Decision-Driven Analytics Curriculum Document

Using a MT5 EA as a case study

Bridging Data Analytics & Business Analysis

Programme Type

Self-paced, outcome-driven professional development curriculum

Target Profile

- Data Analysts seeking stronger business impact
- Software Engineers transitioning into analytics roles
- Business Analysts seeking analytical depth
- Hybrid Analytics / Decision Support roles

Duration

12 modules (recommended: 10–14 weeks, flexible pacing)

Learning Philosophy

This curriculum is **decision-first**, not tool-first.
Every analytical activity must map to:

- A business objective
- A decision
- An action
- A measurable impact

Exit Outcome

By completion, the learner will possess:

- A complete analytics portfolio
- At least one end-to-end decision intelligence case study
- Resume-ready business impact statements
- A repeatable analytics-to-decision framework

LEARNING OUTCOMES

Upon completion, the learner will be able to:

1. Translate business problems into analytical decision models
2. Design KPIs aligned to strategic objectives
3. Engineer and analyze data for decision support
4. Communicate insights using executive-grade language
5. Quantify business impact and risk
6. Produce portfolio-ready analytics artifacts

CURRICULUM STRUCTURE

Module 1 — Analytics With Intent (Foundations)

Focus: Decision-oriented analytical thinking
Outcome: Ability to frame analytics around business decisions
Portfolio Artifact: Analytics Decision Framing Document

Module 2 — Business Analysis Essentials for Analysts

Focus: Problem definition, KPIs, constraints, assumptions
Outcome: Clear business framing before analysis begins
Portfolio Artifact: KPI & Metrics Definition Pack

Module 3 — Data Modeling for Decision Support

Focus: Analytical data modeling and feature engineering
Outcome: Data structured for insight, not storage
Portfolio Artifact: Analytics Data Model Diagram

Module 4 — Exploratory Analysis for Business Questions

Focus: Hypothesis-driven exploratory analysis
Outcome: Purposeful EDA tied to decisions
Portfolio Artifact: Narrative EDA Notebook

Module 5 — Metrics That Executives Trust

Focus: Translating technical metrics into decision KPIs
Outcome: Risk-aware, executive-grade metrics
Portfolio Artifact: Executive KPI Framework

Module 6 — Visualization for Decision-Making

Focus: Dashboards that enable action
Outcome: Clear, decision-specific dashboards
Portfolio Artifact: Decision-Grade Dashboard

Module 7 — Insight to Recommendation to Action

Focus: Business interpretation and recommendations
Outcome: Actionable insights with quantified impact
Portfolio Artifact: Insight-to-Action Brief

Module 8 — Change Impact & Measurement

Focus: Measuring outcomes and attribution
Outcome: Demonstrated business value
Portfolio Artifact: Impact Measurement Report

Module 9 — Stakeholder Communication

Focus: Executive storytelling and communication
Outcome: Dual-layer communication (technical + executive)
Portfolio Artifact: Executive Presentation Deck

Module 10 — Ethics, Risk & Governance

Focus: Responsible analytics and decision risk
Outcome: Risk-aware analytical thinking
Portfolio Artifact: Analytics Risk & Ethics Assessment

Module 11 — Capstone Project

Focus: End-to-end decision intelligence solution
Outcome: Integrated analytics system with business impact
Portfolio Artifact: Complete Decision Analytics Case Study

Module 12 — Portfolio & Career Positioning

Focus: Market-ready positioning
Outcome: Professional analytics portfolio
Portfolio Artifact: Portfolio Pack (GitHub, Case Study, Resume Bullets)

ASSESSMENT & COMPLETION CRITERIA

The curriculum is **artifact-based**, not exam-based.

A module is considered complete when:

- All practical tasks are finished
- The portfolio artifact meets professional quality
- Insights are decision-oriented

Completion requires:

- All modules completed
- Capstone delivered
- Portfolio assembled