Note: *This course outline and schedule are tentative and may be adjusted by the instructor depending on class progress and circumstances.*

Computerized Accounting Course Outline

Data Analytics

Course Details

Course Type: Certification

Course Duration: 1 month

Class Frequency: 3 classes/week, 2 hours each

Mode of Delivery: On-Campus

Course Objectives

- Master data cleaning and preprocessing techniques
- Develop proficiency in SQL, Power BI, and Python
- Create impactful data visualizations
- Build predictive models using machine learning
- Communicate data-driven insights effectively

Week-wise Course Plan

Week	Topics Covered	Learning Objectives	Assignments
1	• Introduction to Data Analytics • Data Types & Structures • Excel for Data Analysis	• Understand data fundamentals • Clean and transform raw data	• Clean a messy dataset in Excel • Create pivot tables and charts
2	• SQL Fundamentals • Power BI Basics • Data Visualization	• Write SQL queries for data extraction • Design	• Build customer analysis queries • Create sales dashboard in Power BI

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	Principles	interactive dashboards	
3	• Python for Analytics (Pandas) • Statistical Analysis • Advanced Power BI	• Perform exploratory data analysis • Automate reporting workflows	• Analyze dataset using Python • Generate statistical report
4	• Predictive Analytics • Machine Learning Intro • Final Project Development	• Implement regression models • Present insights professionally	• Build prediction model • Present final project

Assessment Structure

Component	*Weightage*
Class Participation	20%
Assignments	40%
Final Project / Exam	40%

Final Project

End-to-End Data Analysis Case Study

1. Source and clean a real-world dataset
2. Perform exploratory analysis (Python/Excel)
3. Create interactive dashboards (Power BI)
4. Develop predictive model (optional)
5. Present key business insights

Attendance Policy

- 80 % Attendance is mandatory for certification.

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Power BI Course Outline

Course Details

Course Type: Certification

Course Duration: 1 month

Class Frequency: 3 classes/week, 2 hours each

Mode of Delivery: On-Campus

Course Objectives

- Data Acquisition and Preparation

- Data Analysis and Visualization

- Sharing and Collaboration

Week-wise Course Plan

Week	Topics Covered	Learning Objectives	Activities / Assignments
1	**-Introduction to Power BI** **-Data Sources** **-Data Loading and Transformation** **-Data Modeling**	features, and architecture. Connecting to various data sources like Excel, CSV, SQL Server, etc.	Basic Assignment
2	**-Report Building** **-Visualizations** **-DAX Calculations** **-Interactivity and Filtering**	Creating basic and advanced visualizations like charts, tables, and maps. Writing DAX (Data Analysis Expressions) for	Data Cleaning, Data Manipulation, Uploading Data to Power BI

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		calculated columns and measures to perform advanced calculations.	
3	**-Advanced DAX** **-Custom Visuals**	Using filters, slicers, and drill-through functionality to make reports interactive. Exploring and using custom visuals to extend the functionality of Power BI.	DAX Expressions with Dashboard Designing.
4	**-Performance Optimization** **-Integration with Other Tools** **-Power BI Report Server**	Using different chart types, formatting options, and slicers to create interactive reports. Applying and customizing themes to create consistent and visually appealing reports.	Completely Optimized Reports. Ready for collaborations and further visuals based decisions.

Assessment Structure

Component	*Weightage*
Class Participation	40%
Assignments	30%
Final Project / Exam	30%

Final Project

Professional Dashboard with Advance analysis and DAX

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Attendance Policy

- 80 % Attendance is mandatory for certification.

- Late submissions may result in grade deductions.

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