Why Attend
The data warehouse and business intelligence (DW/BI) system continues to be one of the most organizationally complex and technically interesting IT projects. This course prepares you to successfully implement your DW/BI environment by distilling the essential upfront elements of the popular Kimball approach as described in the bestselling book, *The Data Warehouse Lifecycle Toolkit, Second Edition*.

This course is packed with specific techniques, guidance and advice from initial project planning through business requirements and dimensional modeling. It is taught through a combination of lectures, class exercises, small group workshops, and individual problem solving.

The DW/BI Lifecycle course is appropriate for anyone who is new to DW/BI and wants to learn a holistic set of best practices from the beginning, or for anyone who has been through a couple projects and wants to refine their methods to better align with the proven, broadly-accepted Kimball approach.

Who Should Attend
This course is designed for all major roles on a DW/BI project, including project managers, business analysts, data modelers and database administrators, architects, and ETL or BI application designers/developers.

Instructor
Margy Ross, co-author of *The Data Warehouse Lifecycle Toolkit, 2nd Edition*. She taught Kimball University’s DW/BI Lifecycle course for over 15 years. The legacy lives on!

Course Overview
Day 1 • Introduction to the Kimball Lifecycle
  • Program/Project Planning and Management
  • Business Requirements Analysis
  • Dimensional Modeling Introduction

Day 2 • Dimensional Modeling continued
DAY 1

Introduction to the Kimball Lifecycle
• Roadmap for creating the DW/BI system

Project Planning and Management
• Readiness factors
• Risk assessment and mitigation plans
• Scoping and business justification
• Team roles and responsibilities
• Program management
• Project plan development and maintenance

Business Requirements Definition
• Program versus project requirements preparation
• Requirements gathering participants
• Techniques for gathering requirements and handling obstacles
• Program/project requirements deliverables
• Requirements prioritization

Dimensional Modeling
• Role of dimensional modeling in the Kimball, Corporate Information Factory (CIF) and hybrid architectures
• Fact and dimension table characteristics
• 4-step process for designing dimensional models
• Transaction fact tables
• Fact table granularity
• Denormalizing dimension table hierarchies
• Degenerate dimensions
• Date and time-of-day dimension considerations
• Dealing with nulls
• Surrogate key for dimensions
• Star versus snowflake schemas
• Centipede fact tables with too many dimensions
• Factless fact tables
• Additive, semi-additive, and non-additive facts
• Workshop: Converting requirements and source data realities into dimensional model
• Consolidated fact tables
• Dimension table role-playing
• Allocated facts at different levels of detail
• Complications with operational header/line data
• Multiple currencies

DAY 2

Dimensional Modeling Continued
• Junk dimensions for misc. transaction indicators
• Periodic and accumulating snapshot fact tables
• Implications of business processes on data architecture
• Enterprise Data Warehouse Bus Architecture and matrix for master data and integration
• Conformed dimensions - identical and shrunk roll-ups
• Exercise: Translate requirements into DW Bus Matrix
• Slowly changing dimensions - type 1, 2, 3 and hybrid techniques for current and point-in-time attribute values
• Mini-dimensions for large, rapidly changing dimensions
• Exercise: Design review to identify common dimensional modeling flaws
• Design review dos and don’ts and mistakes to avoid
• Dimensional modeling process, tasks, and deliverables
• Exercise: Design enhancements to embellish existing design