

# Information Management Foundations



## Online Education • Certification • Enterprise Solutions

- Information Management Fundamentals
- Metadata Management Fundamentals
- Data Quality Fundamentals
- Data Governance Fundamentals
- Data Integration Fundamentals & Best Practices
- Data Warehousing Fundamentals
- MDM Fundamentals: Architecture and Implementation
- Fundamentals of Business Intelligence
- Fundamentals of Predictive Analytics
- Analytics Fundamentals
- Big Data Fundamentals
- Data Science Fundamentals
- Data Architecture Fundamentals
- Data Analysis Fundamentals



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**Information Management** is a broad and diverse field that encompasses many different disciplines and practices. Effective information management comprises a continuum of people, process, and technical dimensions that range from data collection to decision-making. Considering information in all of its forms from raw data to business analytics, information management practices address architecture, governance, quality, modeling, integration, transformation, visualization, and much more.

Our Information Management Foundations curriculum includes 10 online courses from world leading experts: Andy Hayler, Theresa Kushner, Arkady Maydanchik, Mark Peco, Eric Siegel, Maria Villar, and Dave 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 liked CIMP certification a lot. By taking courses I did realize that our approach of data integration was wrong, we did not have the right priorities setup at the beginning and mainly because no one ever thought about data quality and data integration. I learned so much out of the courses that I wanted to continue my learning even beyond the basic requirement of my current job. I learned a good deal about data management, data quality, foresight needed to embark on data projects and how to integrate business and IT.

*Jagmeet Singh, CIMP Ex - Data Modeling & Metadata Management, Data Quality, Data Governance, IM Foundations, MDM USA*

## CURRICULA AT-A-GLANCE

Full course descriptions begin on page 7.

### Information Management Fundamentals

**Instructor:** Dave Wells

This 5.5-hour course provides a high-level view across the entire scope of information management.

### Metadata Management Fundamentals

**Instructors:** Arkady Maydanchik and Dave Wells

This 4-hour course covers foundational metadata knowledge needed by anyone who has data management roles and responsibilities.

### Data Analysis Fundamentals

**Instructor:** Mark Peco, Dave Wells

This 5-hour online course looks at the core activities needed for data analysis that is purposeful, accurate, meaningful, and valuable.

### Data Architecture Fundamentals

**Instructor:** Mark Peco, Dave Wells

This 5-hour online course looks at the concepts, principles, and products of data architecture

### Data Quality Fundamentals

**Instructor:** Dave Wells

This 4-hour course provides an overview of the data quality field with the goal of building strong foundational knowledge.

### Data Governance Fundamentals

**Instructors:** Maria Villar, Theresa Kushner, Dave Wells

This 4-hour course provides an overview of the disciplines of governing data, covers the essential components of an enterprise-wide program.

### Big Data Fundamentals

**Instructor:** William McKnight and Jake Dolezal

In this 3.5-hour course you will learn the path that big data is on, the obstacles, and the way forward.

### MDM Fundamentals: Architecture & Implementation

**Instructor:** William McKnight

This 4.5-hour course provides a comprehensive look at the elements of an MDM program and the key success factors for MDM.

### Data Warehousing Fundamentals

**Instructor:** Mark Peco

This 4.5 hour online course re-defines the scope of the “modern” data warehouse.

### Fundamentals of Business Intelligence

**Instructor:** Mark Peco

In this 5-hour course you will learn basic terminology, concepts, purpose and capabilities of BI.

### Fundamentals of Predictive Analytics

**Instructor:** Eric Siegel

This 5-hour online course goes from fundamentals and best practices to hands-on discussion of predictive analytics models and their applications.

### Data Integration Fundamentals & Best Practices

**Instructor:** Dave Wells

This 5-hour course discusses architectures, requirements, methods, roles and activities of data integration that can be applied to achieve successful data integration projects.

### Analytics Fundamentals

**Instructors:** Mark Peco, Dave Wells

This 6-hour online course provides a foundation to understand the scope and the key success factors of analytics.

### Data Science Fundamentals

**Instructor:** Mark Peco, Natasha Balac

This course introduces data science and sets the stage for understanding how process, data, skills, culture, methodology and technical building blocks collectively drive results.

