



## Power BI<sup>®</sup> Boot Camp

### Course Description

**Course Overview:** Extract, transform and load your data with Get and Transform, create measures in Pivot Tables with Power Pivot, and present and visualize your data with Power BI, Power View and 3D Maps. Sanitize your data, Analyze your data, and Visualize your data! Although you may feel like a Power Nap after 3 days in class, it will be worth it!

**Target Student:** This course is for students who want to join the Business Intelligence revolution! Students who take this course want to learn how to use Power BI (Microsoft's powerful new analytical toolset) to make timely and strategic business decisions.

If you already know Excel, you need to take the 3-Day Power BI Boot Camp if you:

- Need to integrate data from more than one source or data type
- Consolidate your data using the =VLOOKUP() function
- Need more sophisticated and flexible reports than traditional Pivot Tables
- Create calculated fields in Pivot Tables to further analyze your summary data
- Re-create the same Pivot Tables to report updates to the data

If you don't know Excel, but will be supporting Power BI, you need to take the 3-Day Power BI Boot Camp if you are:

- A business leader who needs to mine data for actionable insight – using existing resources and on short deadlines
- An IT or database professional looking to increase professional agility and dramatically expand capabilities
- Part of an organization looking to leverage Microsoft's groundbreaking Power BI offerings

**Prerequisites:** To ensure your success, we recommend you first take the following CompuTrain courses or have equivalent knowledge: Microsoft<sup>®</sup> Excel<sup>®</sup>: Introduction, and Microsoft<sup>®</sup> Excel<sup>®</sup>: Intermediate. Alternately, relational database experience and/or training would be helpful.

### Course Objectives

Upon successful completion of this course, students will be able to:

- Navigate the Power BI Interfaces
- Import data
- Create Data Models
- Create reports using Power Pivot data
- Use DAX functions
- Create Measures and KPIs
- Analyze Data with Pivot Tables and Pivot Charts
- Create Tables, Matrices and Charts
- Create Dashboards
- Get and Transform Data
- Perform Geospatial Analysis using Power Map

### Course Content

#### Lesson 1: Introducing Power Pivot

- Why Use Power Pivot?
- Enabling Power Pivot for Excel
- Exploring the Data Model Manager Interface

#### Lesson 2: Importing Data into Power Pivot

- Importing Data from Relational Databases
- Importing Data from Text Files
- Importing Data from a Data Feed
- Reusing Existing Connections to Update the Model

#### Lesson 3: Creating the Data Model

- What is a Data Model?
- Creating Table Relations
- Creating a Star Schema
- Creating Linked Tables
- Creating Hierarchies
- Making a User Friendly Model

**Course Content (continued on next page)**



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### Course Content (continued from previous page)

#### Lesson 4: Data Analysis with Power Pivot Tables and Charts

- Pivot Table Fundamentals
- Slicing the Data
- Adding Visualizations to a Pivot Table
- Working with Pivot Charts
- Using Multiple Charts and Tables

#### Lesson 5: Introduction to DAX

- What is DAX?
- Calculated Columns vs Measures
- Understanding the Syntax of DAX
- Understanding Implicit vs Explicit Measures

#### Lesson 6: Understanding Date Tables

- Creating a Date Table
- Creating a Date Hierarchy
- Using Single Date Functions

#### Lesson 7: Creating Measures with DAX

- Working with Text Functions
- Using Statistical Functions
- Creating Logical Functions
- Tips for Creating Calculations in Power Pivot
- Creating KPIs

#### Lesson 8: Understanding Filter Propagation

- Understanding Filter Context
- Altering the Query Context
- Creating Advanced Filters

#### Lesson 9: Basic Iterator Functions

- Understanding Row Context
- When to use X-Functions vs Aggregators
- Using Iterator Functions

#### Lesson 10: Relationship Building Calculations

- Getting Data from Related Tables
- Using Inactive Relationships in Measures

#### Lesson 11: Incorporating Time Intelligence

- Using DAX Date and Time Functions
- Shifting the Date Context

#### Lesson 12: Data Discovery with Get and Transform

- Discovering and Importing Data
- Transforming, Cleansing and Filtering Data
- Merging and Shaping Data
- Grouping and Aggregating Data
- Inserting Calculated Columns

#### Lesson 13: Creating Standard Visualizations with Power View and Power BI Desktop

- Creating Tables and Matrices
- Constructing Bar, Column, and Pie Charts
- Building Line and Scatter Charts
- Creating Map-Based Visualizations

#### Lesson 14: Creating Interactive Dashboards with Power View and Power BI Desktop

- Linking Visualizations in Power View
- Using Tiles to Organize the Data
- Filtering Groups and Views
- Exposing the Dashboard

#### Lesson 15: Geospatial Analysis with 3D Map

- Preparing Data for Mapping
- Creating a Map-Based Graph
- Creating Heat and Region Maps
- Adding Multiple Layers to a Power Map
- Analyzing Changes Over Time
- Creating a Tour