Module One

Concepts and Definitions

- Anatomy of a Metric
  - Data, Measures, and Metrics
  - Indicators and Indices
  - Qualitative Components
  - Quantitative Components
- Business Intelligence Concepts
  - BI Defined
  - The BI Framework
  - The BI Value Chain
- Business Measurement Systems
  - Measurement Concepts
  - Units of Measure
  - Applications in Business
  - Feedback and Control
- Systems and Process Concepts
  - Connectivity Models
  - Process Flows
  - Cause and Effect Relationships
  - Temporal Relationships
- The Metrics Supply Chain
  - Overview and Definitions
  - Applications to Metrics Delivery
  - Supply Chain Stages
  - Processes in the Supply Chain
- Metrics and Management
  - Overview
  - Performance Management
  - Process Management
  - Activity Management

Module Two

The Challenges of Metrics

- Defining the Right Metrics
  - Measuring What is Useful
  - Distinguishing Metrics from Measures
  - Linking Metrics to Measures
- Defining the Metrics Right
  - Quality Considerations
  - Integration and Usage
  - Sources of Data
  - Quantum and Application Data Mapping
  - Subject and Stratum Data Mapping
- Maintaining Business Alignment
  - Risks of Ad Hoc Metrics
  - Business Change and Continuous Alignment
  - Cascading through Hierarchies
  - Accountability and Incentives
- Measurement Characteristics
  - Setting Targets and Thresholds
  - Timing and Latency
  - Precision and Accuracy

  - Uncertainty and Measurement Error
  - Integration of Measurement Units

Module Three

Extending Data Modeling for Metrics

- The Data Modeling Framework
  - Overview
  - Framework Levels
  - Models and Deliverables
- Modeling Content and Structure
  - Business Context – Goals and Objectives
  - Fact/Qualifier Analysis
  - Logical Dimensional Modeling
- The Modeling Gap
  - The Zachman Framework
  - The Data Perspective
  - Additional Perspective for Metrics
- Metrics Modeling vs. Data Modeling
  - Contextual and Conceptual Modeling
  - Logical Modeling and Physical Design
  - Specification and Implementation
- GQMM Models
  - Purpose and Description
  - Approach and Deliverables
  - Usage and Application
- Causal Models
  - Purpose and Description
  - Cause and Effect Models
  - Process Models
  - State Transition Models
- Hierarchy Models
  - Purpose and Description
  - Approach and Deliverables
  - Usage and Application
- Measurement Models
  - Purpose and Description
  - Timing
  - Quality
  - Measurement Performance
  - Computation
- Fully Defined Metrics
  - Business Model
  - Measurement Model
  - Logical Data Model
  - Process, Delivery, and Calculation Models
- Metadata for Metrics
  - Metadata Categories
  - Metadata Usage
  - Metadata Content

Module Four

Goal-Question-Metric-Measure Case Study

- Case Study Background
  - Industry Perspective
  - Business Context and Issues

    - Goals and Objectives
    - From Strategies to Tactics
- GQMM Technique
    - Goal Modeling
    - Accountabilities and Incentives
    - Goal Attainment Questions
    - Identifying and Selecting Metrics
    - Metrics Components
    - Identifying Measures
    - Developing a Measurement Plan
- Logical Data Modeling
    - Modeling the Meter
    - Modeling the Dimensions
- Model Validation
    - Revisiting the Business Questions

Module Five

Causal Modeling Case Study

- Case Study Background
    - Business Perspective
    - Process Description
    - Process Improvement Objectives
- Causal Modeling Approach
    - Objectives and Goals
    - Cause and Effect Model
    - Identifying Goals
    - Validating the Model
    - Refining the Goals
    - Identifying Measures and Metrics – Goal #1
    - Identifying Measures and Metrics ÷ Goal #2
    - Identifying Measures and Metrics ÷ Goal #3
    - Identifying Measures and Metrics ÷ Goal #4
- Model Validation
    - Reviewing the Metrics Model

Module Six

Summary and Conclusion

- Implementing and Sustaining Metrics
    - From Metrics to Analytics
    - Metrics for the Long-Term
- Summary of Key Concepts
    - A Quick Review
- References and Resources
    - For More Information

Appendix A

Bibliography and References

Appendix B

Exercises

- Exercise 1 – Classification of Measures
- Exercise 2 – Defining Metric Data Requirements
- Exercise 3 – Designing a Metric Data Structure