

TDWI Business Intelligence and Analytics Principles and Practices

Course Outline

Module 1 – Introduction to BI and Analytics

- Definitions
 - Business Intelligence
 - Business Analytics
 - Evolution of BI and Analytics
- Components
 - People and Applications
 - Systems and Processes
 - Data and Technology
- Perspectives
 - Points of View
- The BI and Analytics Roadmap
 - The BI and Analytics Lifecycle
 - Evolving Capabilities
 - Parallel Paths
 - Continuous Planning
- BI and Analytics Maturity
 - Readiness Assessment
 - Maturity Models
- Mistakes to Avoid
 - When Validating Direction
 - When Delivering Business-Driven BI
- Discussion
 - Introduction to BI and Analytics

Module 2 – Business Metrics and Analytics

- Business Capabilities
 - Purpose
 - Descriptive BI and Analytics
 - Diagnostic BI and Analytics
 - Discovery BI and Analytics
 - Predictive BI and Analytics
 - Prescriptive BI and Analytics
 - Capabilities Through Services
- Performance Management
 - Definitions and Concepts
 - Key Performance Indicators
 - Metrics, Measures, and Monitoring
 - Scorecards and Dashboards
- Business Analytics
 - Continuum
 - Analysis Types
 - Analytic Modeling
 - Framing Models

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- Casual Models
- Data Analytics
 - Solution Models
 - Modeling Process
 - Data Mining
 - Geospatial Analytics
 - Text Analytics
 - Forecasting and Prediction
 - Simulation and Optimization
 - Decision Management
- The BI and Analytics Roadmap
 - Capabilities, Metrics, and Analytics
- Mistakes to Avoid
 - In Predictive Analytics Efforts
 - When Deploying BI and Analytics
- Discussion
 - Business Metrics and Analytics

Module 3 – OLAP and Other Information Services

- OLAP Services
 - Online Analytical Processing
 - Dimensional Data Marts and Star Schema
 - The OLAP Cube
- BI Reporting
 - Enterprise and Operational Reporting
 - On-Demand Reporting
- Visualization and Storytelling
 - Communicating Insights
 - Data Visualization
 - Data Storytelling
- Data Access and Delivery
 - Query Services
 - Data Feeds and Downloads
- Self-Service
 - Evolving Service Models
- The BI and Analytics Roadmap
 - OLAP and Other Information Services
- Mistakes to Avoid
 - In Dimensional Modeling
 - In Data Storytelling
- Discussion
 - OLAP and Other Information Services

Module 4 – Data Integration

- Data Integration Architecture

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Course Outline

- Integration Strategy
- The Purpose of Architecture
- Integration and Data
- Components and Structures
- Integration Techniques and Technologies
- Data Types and Sources
 - Data Properties
 - Data Characteristics
 - Data Structure
 - Big Data Defined
 - Big Data Sources
 - Big Data Characteristics
 - Physical Storage
- Data Warehousing
 - Definitions
 - Applied Data Integration
 - Data Warehouse Architecture
- Data Stores
 - Diversity of Data Sources
 - The Data Lake
 - Analytics Sandboxes
- Implementation
 - Process
 - Agile Development
 - Data Warehouse Automation
 - What Can You Automate?
- Operation
 - Components
- The BI and Analytics Roadmap
 - Data Integration
- Mistakes to Avoid
 - When Using Data Federation
 - In Your Big Data Implementation
- Discussion
 - Data Integration

Module 5 – Data Management

- Data Governance
 - Data Governance Concepts
 - Data Governance Roles and Responsibilities
 - Data Stewardship
- Data Quality
 - Data Quality Concepts
 - Data Quality Assessment
 - Data Quality Improvement

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Course Outline

- Data Profiling
 - Purpose and Processes
 - Profiling Techniques
 - Tools and Technology
 - Application
- The BI and Analytics Roadmap
 - Data Management
- Mistakes to Avoid
 - When Creating Your Data Strategy
 - When Building a Data Quality Program
- Discussion
 - Data Management

Module 6 – BI and Analytics Technology

- The Technology Stack
 - Technology Layers
 - Functions and Services
- Technology Architecture
 - The Right Technology-Present and Future
- Technology Management
 - Reliable Platforms
- The BI and Analytics Roadmap
 - Technology
- Mistakes to Avoid
 - When Adopting New Technologies in BI
 - In Hadoop Implementations
- Discussion
 - BI and Analytics Technology

Module 7 – Summary

- Summary
 - Key Points

Appendix

- Bibliography and References