

Course Outline

1. Introduction

- a. Agile Overview
- b. Benefits of Evolutionary Design

2. Agile Modeling Mindset

- a. The Challenge
- b. Purpose of Modeling
- c. Agile Modeling Goals
- d. Modeling in the Agile Project Management Lifecycle
- e. Agile Modeling Guiding Principles

3. Agile Documentation

- a. Why, When and What to Document
- b. Creating Self-Evident Implementations
- c. Documenting with a clear purpose for the right audience
- d. Minimally sufficient documentation
- e. Negative Value Documentation and Document End of Life

4. Domain Modeling

- a. Why, When and Who
- b. Story-Gathering Process
- c. Defining and Refining user roles
- d. User Personas
- e. Domain Modeling Exercise

5. Use Cases and User Stories

- a. Why, When and Who
- b. Use Cases
- c. User Stories
- d. Use Case Exercise

6. Sufficient Design Up Front

- a. How Buildings Learn
- b. Iteration Zero
- c. Conceptual Data Modeling
- d. Establishing Test Automation

- e. Continuous Integration Infrastructure
- f. Sufficient Design Guiding Principles

7. Data Model Patterns

- a. What is a Pattern?
- b. Pattern References
- c. Why Use Patterns?
- d. Drawbacks of Patterns
- e. Patterns, Seed Models, and Archetypes

8. Technical Debt

- a. Overview
- b. Design and Technical Debt
- c. Indicators of Technical Debt
- d. Prioritizing Debt
- e. Technical Debt exercise

9. Database Refactoring

- a. What is Refactoring?
- b. Refactoring Categories
- c. How Refactoring Works
- d. Preparing to Refactor
- e. How to Refactor

10. Agile Modeling with Data Vault

- a. Complexity of Change
- b. Introduction to Data Vault
- c. Hubs, Satellites and Links
- d. Data Vault example
- e. Data Vault Strength: Adapting to Change
- f. Data Vault Principles
- g. Why is Data Vault agile?
- h. Data Vault Exercise