Training Course on Power BI: Intermediate Data Analysis Techniques

Professional Development Training Course Outline

Category	Research and Data Analysis	**Duration**	10 Days
Base Fee	$3,000 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

Unleash the true potential of your data with our comprehensive **Power BI: Intermediate Data Analysis Techniques** training course. Training Course on Power BI: Intermediate Data Analysis Techniques is meticulously designed to equip you with advanced skills in data modeling, DAX calculations, insightful visualizations, and collaborative reporting within the Power BI ecosystem. Elevate your data analysis capabilities beyond basic reporting and discover how to extract actionable intelligence, identify key **business trends**, and drive strategic decision-making. Through hands-on exercises and real-world case studies, you will gain practical experience in leveraging Power BI's powerful features to uncover hidden patterns, forecast future outcomes, and communicate complex data stories effectively. Master the art of creating dynamic and interactive dashboards that empower stakeholders across your organization to gain a deeper understanding of performance metrics and key **performance indicators (KPIs)**.

This course builds upon foundational Power BI knowledge, diving into sophisticated techniques for data transformation, relationship management, and performance optimization. You will learn to write efficient DAX formulas to perform complex calculations, implement advanced visualization techniques to present data in compelling ways, and utilize Power BI Service for seamless collaboration and report sharing. By the end of this training, you will be proficient in developing robust and scalable Power BI solutions that provide valuable insights and contribute directly to organizational success. Invest in your data literacy and become a proficient Power BI user capable of transforming raw data into strategic assets.

Programme Curriculum

Training Course on Power BI: Intermediate Data Analysis Techniques

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Course Duration

10 days

Course Objectives

Upon completion of this training, participants will be able to:

1. **Develop advanced data models** in Power BI Desktop, including complex relationships and calculated tables.
2. Write and implement sophisticated **DAX measures** for advanced calculations and business logic.
3. Create dynamic and interactive **data visualizations** beyond standard chart types.
4. Utilize **Power Query M language** for advanced data transformations and shaping.
5. Implement **row-level security (RLS)** to control data access and ensure data privacy.
6. Optimize Power BI reports and dashboards for **performance efficiency** and faster load times.
7. Leverage **Power BI Service** for report publishing, sharing, and collaboration.
8. Build interactive **drill-down and drill-through** functionalities in reports.
9. Incorporate **advanced filtering and slicer techniques** for user-driven analysis.
10. Utilize **Power BI Desktop's performance analyzer** to identify and resolve bottlenecks.
11. Integrate **external data sources** beyond common databases, such as APIs and web data.
12. Create and manage **Power BI workspaces and apps** for effective content organization.
13. Understand and implement best practices for **data governance** within Power BI.

Organizational Benefits

- Improved **data-driven decision-making** across all departments.
- Enhanced ability to identify and capitalize on emerging **business opportunities**.
- Increased efficiency in generating insightful **business intelligence reports**.
- Better understanding of **key performance indicators (KPIs)** and their impact.
- Empowered employees with self-service **data analysis capabilities**.

- Improved collaboration and communication through shared **data insights**.
- Reduced reliance on manual data manipulation and spreadsheet errors.
- Greater ability to forecast trends and make proactive **strategic adjustments**.
- Enhanced data literacy and a more **data-centric organizational culture**.
- Cost savings through optimized reporting processes and better resource allocation.

Target Audience

1. Data Analysts seeking to enhance their Power BI skills.
2. Business Analysts looking to perform more in-depth data exploration.
3. Report Developers aiming to create sophisticated and interactive dashboards.
4. Power Users who want to leverage the advanced features of Power BI.
5. IT Professionals responsible for managing and deploying Power BI solutions.
6. Finance Professionals needing to analyze complex financial data.
7. Marketing Analysts looking to gain deeper insights from campaign data.
8. Anyone with foundational Power BI knowledge seeking to master intermediate techniques.

Course Outline

Module 1: Advanced Data Modeling Techniques

- Creating and managing complex table relationships (one-to-many, many-to-many).
- Implementing calculated tables and their use cases.
- Understanding and utilizing different filter directions and cross-filtering.
- Working with relationship cardinality and its impact on DAX.
- Best practices for optimizing data model performance.

Module 2: Mastering DAX for Complex Calculations

- Advanced aggregation functions (e.g., RANKX, AVERAGEX).
- Time intelligence functions for period-over-period analysis.
- Creating dynamic measures based on user selections.
- Implementing iterative functions (e.g., SUMX, MAXX) for row-level calculations.
- Understanding and optimizing DAX query performance.

Module 3: Advanced Data Visualization Strategies

- Utilizing custom visuals for enhanced data storytelling.
- Creating interactive visualizations with drill-down and drill-through.
- Implementing advanced conditional formatting techniques.
- Designing effective dashboards for different audiences.
- Best practices for visual design and data interpretation.

