Data Analytics Hybrid Accelerator (12-Week Program)

Course Syllabus

Course Title: Data Analytics

Course Code: DA301
Duration: 12 Weeks

Format: Hybrid with Capstone
Instructor: Senior Data Analyst with 10+ years experience
Prerequisites: Basic math proficiency, logical thinking

Week 1-2: Data Foundations & Excel Mastery

- Topics: Data types, Excel formulas, data cleaning, pivot tables
- Learning Objectives: Master Excel for data analysis
- Software: Excel, Google Sheets
- Assignment: Financial analysis project
- Assessment: Excel proficiency test (150 points)

Week 3-4: SQL & Database Management

- Topics: Database concepts, SQL queries, data manipulation
- Learning Objectives: Query and manipulate databases effectively
- Software: MySQL, PostgreSQL, BigQuery
- Assignment: Database querying project
- Assessment: SQL practical exam (200 points)

Week 5-6: Python for Data Analysis

- Topics: Python basics, Pandas, data visualization
- Learning Objectives: Analyze data using Python

- Software: Python, Jupyter Notebooks
- Assignment: Data analysis script
- Assessment: Python coding project (250 points)

Week 7-8: Business Intelligence & Visualization

- Topics: Dashboard design, data storytelling, BI tools
- Learning Objectives: Create effective data visualizations
- Software: Tableau, Power BI, Looker
- Assignment: Interactive dashboard
- Assessment: BI project presentation (300 points)

Week 9-10: Capstone Project

- Topics: End-to-end analytics project
- Learning Objectives: Apply all skills to real business problem
- Software: All tools combined
- Assignment: Complete analytics project
- Assessment: Capstone project (500 points)

Week 11-12: Career Preparation

- Topics: Portfolio development, interview skills, industry networking
- Learning Objectives: Prepare for data analyst roles
- Software: GitHub, LinkedIn
- Assignment: Professional portfolio
- Assessment: Mock interview (200 points)

Grading Policy:

- Attendance : 40%
- Capstone Project: 40%
- Final Assessment: 20%
- Total: 100%

Software Requirements:

1. Python 3.8+ with required libraries
2. SQL database access
3. BI tool licenses (provided)
4. Git for version control

Support Resources:

- Code Review: Daily code review sessions
- Data Sets: Access to real business datasets
- Industry Projects: Real company data challenges