

Data Quality Education



Online Education • Certification • Enterprise Solutions

- Data Quality Fundamentals
- Data Profiling
- Data Quality Assessment
- Root Cause Analysis
- Data Quality Scorecard
- Crafting the Business Case for Data Quality
- Diagnostic Analytics Using Statistical Process Control
- Data Parsing, Matching & De-duplication
- Ensuring Data Quality in Data Integration
- Organizing for Data Quality
- Data Governance Fundamentals
- Data Stewardship Fundamentals

TABLE OF CONTENTS



➤ OVERVIEW	2
➤ CURRICULA AT-A-GLANCE	3
➤ CERTIFICATION PROGRAMS	4
➤ ENTERPRISE SOLUTIONS	5-6
➤ COURSE DESCRIPTIONS	7-18
➤ OUR INSTRUCTORS	19-20
➤ OUR CUSTOMERS	21
➤ CONTACT US	22
➤ PRICE LIST	23
➤ ABOUT ELEARNINGCURVE	23

Data quality is a key business challenge of the 21st century. Quality has been an issue since the dawn of the IT profession and becomes increasingly challenging as the volumes of data increase and the uses for data expand. Regardless of your roles and responsibilities in business and IT - manager, analyst, or technologist - you will at some time be challenged by data quality issues. And quality is an equal opportunity issue, imposing itself in every aspect from transaction systems to Web content and business intelligence.

Our Data Quality curriculum includes 12 online courses from world leading experts: Kathy Hunter, Theresa Kushner, William McKnight, Arkady Maydanchik, Mark Peco, Tom Redman, Henrik Sørensen, Maria Villar, and David Wells. Our robust Certified Information Management Professional (CIMP) program builds upon education to certify knowledge and understanding of data quality. Finally, eLearningCurve's Enterprise Program is a flexible, scalable, cost-effective solution for teams and enterprises.

WHAT PEOPLE ARE SAYING ABOUT ELC



I found the course content to be exactly what I was looking for, with a good balance between theory and real-world examples. I would recommend this training to anyone who has an interest or

-- Gus McEachen, CIMP - Data Quality, Ireland

CURRICULA AT-A-GLANCE

Full course descriptions begin on page 8.

Data Quality Fundamentals

Instructor: Dave Wells

This 4-hour course provides an overview of the field of data quality with the goal of building strong foundational knowledge, including terminology, concepts, principles, processes, and practices.

Data Profiling

Instructor: Arkady Maydanchik

Data profiling is the process of analyzing actual data and understanding its true structure and meaning. This 5-hour course teaches all practical skills necessary to succeed in a data profiling initiative.

Data Quality Assessment

Instructor: Arkady Maydanchik

This 6-hour course gives comprehensive treatment to the process and practical challenges of data quality assessment. It starts with systematic treatment of various data quality rules and proceeds to the results analysis and building aggregated data quality scorecard.

Root Cause Analysis

Instructor: Dave Wells

Through this 4-hour course you will discover the art and science of knowing why. Learn to apply linear thinking, lateral thinking, systems thinking, and critical thinking – independently and in combination – to get to the core of even the most vexing problems.

Data Quality Scorecard

Instructor: Olga Maydanchik

Data quality scorecards have become very popular and many organizations are starting to build them. This online training course gives comprehensive treatment to the processes and practical challenges of data quality scorecarding.

Crafting the Business Case for Data Quality

Instructor: Tom Redman

Bad data harms almost all organizations, adding cost to operations, angering customers, and increasing risk. This 3.5-hour course offers a comprehensive analysis of benefits of high-quality data and costs of poor data quality, capped with the process for developing and delivering a powerful and effective business case.

Diagnostic Analytics Statistical Process Control

Instructor: Mark Peco

This 4-hour course provides an introduction to the concepts, techniques and applications of SPC within the context of information management.

Data Parsing, Matching, and De-duplication

Instructors: Kathy Hunter, William McKnight, Henrik Sørensen

To take advantage of the worldwide marketplace, businesses need to manage data globally. This reality poses very specialized and unique kinds of problems in data management. In this 4.5-hour course you will learn to identify and avoid the pitfalls of global information.

Organizing for Data Quality

Instructor: Tom Redman

Much like any other important endeavor, success in data quality depends on having the right people in the right jobs. This 3.5-hour course works through three case studies, while teasing out the principles needed to create successful data quality organizations.

Data Stewardship Fundamentals

Instructor: Maria C. Villar and Dave Wells

The objective of this 5-hour 15-minute course is to build a foundation of knowledge for Data Stewards. It covers topics ranging from basic terminology, roles and responsibilities and best practices of data stewardship to fundamentals of data quality, data governance, and other information management disciplines.

Data Governance Fundamentals

Instructors: Maria Villar, Theresa Kushner, Dave Wells

This 5-hour course provides an overview of the disciplines of governing data, covers the essential components of an enterprise-wide program, and outlines a roadmap to execute a successful data governance program.

Ensuring Data Quality in Data Integration

Instructor: Arkady Maydanchik

Data errors multiply and spread like viruses through data consolidation processes and ongoing data interfaces. This 5-hour course discusses various practices that can be put in place to maintain high data quality through data integration.

DATA QUALITY CERTIFICATION PROGRAM



CIMP: Demonstrate Mastery. Achieve Success.

Certification is an important tool for job seekers and for employers seeking to hire the most qualified people. eLearningCurve offers a robust certification program, Certified Information Management Professional (CIMP) that builds upon education to certify knowledge and understanding of information management.

