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
  o Profiling and Projects
  o People and Technology

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

Module Four: Fixing Data Quality Defects
• Data Cleansing Concepts
  o Cleansing and Preparation
  o Data Cleansing Defined
  o Techniques
  o Cleansing Project Overview
  o Planning and Preparation
• Procedural Data Cleansing
  o Names and Addresses
  o Deduplication and Consolidation
• Rule-Based Data Cleansing
  o Data Cleansing Rules
  o Rules Processing
• Data Cleansing in Practice
  o Data Cleansing Workflow
  o Cleansing and the Data Warehouse
  o Data Cleansing and Projects
  o Cleansing and Analytics
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