

## COURSE OVERVIEW.

This course covers the core concepts of Data Warehousing and Dimensional Modelling. The main components of a data warehouse will be discussed, the general architecture of a data warehouse and the ETL process.

The course also covers the key concepts of dimensional modelling (based on Kimball). These dimensional modelling concepts will then be applied to a number of exercises. The final part of the course will look at some of the database features available in DBMS to physically implement a Data Warehouse

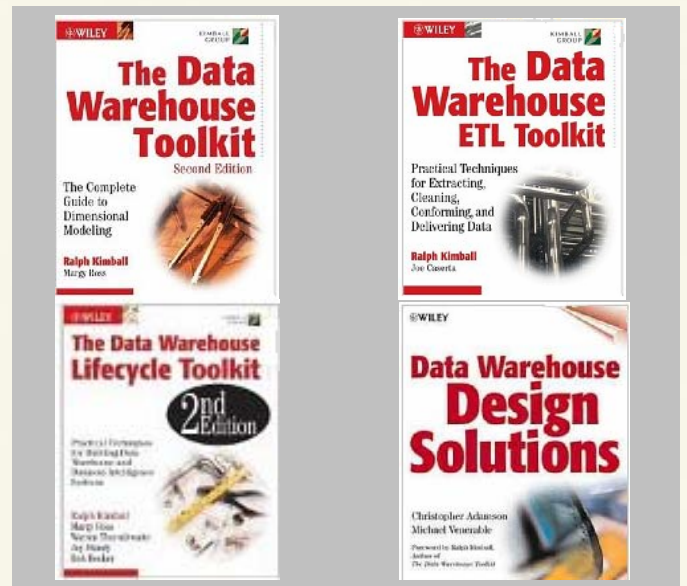
## COURSE SYLLABUS

### Day 1

- Introduction to Data Warehousing
  - Operational Data versus a Data Warehouse
  - Operational Data Store / Data Hub / DW
- Architecture of a Data Warehouse Environment
  - ETL, Data Staging, Data Timeliness
- Dimensional Modeling
- Granularity of Data
- Dimension Tables
- Fact Tables
  - Identifying Facts & Measures
  - Aggregations
- The 9 Step Process to Dimensional Modelling
  - The Bus Architecture
  - Slowly changing dimensions
- Exercises

### Day 2

- Review of Dimensional Modelling covered in Day1
- Exercises
- Data issues
- Database Considerations
  - Partitioning, Parallel Queries, Indexes, Materialised Views



## AVAILABLE OPTION

There is an option for the afternoon of day 2 of the course where the client can present one of their business processes. The instructor can guide the class through the dimensional modelling process for this business process, including the defining of the ETL requirements and reporting requirements. At the end of this optional session the clients will have an initial specification which they can continue to design and then implement.

## READING LIST

- [The Data Warehouse Toolkit: The Complete Guide to Dimensional Modeling, by Ralph Kimball](#)
- [The Data Warehouse ETL Toolkit: Practical Techniques for Extracting, Cleaning, by Ralph Kimball](#)
- [The Data Warehouse Lifecycle Toolkit, by Ralph Kimball](#)
- [Building the Data Warehouse, by Bill Inmon](#)
- [Data Warehouse Design Solutions, by Adamson & Venerable](#)
- [Mastering Data Warehouse Aggregates: Solutions for Star Schema Performance, by Adamson](#)