The CIMP –Data Quality designation makes a clear statement that you have learned from the industry leaders and have demonstrated thorough understanding of data quality by passing several challenging exams.

For the true experts and standard bearers in the industry we offer the second level of CIMP certification - CIMP Ex. To earn the CIMP Ex designation you must demonstrate a combination of great Expertise, Experience, and Excellence.

WHAT SETS CIMP APART?

Rigorous exam system: We go beyond the basics. Rather than testing for knowledge that any industry professional should know, CIMP exams test an in-depth knowledge, comprehensive understanding, and ability to apply various concepts to a problem. You can be proud of your achievement of the CIMP designation, and hiring managers can be sure they are getting a highly knowledgeable employee.

Education to support certification: We believe that the best way to ensure success is to combine meaningful industry experience with thorough academic study. To that end, CIMP exams are aligned with our courses, developed and taught by top industry educators and professionals.

Designed with busy, working professionals in mind: No time-consuming or costly travel is required to complete coursework or to take your CIMP examinations. All courses and exams are available online. All that's required of candidates is an internet connection and the desire to demonstrate mastery of data governance topics and achieve success.

HOW DO I ENROLL?

The most convenient and cost-efficient method to enroll in the CIMP program is with one of our Education Packages (see page 5 for details). Each package includes all courses and exams necessary to earn CIMP or CIMP Ex. Alternatively, you can enroll in courses one at a time.

ENTERPRISE SOLUTIONS



Today more than ever companies are watching expenses and looking for ways to streamline processes, make training convenient, and create a consistent, scalable learning environment.

Today more than ever companies are watching expenses and looking for ways to streamline processes, make training convenient, and create a consistent learning environment.

eLearningCurve Enterprise is a flexible, convenient, and cost-effective way to train your employees and ensure that all team members have access to information management training they need when they need it. Whether your team or department work in the same office, or are on the other side of the world from each other, you can train them on time and on budget with eLearningCurve Enterprise.

Why eLearningCurve Enterprise?

- Comprehensive educational solution from a single provider
- Employees can take the courses they need when they need them
- Ensure all team members are trained to the same high standard
- Train employees no matter what their geographic location
- Employ a fully scalable education solution
- Minimize disruption to the business
- Maximize your employee training ROI
- Achieve 100% information comprehension
- Get "live" time with our instructors
- Stretch your training budget
- Get solutions for your specific needs

When you become an eLearningCurve Enterprise Customer

We'll work with you to develop educational programs for different roles, positions, teams, departments, and manage and track enrollment of all students in online classes and CIMP exams. We'll track and report educational progress for each student and work with you to meet any specific educational needs.

ELEARNINGCURVE ENTERPRISE BENEFITS

PARTNERSHIP: *Comprehensive educational solution from a single provider.* We'll be your educational "partner-for-life" providing employees with continuous information management education they need over the course of their careers.

FLEXIBILITY: *Employees can take the courses they need when they need them.* Our flexible program allows employees to take the courses they need when they need them to best suit their role, projects, backgrounds or interests.

CONSISTENCY: *Ensure all team members are trained to the same high standard.* Train your existing team, and set up courses for new hires and transfers. Consider CIMP exams to verify that your employees utilize the same methodology, techniques, and terminology.

SCALABILITY: *Select an Education Partner who truly understands scalability.* Roll out to a few employees, or your entire organization. Our solution can quickly and effortlessly accommodate groups of all sizes, even if they are geographically dispersed.

BREADTH: *Acquire comprehensive education and certification.* We offer a full information management education. We have you covered with a comprehensive set of courses, exams, and certifications designed to impart knowledge, test understanding, and validate learning.

LOCATION: *Train employees no matter what their geographic location.* Overcome geographical barriers to training. You can train your entire team whether they are in the same office, or on the opposite sides of the world. Everyone can access our online courses from any place at any time.

LOGISTICS: *Minimize disruption to the business.* Our online format allows employees to study from their office or home, allocate full training days, or study an hour a day during lunch breaks.

ROI: *Maximize your employee training ROI.* No need to worry about paying for flights, hotels and other travel expenses. 100% of what you spend goes towards learning, thus achieving top quality education at a fraction of the cost of in-person training.

RESULTS: *Achieve 100% information comprehension.* Learn from top industry experts in information management topics. Study at your own pace, listen to the material many times, and test your knowledge through CIMP certification exams.

SAVINGS: *Stretch your training budget.* We offer various pricing options including volume discounts, pay-as-you-go model with increasing discounts, and other alternatives.

"LIVE" INTERACTION: *Spend time with our instructors.* Organize question and answer meetings (via Webinar) with course instructors for groups of students who complete online courses.

INFORMATION MANAGEMENT 101 Mini-classes. As a benefit to our enterprise customers we offer a certain number of complimentary licenses for our 101 mini-classes..

CUSTOM COURSEWARE: *Get solutions for your specific needs.* Tell us which courses your organization needs the most. We'll work with top instructors in the industry to meet your needs in the most expedient manner.

COURSE DESCRIPTIONS

Data Quality Fundamentals

Instructor: Dave Wells

Duration: 4 hours

Data quality is a large and complex field with many dimensions. Every data quality practitioner needs a foundation of concepts, principles, and terminology that are common in quality management. Building upon that foundation, they need to understand how quality management concepts and principles are applied to data, as well as the language and terminology that specifically apply to data quality.

This online training course provides an overview of the field of data quality with the goal of building strong foundational knowledge.

