise data and analytical methodologies
- Descriptive, diagnostic, predictive, and prescriptive analytics

> **PRACTICAL WORKSHOP**
> Identifying advanced analytics opportunities across organizational functions

DAY 02

Data Preparation and Exploratory Analytics

- Enterprise data collection and data management
- Data cleansing, validation, transformation, and quality improvement
- Exploratory Data Analysis (EDA) and statistical techniques
- KPI development, business intelligence, and executive reporting

> **PRACTICAL WORKSHOP**
> Preparing enterprise datasets for advanced analytical projects

DAY 03

Advanced Analytical Techniques and AI-Assisted Analytics

- Predictive analytics and forecasting methodologies
- Statistical modeling and data mining techniques
- Machine Learning fundamentals for business analytics
- AI-assisted analytics and intelligent business insights

DAY 03 — CONTINUED

PRACTICAL WORKSHOP

Developing advanced analytical models for real-world business scenarios

DAY 04

Governance, Performance Measurement, and Risk Analytics

- Enterprise data governance and data quality management
- Cybersecurity, privacy protection, and regulatory compliance
- Risk analytics, performance management, and executive dashboards
- Ethical data analytics and responsible AI-assisted decision-making

PRACTICAL WORKSHOP

Designing governance frameworks and enterprise performance dashboards

DAY 05

Enterprise Advanced Analytics Strategy

- Planning enterprise advanced analytics initiatives
- Building a data-driven organizational culture
- Future trends in advanced analytics, Artificial Intelligence, Business Intelligence, and predictive decision support
- Measuring business value and return on investment from analytics initiatives

FINAL WORKSHOP

Developing a comprehensive Advanced Data Analytics implementation roadmap, including enterprise analytics strategy, data governance framework, KPI architecture, executive dashboard framework, performance measurement model, stakeholder engagement strategy, implementation roadmap, and organizational action plan to strengthen business intelligence, improve strategic decision-making, accelerate digital transformation, optimize operational performance, and achieve sustainable organizational excellence.

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Register or Request More Information

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