



## Logical Data and Process Modeling (3 Days)

1. **Introduction**
  - a. System development challenges
  - b. Benefits of modeling
  - c. Components of logical process models: moving from dataflow to process
  - d. Characteristics of essential modeling
2. **Approaches to Functional Decomposition**
  - . Concepts of Perfect Technology
    - a. Top down and bottom up approaches
    - b. Event partitioning
    - c. Using functional decomposition diagrams
3. **Introduction to Logical Data Modeling**
  - . Purpose and components
    - a. Data redundancy and derived data
    - b. Different levels of data modeling
4. **The Conceptual Data Model**
  - . Discovering entities, attributes and relationships
    - a. Analyzing attributes and choosing unique identifiers
    - b. Relationships and cardinality
5. **The Logical Data Model**
  - . Super-types and sub-types
    - a. Attributive and associative entities
    - b. Documenting data constraints
6. **Normalization and the Physical Data Model**
  - . The physical data model
    - a. The role of the database designer
7. **The Process Diagram in Context**
  - . Purpose and components
    - a. Rules and conventions
    - b. Leveled data flow diagrams
8. **Verifying and Presenting Models**
  - . Accuracy and completeness
    - a. Internal verification and external validation
    - b. Effective presentation
9. **CASE Tools and Transition to OO/UML**
  - . Major functions of CASE tools
    - a. Introduction to Object Orientation (OO) and Unified Modeling Language (UML)
    - b. Impact of OO/UML on the business analyst