You will learn:

- Basic concepts, principles, and practices of quality management
- General quality management terminology
- Data-specific quality management terminology
- How quality management principles are applied to data

This course is geared towards:

- Those getting started in the data quality field
- Individuals preparing for in-depth study of data quality and needs to start with the basics
- People who work with data quality professionals and needs to understand what they do
- Those who need to "speak the data quality language"

Course Outline

About the Course (5 min)

Quality Basics (30 min)

- Quality Basics
- Quality Defined
- Quality and Defects
- Quality Economics

Quality Management (93 min)

- Quality Management Practices
- Quality Management Gurus
- Quality Management Methodologies
- Related Disciplines
- Measurement and Standards

Data Quality Basics (45 min)

- Data Quality Defined
- Data and Purpose
- Dimensions of Data Quality

Data Quality Management (74 min)

- Data Quality Processes
- Data Quality Techniques
- Data Quality Tools and Technology
- Data Quality Projects
- Building-In Data Quality
- Data Quality Organizations

Data Profiling

Instructor: Arkady Maydanchik

Duration: 5 hours

Data profiling is the process of analyzing actual data and understanding its true structure and meaning. It is one of the most common and important activities in information management. Data profiling is the first critical step in many major IT initiatives, including implementing a data warehouse, building an MDM hub, populating metadata repository, as well as operational data migration and integration. It is also the key ingredient to successful data quality management.

While proliferation of commercial tools made data profiling accessible for most information management professionals, successful profiling projects remain elusive. This is largely because the tools allow gathering large volumes of information about data, but offer limited means and guidelines for analysis of that information.

In this online training course you will learn all practical skills necessary to succeed in a data profiling initiative.

You will learn:

- The what, why, when, and how of data profiling
- Various data profiling techniques, from simple column profiling to advanced profiling methods for time-dependent and state-dependent data
- How to efficiently gather data profiles
- How to analyze the data profiling information and ask the right questions about your data
- How to organize data profiling results
- How to perform dynamic data profiling and identify changes in data structure and meaning

This course is geared towards:

- Data quality practitioners
- MDM practitioners
- Metadata management practitioners
- IT and business analysts involved in data management
- Those responsible for implementation and maintenance of various data management systems

Course Outline

About the Course (7 min)

Introduction to Data Profiling (44 min)

- What is Data Profiling?
- Myth and Reality of Data Profiling
- Profiling Techniques
- Profiling Challenges
- Role of Profiling
- People and Technology

Column Profiling (89 min)

- Introduction
- Basic Counts
- Value Frequency Charts
- Value Distribution Characteristics
- Value Distribution

Profiling Time-Dependent Data (58 min)

- Introduction
- Timeline Profiling
- Timestamp Pattern Profiling
- Multi-Dimensional Profiling
- Event Dependency Profiling

Profiling State-Transition Models (49 min)

- Introduction
- Data Structures for State-Dependent Data
- Profiling Techniques

Other Profiling Techniques (65 min)

- Subject Profiling
- Relational Integrity Profiling
- Attribute Dependency Profiling
- Dynamic Data Profiling

Data Quality Assessment

Instructor: Arkady Maydanchik

Duration: 6 hours

More and more companies initiate data quality programs and form data stewardship groups every year. The starting point for any such program must be data quality assessment. Yet in absence of a comprehensive methodology, measuring data quality remains an elusive concept. It proves to be easier to produce hundreds or thousands of data error reports than to make any sense of them.

This online training course gives comprehensive treatment to the process and practical challenges of data quality assessment. It starts with systematic treatment of various data quality rules and proceeds to the results analysis and building aggregated data quality scorecard. Special attention is paid to the architecture and functionality of the data quality metadata warehouse.

You will learn:

- The what, why, when, and how of data quality assessment
- How to identify and use data quality rules for assessment
- How to ensure completeness of data quality assessment
- How to construct and use a data quality scorecard
- How to collect, manage, maintain, warehouse and use data quality metadata

This course is geared towards:

- Data quality practitioners
- Data stewards
- IT and business analysts and everyone else involved in data quality management

Course Outline

About the Course (9 min)

Introduction (53 min)

- Why Assess Data Quality
- Business Value of Data Quality Assessment
- Types of Data Errors
- Data Quality Assessment Approaches
- How Rule-Driven Approach Works
- Project Planning
- Project Steps

Data Quality Rules Overview (63 min)

- Attribute Domain Constraints
- Relational Integrity Constraints
- Complex Data Relationships

Rules for Historical Data (56 min)

- Historical Data Overview
- Timeline Constraints
- Value Pattern Rules
- Rules for Event Histories
- Rules for State-Dependent Objects

Finding Data Errors (76 min)

- Discovering Data Quality Rules
- Implementing Data Quality Rules
- Building Rule Catalog
- Building Error Catalog
- Fine-Tuning Data Quality Rules

Aggregate Data Quality Scores (66 min)

- School Report Card Example
- A First Look at DQ Scorecard
- Defining Aggregate Scores
- Score Tabulation

Building Data Quality Scorecard (61 min)

- Basic Scorecard Example
- Recurrent Data Quality Assessment
- Database and Enterprise-Wide DQ Scorecard

Root Cause Analysis

Instructor: Dave Wells

Duration: 3 hours, 45 minutes

Understanding why things happen is a fundamental management skill. For anyone who is challenged to manage data quality, business processes, or people and organizations, finding root causes is an essential skill. Understanding why is the key to knowing what to do – the core of sound decision making. But cause-and-effect relationships are elusive. Real causes are often difficult to find so we settle for easy answers. This leads to fixing symptoms rather than to solving problems, and to little or no gain where opportunity is abundant.