Module 4: Leveraging the Power Query M Language

- Writing custom M code for advanced data transformations.
- Working with lists, records, and tables in M.
- Implementing error handling and data cleansing techniques in Power Query.
- Creating reusable functions in Power Query.
- Optimizing Power Query performance for large datasets.

Module 5: Implementing Row-Level Security (RLS)

- Understanding the concepts and benefits of RLS.

- Implementing RLS within Power BI Desktop.
- Managing RLS for users and roles in Power BI Service.
- Testing and troubleshooting RLS configurations.
- Best practices for designing and implementing RLS.

Module 6: Performance Optimization of Power BI Reports

- Identifying performance bottlenecks using Power BI Performance Analyzer.
- Optimizing DAX queries for faster execution.
- Reducing report size and improving loading times.
- Best practices for data model design and performance.
- Understanding and utilizing query folding.

Module 7: Advanced Power BI Service Features

- Publishing and managing reports and dashboards in Power BI Service.
- Collaborating with colleagues through workspaces and apps.
- Setting up data refresh schedules and gateways.
- Implementing report subscriptions and alerts.
- Understanding Power BI Service administration and governance.

Module 8: Creating Interactive Drill-Down and Drill-Through Reports

- Designing effective drill-down hierarchies for detailed analysis.
- Setting up drill-through actions to navigate between report pages.
- Utilizing bookmarks and selections for interactive exploration.
- Best practices for user experience in interactive reports.
- Combining drill-down and drill-through for comprehensive analysis.

Module 9: Implementing Advanced Filtering and Slicers

- Creating advanced slicer configurations (e.g., hierarchy slicers, relative date slicers).
- Using measures to dynamically control slicer behavior.
- Implementing advanced filtering techniques using DAX.
- Synchronizing slicers across multiple report pages.
- Best practices for designing user-friendly filtering options.

Module 10: Utilizing Power BI Desktop's Performance Analyzer

- Understanding the Performance Analyzer interface and metrics.
- Identifying slow-performing visuals and DAX queries.
- Analyzing query plans to optimize DAX.
- Diagnosing and resolving performance issues.
- Best practices for proactive performance monitoring.

Module 11: Integrating External Data Sources

- Connecting to various data sources beyond databases (e.g., APIs, web).
- Using dataflows to prepare and transform external data.
- Implementing authentication and security for external data sources.
- Combining data from multiple disparate sources.
- Best practices for managing and refreshing external data connections.

Module 12: Managing Power BI Workspaces and Apps

- Creating and organizing workspaces for collaboration.
- Publishing and managing Power BI apps for wider distribution.
- Understanding roles and permissions within workspaces and apps.
- Implementing version control and lifecycle management for Power BI content.
- Best practices for Power BI content governance.

Module 13: Data Governance and Best Practices in Power BI

- Understanding the principles of data governance.
- Implementing naming conventions and documentation standards.
- Ensuring data quality and consistency within Power BI.
- Managing data lineage and impact analysis.
- Best practices for security, compliance, and auditing in Power BI.

Module 14: Advanced Analytical Techniques with Power BI

- Implementing forecasting and trend analysis using DAX.
- Performing what-if analysis with parameters.
- Integrating R and Python visuals for advanced analytics.
- Utilizing AI visuals for anomaly detection and key influencers.
- Best practices for applying advanced analytical methods in Power BI.

Module 15: Real-World Case Studies and Practical Applications

- Analyzing real-world business scenarios using Power BI.
- Working through practical exercises and case studies.
- Developing end-to-end Power BI solutions for specific business problems.
- Sharing best practices and lessons learned.
- Q&A session and discussion on applying learned skills.

Training Methodology

This course employs a blended learning approach that combines:

- **Interactive Lectures:** Concise explanations of key concepts and techniques.
- **Live Demonstrations:** Step-by-step demonstrations of Power BI features and functionalities.
- **Hands-on Labs:** Practical exercises allowing participants to apply learned skills.
- **Real-World Case Studies:** In-depth analysis of business scenarios using Power BI.
- **Group Discussions:** Collaborative problem-solving and knowledge sharing.
- **Q&A Sessions:** Opportunities for participants to ask questions and receive clarification.

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	04 Dec 2026	Online	$2,000
23 Nov 2026	04 Dec 2026	Physical	$3,000
23 Nov 2026	04 Dec 2026	Physical	$6,000
23 Nov 2026	04 Dec 2026	Physical	$6,000
23 Nov 2026	04 Dec 2026	Physical	$12,000
23 Nov 2026	04 Dec 2026	Physical	$9,000
23 Nov 2026	04 Dec 2026	Physical	$12,000
23 Nov 2026	04 Dec 2026	Physical	$12,000

Ready to enroll or request a customized program? Book online or contact us:

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