

### **Module One: Data Quality Basics**

- Data Quality Needs
  - Stakeholders
  - Services and Applications
  - Big Data
- Data Quality Concepts
  - Defining Data Quality
  - Integrity and Correctness
  - Data Quality and Metadata Quality
  - Rules as Metadata
  - Metadata and DQ Management
- Data Quality Processes
  - Metadata and DQ Management
  - Quality Control, Assurance, and Management
  - Data Profiling
  - Data Quality Assessment
  - Data Cleansing
  - Process Improvement

### **Module Two: Profiling Data**

- Data Profiling Concepts
  - Purpose and Processes
- Column Profiling
  - Extracting Values Metadata
  - Examining Values Metadata
- Table Profiling
  - Examining Dependencies
  - Keys and Uniqueness
  - Column Dependencies
- Cross-Table Profiling
  - Examining Redundancy and Relationships
  - Redundancy
  - Relationships
- Analyzing Data Profiles
  - Column Profiles
  - Values Frequency
  - The Story in the Profiles
  - Data Quality Rules

- Data Profiling in Practice
  - Profiling and Projects
  - People and Technology

### **Module Three: Assessing Data Quality**

- DQ Assessment Concepts
  - DQ Assessment Defined
  - Subjective Assessment
  - Objective Assessment
  - Assessment in DQ Management
- Subjective Assessment
  - Subjective Assessment Process
  - A Survey of Data Quality Perceptions
- Objective Assessment
  - Objective Assessment Process
  - Planning and Preparation
  - Cataloging Data Quality Rules
  - Cataloging Data Quality Errors
  - Testing and Tuning Rules
  - Reporting and Analyzing Data Quality
- Assessment in Practice
  - Assessment and Projects
  - People, Roles, and Skills

### **Module Four: Fixing Data Quality Defects**

- Data Cleansing Concepts
  - Cleansing and Preparation
  - Data Cleansing Defined
  - Techniques
  - Cleansing Project Overview
  - Planning and Preparation
- Procedural Data Cleansing
  - Names and Addresses
  - Deduplication and Consolidation
- Rule-Based Data Cleansing
  - Data Cleansing Rules
  - Rules Processing
- Data Cleansing in Practice
  - Data Cleansing Workflow
  - Cleansing and the Data Warehouse
  - Data Cleansing and Projects
  - Cleansing and Analytics

- Cleansing and Self-Service
- People, Roles, and Responsibilities

**Module Five: Preventing Data Quality Defects**

- Data Quality Organizations
  - Data Governance
  - DQ Roles and Responsibilities
  - Data Ownership
  - Data Stewardship
  - Data Custodianship
- Root Cause Analysis
  - RCA Overview
  - Five Whys
  - Fishbone Diagrams
  - Causal Loop Diagrams
  - From Defects to Solutions
- Process Improvement
  - Process Improvement Principles
  - Process Improvement Overview
  - Prerequisites
  - Target Processes
  - Change Planning
  - Action Planning
  - Executing Change

**Module Six: Summary and Conclusion**

- Sustaining Data Quality
  - Awareness, Accountability, Action
- References and Resources
  - To Learn More

**Appendix A: Bibliography and References****Appendix B: Exercise Instructions and Worksheets**