Root cause analysis is the alternative to easy answers. Looking beyond the apparent and obvious to find real causes brings insight and sows the seeds of foresight. Through this online training course you will discover the art and science of knowing why. Learn to apply linear thinking, lateral thinking, systems thinking, and critical thinking – independently and in combination – to get to the core of even the most vexing problems.

You will learn to:

- Recognize and avoid logical fallacies
- Identify and distinguish between correlation, coincidence, and cause
- Perform fast and light causal analysis using the “5 whys” technique
- Explore linear cause-and-effect chains with fishbone diagramming
- Describe complex cause-effect networks with causal loop models
- Challenge and refine linear and loop models with lateral and critical thinking techniques
- Apply root cause analysis to effectively manage quality, processes, and organizations

This course is geared towards individuals who:

- Data quality professionals and practitioners
- Quality management and quality improvement professionals
- Business analysts and business analytics professionals
- Managers and problem-solvers seeking insight and confidence in decision making
- Anyone responsible to manage data, information, people, process, or technology

Course Outline

About the Course (5 min)

The Nature of Cause and Effect (23 min)

- Definitions and Distinctions
- A First Look at Cause and Effect Models
- Cause and Effect Misconceptions

RCA Concepts and Principles (22 Min)

- The Purpose of RCA
- The Process of RCA
- Practical Application

Basic Causal Modeling Techniques (55 min)

- The Five Why's Method
- Fishbone Diagramming
- Five Why's and Fishbone Together

Complex Causal Modeling Techniques (61 min)

- Systems Thinking Concepts
- Causal Loop Models
- System Archetypes

Verifying Cause & Effect Conclusions (57 min)

- Nonsense and Logical Fallacies
- Fallacies and Thinking Styles
- Critical Thinking
- Lateral Thinking
- Course Summary
- Final Thoughts

Data Quality Scorecard

Instructors: Olga Maydanchik

Duration: 5 hours

Data quality scorecards have become very popular and many organizations are starting to build them. What they have found is that the path to a meaningful and useful DQ Scorecard is riddled with traps and obstacles.

This online training course gives comprehensive treatment to the processes and practical challenges of data quality scorecarding.

It starts with a few real, live use cases that showcase what a scorecard can do for a company when done right. Systematic treatment of various DQ scorecard challenges is given. Then the course proceeds to the ins and outs of the successful DQ scorecard, from the underlying data model to the effective processes that need to be set up in order to produce the scorecard efficiently. Multiple examples to illustrate every important point are provided in the class.

You will learn:

- The methodology behind data quality metrics calculations
- The best way to organize data quality related metadata collected during typical data quality projects
- Effective data visualization techniques to depict data quality measurements
- Typical pitfalls that accompany data quality scorecard implementation and how to avoid them
- How to achieve scorecard adoption and usage by the business users

This course is geared towards:

- Data quality practitioners
- Data stewards and data governance practitioners
- IT analysts, business analysts, and everyone else involved in data quality management
- Developers tasked with DQ Scorecard creation

Course Outline

About the Course (3 min)

Case Studies (46 min)

- What is Data Quality Assessment?
- What is a Data Quality Scorecard?
- Data Quality Scorecard Case Study 1: Improving the Efficiency of the Risk-Weighted Asset (RWA) Calculation Process (Financial Company)
- Data Quality Scorecard Case Study 2: Data Quality Impact on Catastrophe Risk Modeling (Insurance Company)

Data Quality Score Calculation Methods (37 min)

- Averages Method For Score Cards
- Record Level Score Calculations
- Subject Level Score Calculations
- Score Types Comparisons
- Score Decomposition By Business Dimensions
- Business Dimensions Versus Subjects
-

Data Modeling Considerations Part 1 (55 min)

- Why DQMDW?
- DQMDW Components
- Case Study DQMDW For Property Insurance Company
- DQMDW: Critical Data Elements Catalog
- DQMDW: Rule Catalog

Data Modeling Considerations Part 2 (68 mins)

- DQMDW: Subject Master And Business Dimensions Master
- DQMDW: Error Catalog
- Error Details – Storage Options
- Rule Error Output – Advanced Examples
- DQMDW: Score Catalog
- DataMarts For DQ Visualization

Building A Data Quality Scorecard Process (61 mins)

- Process Overview
- Step 1-10:

Data Quality Scorecard Demo (35 mins)

- Overall Score Analysis
- Summary

Crafting the Business Case for Data Quality

Instructor: Tom Redman

Duration: 3 hours, 30 minutes

Bad data harms almost all organizations, adding cost to operations, angering customers, increasing risk, and making it more difficult to craft and execute strategy. Good business cases help build support for the hard work needed to improve.

Two important components of a business case are Business Benefits and a Cost-of-Poor-Data-Quality (COPDQ) analysis. To be clear, assigning dollar values to some benefits and costs is extremely difficult. As Dr. Deming observed, "the true costs of poor quality are unknown and unknowable." Dr. Deming was referring specifically to manufacturing but, so far anyway, his insights have proven true for quantifying the cost of poor data as well.

Critically a good business case engages both "the head and the heart," narrowing the focus to the benefits and costs that have the greatest logical and emotional appeal to the organization. For example, a company pursuing a strategy of customer intimacy may be far more concerned about costs associated with customer anger than increased operational costs. Finally, the business case must be sold in powerful ways.

