## Course Outline

### Module One: Data Quality Concepts

- Defining Data Quality
  - Common definitions of quality
  - Applying quality definitions to data
  - Data correctness and data integrity
  - Actionable data quality
- Dimensions of Data Quality
  - Accuracy
  - Completeness
  - Consistency & dependency
  - Precision & granularity
  - Timeliness
  - Structural integrity
- Common Causes of DQ Problems
  - Definition
  - Design & modeling
  - Data entry & data collection
  - Conversion and consolidation
  - Integration

### Module Two: Data Quality Practices and Processes

- Quality Management Practices
  - Quality Assurance (QA) vs. Quality Control (QC)
  - Quality economics
  - Inspection and detection
  - Correction and prevention
- Quality Management and Data
  - Business applications and operational data
  - Integrated data and business information
  - Data quality and defect propagation
- Data Quality Organizations
  - Governance
  - Ownership
  - Stewardship
  - Custodianship
  - Architecture
  - Usage (access, update, and application)
- Data Quality Processes
  - Data profiling
  - Data quality assessment
  - Data cleansing

  - Process improvement
- Data Quality Tools and Technology
  - Profiling
  - Verification & standardization
  - Matching & grouping
  - De-duplication
  - Data transformation

**Module Three: Data Quality Assessment**

- Planning & Preparation
  - Project planning
  - Assessment team
  - Assessment resources
- Conducting the Assessment
  - DQ Rule identification
  - DQ Rule execution
  - Analysis and tuning
- Assessment Results
  - Error catalog
  - Data quality measures and metrics
  - DQ scorecard
- Applied Results
  - Communication & expectations
  - Root cause analysis
  - Quality improvement
  - Process improvement
  - Data cleansing
  - Data governance

**Module Four: Data Quality Improvement**

- Procedural Data Quality
  - Standardization
  - Verification
  - Classification
  - Parsing
  - Geo-coding
  - Matching
  - Grouping
  - De-Duplication
- Rule-Based Data Quality
  - Five kinds of data correctness rules
  - Six kinds of data integrity rules
  - Four kinds of timeliness rules
  - Applied DQ rules

- IT Processes and Data Quality
  - System architecture & standards
  - Application and database development processes
  - Conversion & migration processes
  - Data warehousing & BI processes
- Business Processes and Data Quality
  - Defining Data
  - Creating and updating data
  - Access, analysis, and reporting

**Module Five: Summary and Conclusion**

- Summary of Key Points
- References & Resources