

## Advanced Excel & Power BI – Fast-Track Analytics Program

**Total Duration:** 24 Hours (6 Sessions × 4 Hours)

### Program Design Logic (Client Assurance)

- No topic removed – all original content retained
  - Reduced repetition across Excel & Power BI
  - Business use-case–driven delivery
  - Single end-to-end dataset used throughout
  - Capstone embedded across sessions
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### Session 1 – Advanced Excel: Data Analysis & Productivity

#### Coverage

- Advanced Excel interface, productivity tools & best practices
- Advanced formulas & functions:
  - Logical: IF, IFS, SWITCH
  - Lookup: XLOOKUP, INDEX–MATCH
  - Dynamic arrays: FILTER, SORT, UNIQUE
- Text, date & financial functions
- Error handling & formula auditing
- Efficient techniques for large datasets

#### Methodology

- Function clustering
- Side-by-side formula comparisons
- Business case–based exercises

#### Outcome

Participants build **optimized, scalable Excel models** quickly and accurately.

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### Session 2 – Advanced Excel: Automation, Modeling & Dashboards

#### Coverage

- Data validation using formulas & custom rules
- Advanced PivotTables & PivotCharts:

- Calculated fields & measures
  - Slicers & timelines
- Power Query in Excel:
  - Importing, cleaning, transforming data
  - Merge & append queries
- What-If analysis:
  - Goal Seek
  - Scenario Manager
  - Data Tables
- Dashboard design principles
- Introduction to Excel automation:
  - Macro recording overview

### Methodology

- One dashboard built live end-to-end
- Guided lab on pivot-driven dashboards

### Outcome

Participants **automate reports** and build **interactive Excel dashboards**.

## Session 3 – Power BI: Data Preparation & Modeling

### Coverage

- Power BI ecosystem:
  - Desktop, Service & Mobile
- Connecting to data sources:
  - Excel, CSV, databases
- Power Query Editor:
  - Data transformation & cleansing
- Data modeling:
  - Relationships & cardinality
  - Star schema best practices
- Introduction to DAX:
  - Calculated columns vs measures

- Core DAX functions

### **Methodology**

- Same Excel dataset reused
- Model-first BI approach

### **Outcome**

Participants design **clean, scalable Power BI data models**.

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## **Session 4 – Power BI: Advanced Analytics & Visualization**

### **Coverage**

- Advanced DAX:
  - CALCULATE, FILTER, ALL, RELATED
  - Time intelligence functions
- Advanced visuals:
  - Custom visuals
  - Formatting best practices
- Interactivity:
  - Slicers & filters
  - Drill-down & drill-through
  - Tooltips
- Dashboard design principles
- Performance optimization techniques

### **Methodology**

- Measure-driven visuals
- Optimization tips embedded during live builds

### **Outcome**

Participants create **high-performance, interactive BI dashboards**.

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## **Session 5 – Power BI: Deployment, Automation & Business Insights**

### **Coverage**

- Publishing to Power BI Service
- Data refresh & gateway concepts

- Row-Level Security (RLS)
- Integrating Power BI with Excel & other tools
- Data storytelling best practices

### **Capstone (Embedded)**

- End-to-end solution:
  - Excel data → Power Query → Data Model → DAX → Power BI Dashboard

### **Wrap-Up**

- Review of best practices
- BI roadmap & next steps

### **Outcome**

Participants deploy **secure BI solutions** and communicate insights effectively.

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## **Session 6 – Advanced Analytics, Optimization & Executive Readiness**

### **Coverage**

#### **Advanced DAX Patterns & Business Logic**

- Row context vs filter context (practical decoding)
- Business DAX patterns:
  - Running totals
  - YoY / MoM analysis
  - Ranking & Top-N analysis
  - KPI logic using SWITCH
- Debugging mismatched results

#### **Performance Tuning & Model Optimization**

- Model optimization techniques
- Cardinality impact
- Query folding concepts
- Visual & report performance tuning

#### **Governance & Enterprise Readiness**

- Workspace & deployment strategy
- Dataset reuse & certification
- Versioning & update management

- Advanced RLS scenarios

### **Executive Data Storytelling**

- Framing insights for leadership
- Decision-driven dashboards
- Avoiding dashboard anti-patterns

### **Capstone Finalization**

- Enhance dashboards with:
  - Advanced DAX
  - Performance optimizations
  - Executive-ready insights
- Scenario simulations (leadership Q&A)

### **Outcome**

Participants deliver **enterprise-ready, decision-grade analytics solutions.**

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### **Final Capability Outcomes**

By the end of the program, participants can:

- Build scalable Excel models & dashboards
  - Design optimized Power BI data models
  - Write advanced, reliable DAX
  - Deploy governed BI solutions
  - Communicate insights at an executive level
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If you want, I can next:

- Convert this into a **client proposal deck**
- Create **assessment rubrics**
- Map this to **job roles (Finance, Ops, Sales, HR)**
- Provide a **trainer delivery guide**

Just tell me how this will be used.