This online training course offers a comprehensive analysis of benefits of high-quality data and costs of poor data quality, capped with the detailed process for developing and delivering a powerful business case.

You will learn to:

- Think through both the benefits of high-quality data and the costs of poor quality
- Distinguish costs that are estimable from those that cannot
- Perform cost-of-poor-data-quality analysis
- Create a business case for data quality that engages both "the head" and "the heart"
- Deliver and sell business case for quality

This course is geared towards:

- Those tasked with getting a data quality program started, or advancing an existing program
- Those who must build support for their data quality efforts
- Those seeking to advance data quality in the face of indifference, tight budgets, opposition, etc
- Data stewards and data quality professionals who want to better understand costs and benefits of data quality

Course Outline

About the Course (9 min)

The Benefits of High-Quality Data (62 min)

- Advantages of High-Quality Data
- Data Quality in the [Not Too Distant] Future
- Putting Data to Work and Data Quality
- Special Properties of Data and Data Quality

The High Costs of Poor Data Quality (101 min)

- The Range of Impact due to Bad Data
- Data Quality Defined
- Operations' Perspective
- Decision Maker's Perspective
- Technologist's Perspective
- Risk Perspective
- Societal (Taguchi) Perspective
- Customer Perspective
- Regulator's Perspective
- Lost Opportunity Costs
- Marketplace Perspective

Building Business Case for Data Quality (43 min)

- Key Messages
- Developing the Business Case
- Influencing Factors
- Areas of Focus
- Assemble Current State
- Propose Improvement Targets
- Before and After Picture
- Assemble the Business Case
- Expect Objections
- A Final Note

Diagnostic Analytics Using Statistical Process Control

Instructor: Mark Peco

Duration: 3 hours, 50 minutes

The field of Diagnostic Analytics includes the capabilities to detect abnormal conditions and to estimate root causes to those conditions. This course is focused on the “detection” aspect of diagnostic analytics and introduces Statistical Process Control (SPC) as a suitable approach for defect detection. Root cause analysis of the identified defects is beyond the scope of this course.

SPC includes a set of analytical techniques that measure and detect abnormal changes in the behavior of a managed process. SPC helps managers respond to unexpected changes in critical variables and take corrective action as necessary to maintain the desired levels of product quality and process performance over time.

SPC has been successfully applied to a wide range of business, technology and production processes that all have measurable outputs. It is based on the application of statistical techniques implemented in the form of control charts used to monitor the variation of important process variables or attributes.

This online training course provides an introduction to the concepts, techniques and applications of SPC within the context of information management practices and processes. The theory of SPC is introduced and the design of control charts is discussed as a basis for describing how a diverse range of data and process quality management challenges can be addressed.

You will learn:

- Identify methods for detecting defects and abnormal conditions
- Define and describe some common process building blocks
- Describe the concepts and theory behind “statistical control”
- Describe how statistical methods can be used to measure and estimate process variation
- Identify and categorize major causes of process variation
- Describe how process variation is directly related to product quality
- Discuss the principles of control charts used to detect and generate process alarms
- Present the basic concepts of quality management initiatives and practices and how it relates to the scope of Statistical Process Control
- Describe how to apply solutions to address process, data and related quality management challenges
- Provide the context necessary to implement effective solutions

This course is geared towards:

- Big Data Analytics Professionals
- Data Quality Analysts
- Data Governance Leaders
- Process Improvement Analysts
- Business Analysts
- Information Technology Professionals
- Data Warehousing Team Members
- Data Warehousing and Big Data Professionals
- Program Managers and Project Managers leading various types of Business Improvement Programs
- Functional Business Managers
- Anyone with a desire to learn how statistical concepts can be applied to improve the quality of data and information and its various management processes

Course Outline

About the Course (8 min)

Introduction to SPC (38 min)

- Basic Definitions
- Understanding Variation
- SPC and Quality Management

Control Charts (56 min)

- Basic Statistics
- Control Chart Fundamentals
- Types of Control Charts
- Control Chart Design Considerations

Applications (66 min)

- Application Areas of SPC
- Role of SPC in Process Management
- Operations Improvement Example
- Real Time Process Monitoring Example
- Master Data Interface Monitoring Example
- Data Quality Monitoring Example
- Business Performance Monitoring Example

Beyond the Basics (65 min)

- Improving Control Chart Performance
- Analyzing Process Capability

Data Parsing, Matching and De-duplication

Instructors: Kathy Hunter, William McKnight, Henrik Sørensen

Duration: 4 hours, 20 minutes

Data parsing, standardization, matching, and de-duplication are the cornerstones of successful Master Data Management (MDM). They are also critical parts of successful data quality programs, and are key steps in building data warehouses as well as any data integration and consolidation initiatives. You could say that today few organizations can function effectively without implementing data parsing and matching processes often in many data domains.

This need is further magnified if your company has gone global and plans to create databases that combine name- and address-related data from all corners of the world. Managing global information effectively takes specialist knowledge and the ability to show consideration for the differences that exist throughout the world. Worldwide there are more than 10,000 languages, 130 address formats, 36 personal and hundreds of business name formats. All of these variables are further complicated by the need to respect national and regional cultures. Failure to consider formats, styles, and cultures has huge impact on quality of data and quality of business relationships.

This online training course is aimed at data quality and master data management (MDM) professionals as well as those responsible to work with global information. The field is broad and the details are many. The purpose of this course is to provide a broad and in-depth review of data parsing, standardization, matching, and de-duplication techniques, as well as extensive overview of specific problems and solutions when dealing with global data.

You will learn:

- Data parsing, standardization, matching, and de-duplication techniques
- How to find and use external reference data
- How data parsing and matching contribute to improving data quality, MDM, and data warehousing
- Which data domains, entities and data elements may benefit from data parsing and matching
- Challenges of global data and ways to overcome these challenges

This course is geared towards:

- Master data management professionals
- Data quality professionals
- Information architects
- Developers of data warehousing systems
- Business professionals who work with global data

Course Outline

About the Course (12 min)

Introduction (17 min)

Implementation Fundamentals (70 min)

- Parsing and Standardization
- Introduction to Data Matching
- Data Matching Techniques
- Data Matching Destinations
- Evaluating Data Matching Tools

External Reference Data (45 min)

- External Data Sources
- Syndicated Customer Data
- Syndicated Product Data
- Using the Web

Challenges of Global Data (58 min)

- Introduction to Global Information
- Global Data: What You Need to Know
- Variations by Country and Region
- Cultural and Legal Impacts
- Characters and Diacritics

Overcoming the Challenges of Global Data (59 min)

- Data Profiling
- Consistent Data Structures
- Preparing Global Data for Effective Use

Organizing for Data Quality

Instructor: Tom Redman

Duration: 3 hours, 20 minutes

Much like any other important endeavor, success in data quality depends on having the right people in the right jobs. But who, specifically, are these people and what are they supposed to do? The question is especially crucial because virtually everyone touches data in some way or other and so can compromise their quality.

This online training course works through roles and responsibilities for three case studies, while teasing out the principles needed to create successful data quality organizations.

You will learn:

- The politics of data quality management
- The key principles in building data quality organizations
- Various roles and responsibilities in data quality management
- Various data quality organization models, including:
 - a departmental level model
 - a data provider model
 - a fully-functioning enterprise group led by Chief Data Office

This course is geared towards:

- Data quality professionals and practitioners
- Data governance professionals
- Senior leaders who want to understand "where data fits" and "why data quality matters"
- Business managers who lead departments or teams heavily dependent on data
- IT managers and project managers involved in data quality management

Course Outline

About the Course (12 min)

Introduction (41 min)

- Guiding Principle
- A Database is Like a Lake
- Ten Habits of Those with the Best Data
- Common Social and Practical Issues of Data Quality
- Data Organization Staffing

The Fundamental Organizational Unit for Data Quality (57 min)

- Compliance Example Overview
- Compliance Reporting
- Compliance Objective
- Obtaining High-Quality Data
- Creating High-Quality Reports
- Organization Structure for Data Quality

The Rigors of Competition (49 min)

- Small Data Vendor
- Data Vendor Objective
- What's the Same?
- What's Different?
- New Organizational Constructs
- Final Organization Structure
- Data Office for the Data Vendor
- Roles and Responsibilities
- This Model Applies to Most Organizations!

Multi-national, Multi-business, Multi-multi (40 min)

- Objectives of Enterprise Data Quality
- No "One Size Fits All"
- Roles and Responsibilities
- Federated Structure for Data Quality
- Corporate Data Office
- Size of Effort
- Getting Started
- Traps to Avoid
- A Final Note

Data Stewardship Fundamentals

Instructor: Maria C. Villar and Dave Wells

Duration: 5 hours, 15 minutes

Data Stewards are important leaders in a company's information management program. As companies tackle data governance initiatives brought on by regulatory demands and the business need for higher confidence and transparency of data, the role of Data Steward becomes increasingly important.

The objective of this online training course is to build a foundation of knowledge for the Data Stewards. It covers fundamentals of data stewardship: who are the data stewards, what they do, what are their responsibilities, and what are the key principles and practices of data stewardship.

You will learn:

- Why data stewards are important
- Different types of data stewards
- Roles and responsibilities of data stewards
- Best practices of data stewardship
- Types of data, databases, and data stores
- Common uses of data and business data flow
- Types of data management processes
- The "what, why, and who" for each of the 14 IM disciplines
- Relationships, roles, goals, competencies, and knowledge for data stewardship success

This course is geared towards:

- Data stewards
- Data governance professionals and practitioners
- Business or IT professionals who want to become data stewards
- Business or IT counterparts working with data stewards
- Information management professionals who want to learn about data stewardship

Course Outline

About the Course (9 min)

Data Stewardship Basics (51 min)

- What is a Data Steward
- What "Does Stewardship" Mean
- Why a Data Steward
- Types of Data Stewards
- Key Reporting Considerations
- Common examples of Data Stewards
- Not all Data Should be Managed
- Getting Started
- Attributes of a Data Steward

Roles and Responsibilities of Data Stewards (44 min)

- Overview
- Data Stewardship and Data Strategy
- Stewardship and Data Classification
- Stewardship and Data Quality
- Stewardship and Business Processes
- Stewardship and Data Acquisition
- Stewardship and Data Modeling
- Stewardship and IT Management
- Stewardship and Data Operations
- Stewardship and Change Management
- Stewardship and Data Governance

Data Stewardship Tips & Techniques (46 min)

- Create a Data Culture
- 10 Keys to Being A Successful Data Steward
- De-railers to Data Stewardship
- Case studies
- What Does Great Data Management Look Like

Information Management Basics (84 min)

- Overview
- Types of Data Stores
- Types of Data and Information
- Types of Databases
- Common Uses of Data
- Business Data Flow
- Data Management Processes
- Utilization Processes
- Custodial Processes
- Data Lifecycle Processes

Information Management Overview (72 min)

- Overview
- Information Management Defined
- The Scope of Information Management
- IM Dimensions
- Understanding the Data
- Information Supply and Demand
- Data Utility
- Data Resource Consolidation
- Applied Information
- Discovery and Inference

The Data Stewardship Landscape (10 min)

- Overview
- Data Steward Relationships
- Data Steward Roles
- Data Steward Goals
- Data Steward Competencies
- Data Steward Knowledge

Data Governance Fundamentals

Instructors: Theresa Kushner, Maria C. Villar and Dave Wells
Duration: 5 hours

Data governance is an emerging, cross-functional management program that treats data as an enterprise asset. It includes the collection of policies, standards, processes, people, and technology essential to managing critical data to a set of goals.

Data governance also includes the oversight necessary to ensure compliance and to manage risk. A data governance program can be tailored to match an organization's culture, information maturity, priorities, and sponsorship.

This online training course provides an overview of the disciplines of governing data, covers the essential components of an enterprise-wide program, and outlines a roadmap to execute a successful data governance program. In addition to the extensive overview, the course makes data governance real and tangible by illustrating the concepts, principles, and practices using a case study of data governance in a customer intelligence initiative.

You will learn:

- What data should be governed
- Why data governance is important
- Basic concepts, principles, and practices of a data governance program
- Where and how to start a data governance program
- People and tools that enable a data governance program
- Techniques to measure success of a data governance program
- Governance of big data and cloud applications

This course is geared towards:

- Individuals who implement a data governance program
- Individuals who participate in a data governance program
- Business data stewards
- Information professionals who want to learn about this emerging area

Course Outline

About the Course (7 min)

Introduction to Data Governance (33 min)

- Data Governance 101
- Why Govern Data?
- What Data Should Be Governed?
- Business Drivers for Data Governance

Implementation Fundamentals (78 min)

- Selecting Data and Setting Goals
- Standards, Policies, Processes, People, and Technology
- Managing and Measuring Data Governance

Case Study (63 min)

Data Governance of Emerging Solutions (65 min)

- Big Data
- Cloud Applications

Modernizing Data Governance (53 min)

- Overview
- The Data Quake: From Stable to Volatile
- New Data Governance Challenges
- Curating and Cataloging Data
- Rethinking Data Governance Practices
- Technologies and Modern Data Governance
- Module Summary

Ensuring Data Quality in Data Integration

Instructor: Arkady Maydanchik

Duration: 5 hours, 15 minutes

Corporate data universe consists of numerous databases connected by countless real-time and batch data interfaces. The data continuously move about and change. The databases are endlessly redesigned and upgraded, as are the programs responsible for the data integration. The typical result of these dynamics is that information systems get better, while data quality deteriorates. Without a comprehensive data quality monitoring program bad data spread like viruses.

This online training course discusses various practices that can be put in place to mitigate the problem and maintain high data quality through data integration.

You will learn:

- The data quality challenges that are inherent in data integration
- The critical role of data quality monitoring in data integration
- Specific techniques to monitor and manage quality for batch data integration
- Specific techniques to monitor and manage quality in data synchronization interfaces
- Use of Statistical Process Control (SPC) methods in monitoring data quality
- The impacts of change on data quality and techniques to address those impacts

This course is geared towards:

- Data integration practitioners
- Data quality practitioners
- Data warehousing practitioners
- MDM practitioners
- Others in the trenches involved in design, development, and maintenance of data integration systems

Course Outline

About the Course (8 min)

Introduction (64 min)

- Data Integration Basics
- Data Quality in Data Federation
- Data Quality in Data Consolidation
- Data Quality in Real-Time Interfaces
- Data Quality in Batch Interfaces
- Beyond Monitoring

Data Consolidation and Cleansing (75 min)

- Data Consolidation Challenges
- Keys to Success
- Data Discovery and Analysis
- Data Cleansing
- Data Consolidation

Error Monitors in Batch Interfaces (77 min)

- Monitoring Techniques
- Batch Integrity Rules
- Master Data Integrity Rules
- Dynamic Integrity Rules
- Monitor Management
- Error Correction
- Root Cause Analysis
- Statistical Process Control

Change Monitors in Batch Interfaces (95 min)

- Examples
- Change Monitor Defined
- Which Metrics to Monitor
- Implementing the Monitors
- Heuristic Monitors
- Basic Statistical Monitor
- Handling Non-Stationary Data

OUR INSTRUCTORS

Kathy Hunter

Kathy always says she has data in her blood. Joining Harte-Hanks in 2002, she built an information management practice and, with her highly skilled team, was responsible for instituting their highly successful Global Data Management solution set. From information quality and data governance through to providing global data solutions and guidance she attained a reputation for expert knowledge and successful delivery in global information management to her clients. Kathy is known for her pragmatic approach to topics, providing helpful hints and practical examples in order to solve tough problems.

Theresa Kushner

Theresa Kushner is presently the Vice President of Enterprise Information Management for VMware, Palo Alto. She joined in October 2012 to help the fast growing software company develop a firm data foundation on which to build their future business. Before joining VMware she was the Director of Customer Intelligence within the Strategic Marketing organization of Cisco Systems.

William McKnight

William is president of McKnight Consulting Group, which includes service lines of Master Data Management, IT assessment, Big Data, Columnar Databases, Data Warehousing, and Business Intelligence. He functions as Strategist, Lead Enterprise Information Architect, and Program Manager for sites worldwide. William is a Southwest Entrepreneur of the Year Finalist, a frequent best practices judge, has authored hundreds of articles and white papers and given hundreds of international keynotes and public seminars.

Arkady Maydanchik

For more than 20 years, Arkady Maydanchik has been a recognized leader and innovator in the fields of data quality and information integration. As a practitioner, author and educator he has been involved in some of the most challenging projects industry has seen. These projects were often the result of major corporate mergers and the need to consolidate and integrate databases of enormous variety and complexity. Arkady's client list includes such household names as Dun & Bradstreet, Hewitt Associates, Kimberly Clark, Raytheon, Sprint, Verizon, and Xerox.

Olga Maydanchik

Olga Maydanchik is an experienced practitioner and educator in the field of Information Management. As a part of Chief Data Offices in Citi, AIG, Deutsche Bank, and Voya Financial, Olga was focusing on designing and implementing the enterprise-wide Data Quality, Master Data Management, Metadata Management, and Analytics programs. Olga is a member of the Enterprise Data Management Council and actively participated in the Data Management Capability Assessment Model and Ontology design work streams.

Mark Peco

Mark Peco is an experienced consultant, educator, practitioner and manager in the fields of Business Intelligence and Process Improvement. He provides vision and leadership to projects operating and creating solutions at the intersection of Business and Technology. Mark is actively involved with clients working in the areas of Strategy Development, Process Improvement, Data Management and Business Intelligence.

Tom Redman

Dr. Thomas C. Redman (the Data Doc) is an innovator, advisor, and teacher. He was first to extend quality principles to data and information, in the late 80s. Since then he has crystallized a body of tools, techniques, roadmaps, and organizational insights that help organizations make order-of-magnitude improvements. He is a sought-after lecturer and the author of dozens of papers and four books. The most recent, *Data Driven: Profiting from Your Most Important Business Asset* (Harvard Business Press, 2008) was a Library Journal best buy of 2008. Tom holds a Ph.D. in statistics from Florida State University.

Henrik Sørensen

Henrik Liliendahl Sørensen has over 30 years of experience in working with Master Data Management and Data Quality and is a charter member of the International Association of Information and Data Quality. Currently Henrik works with Master Data Management at Tata Consulting Services and as Practice Manager at Omikron Data Quality besides writing on a well trafficked blog about data quality, master data management and the art of data matching. Henrik is the founder of the Data Matching and the Multi-Domain MDM groups on LinkedIn.

Maria C. Villar

Maria C. Villar is a leader, consultant and writer in the field of enterprise information management, IT management and software development. She has held senior executive positions in both the technology and financial sector. Maria holds a bachelor in Computer Science and graduate degrees in Management Information Systems and Business Administration. Maria has guest lectured on the topic of IT and information management in leading universities, industry conferences and Fortune 500 companies across the country.

Dave Wells

Dave Wells is a consultant, teacher, and practitioner in the field of information management. He brings to every endeavor a unique and balanced perspective about the relationships of business and technology. This perspective—refined through a career of more than thirty-five years that encompassed both business and technical roles—helps to align business and information technology in the most effective ways. Dave is a frequent contributor to trade publications and is a co-author of the book *BI Strategy: How to Create and Document*. He also speaks at a variety of industry events

OUR CUSTOMERS

eLearningCurve has students in almost every country in the world, including many enterprise customers.



- Variety of customers from small project teams to large enterprises
- Enterprise customers typically Fortune 500 and Global 1000 companies
- All major industries are represented

WHAT OUR CUSTOMERS ARE SAYING...



The courses are well laid out, build on each other, and are rich in practical content and advice.

-- Steve Lutter, CIMP Data Quality, DM and Metadata, IM Foundations, Business Intelligence, Data Governance, MDM, United States



It is evident that a thorough and considerable effort has gone into the preparation of this program.

-- Alfredo Parga O'Sullivan, CIMP Ex Data Quality,



The ability to take the courses at my own pace and at a time suitable for me was of great help.

-- Geeta Jegamathi, CIMP Data Quality, India

CONTACT US

Director, Enterprise Solutions
Arkady Maydanchik
Arkadym@elearningcurve.com

Director, Marketing
Michelle Johnson
Mjohnson@elearningcurve.com

Director, Education
Dave Wells
David.Wells@elearningcurve.com

Director, Technology
Varya Belyaevskaya
Admin@elearningcurve.com

Customer Support
Support@elearningcurve.com

Phone: 1-630-242-1659

Mailing Address: 305 Midwest Club Parkway, Oak Brook, IL
60523



RESELLERS

DENMARK
Right Training
Contact:
Jan Sørensen
+45 31 45 04 99
jms@righttraining.dk

SOUTH AFRICA & SUB-SAHARAN AFRICA
Master Data
Contact:
Gary Allemann
+27 11 485 4856
gary@masterdata.co.za

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Exams

Exam for each course.....	\$80.00
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About eLearningCurve

eLearningCurve offers comprehensive online education programs in various disciplines of information management. With eLearningCurve, you can take the courses you need when you need them from any place at any time. Study at your own pace, listen to the material many times, and test your knowledge through online exams to ensure maximum information comprehension and retention.

eLearningCurve also offers two robust certification programs: CIMP & CDS. Certified Information Management Professional (CIMP) builds upon education to certify knowledge and understanding of information management. Certified Data Steward (CDS) is a role-based certification designed for the fast growing data stewardship profession.

Finally, eLearningCurve's Enterprise Program is a flexible, scalable, cost-effective solution for teams and enterprises.