## 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 – Information Management Foundations** designation makes a clear statement that you have learned from the industry leaders and have demonstrated thorough understanding of information management foundations 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 information management foundations 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.**

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 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 including:

- Organize question and answer meetings (via Webinar) with course instructors for groups of students who complete online courses
- Organize onsite sessions when appropriate, often for senior management.
- Prioritize new course development, or customize existing courses, per customer needs
- Create custom instances of our Learning Management System to reflect customer branding
- Mount our online courses on the customer's Learning Management System

## 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..

**CUSTOMER 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

## Information Management Fundamentals

**Instructor:** Dave Wells

**Duration:** 5 hours, 20 minutes

Information Management (IM) is a broad and diverse field that encompasses fourteen distinct disciplines. The abundance of disciplines and the dependencies among them make IM a complex field but one that is rich with opportunities. To understand the full scope of information management you need to know something about topics that range from data modeling to predictive analytics. For those who are just starting an IM career the scope and complexity can be somewhat daunting. Even seasoned IM professionals don't typically have knowledge of and experience in all of the disciplines.

This online training course provides a high-level view across the entire scope of information management: What are the disciplines and how do they fit together.

### You will learn to:

- The broad scope of information management including fourteen disciplines
- The dependencies that exist among information management disciplines
- The "what, why, and who" for each of the IM disciplines
- The people, process and technology factors of each IM discipline
- Several roles and opportunities for IM professionals

### This course is well suited to anyone who:

- Is interested to learn the basics of information management
- Works in a specific area of information management and needs to learn about related IM disciplines and practices
- Is preparing for in-depth study in one or more areas of IM
- Needs to understand IM to be more effective in business or IT management

## Course Outline

### About the Course (8 min)

#### Information Management Overview (25 min)

- Information Management Defined
- The Scope of Information Management

#### Data Modeling and Metadata Management (63 min)

- Understanding the Data
- Data Modeling
- Metadata Management

#### Content Management and Enterprise Information Management (59 min)

- Information Supply and Demand
- Content Management
- Enterprise Information Management

#### Data Quality and Data Governance (57 min)

- Data Utility
- Data Quality
- Data Governance

#### Data Integration, Data Warehousing, and MDM (60 min)

- Data Resource Consolidation
- Data Integration
- Data Warehousing
- Master Data Management

#### Business Intelligence, Business Analytics, and Performance Management (34 min)

- Applied Information
- Business Intelligence
- Business Analytics
- Performance Management

#### Data Mining and Predictive Analytics (14 min)

- Discovery and Inference
- Data Mining and Predictive Analytics
- Information Management Professionals

# Metadata Management Fundamentals

**Instructor:** Dave Wells and Arkady Maydanchik  
**Duration:** 4 hours

Deriving value from data depends extensively on understanding the data and sharing knowledge among everyone who works with data. Sharing data knowledge is the core purpose of metadata. Just as you need financial data to manage financial resources, you need metadata to manage data resources. In today's data-driven world, the importance of managing data is certainly on par with that of managing finances.

This online training course is designed to provide the foundational metadata knowledge needed by anyone who has data management roles and responsibilities. It covers metadata basics such as the types and purposes of metadata, and explores core metadata disciplines of data modeling, data profiling, and data cataloging. Metadata roles in data governance, stewardship, security, quality, and analysis are explained.

## You will learn:

- The scope and complexities of metadata management
- The roles of data models as metadata and the basics of data modeling
- The role of data profiling in metadata management and the basics of data profiling methods
- The roles of data catalogs in metadata management and the fundamentals of data curation and data cataloging
- Metadata dependencies of business processes, IT projects, data governance, data quality, business intelligence, self-service data, business analytics, and data science

## This course is geared towards:

- Anyone with data management roles and responsibilities
- Data stewards and data governance practitioners and participants
- Data curators and data catalog administrators
- Data and database analysts and designers
- Data quality professionals and practitioners
- Aspiring data modelers who need to start with the basics
- Anyone with a role in information management who needs to understand data or help others to understand data

# Course Outline

## About the Course (8 min)

### Understanding Data (15 min)

- Views of Data
- Projects Flow
- Describing the Data Meaning
- Describing the Data Constraints
- Describing the Data Relationships
- Describing the Data

### Metadata Management (57 min)

- Metadata
- Metadata Management Processes
- Using Metadata
- Metadata Tools and Technologies

### Data Modeling (24 min)

- Data Modeling Defined
- The Data Modeling Process
- Supplemental Models & Additional E-R Concepts
- Dimensional Data Modeling

### Data Profiling (47 min)

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

### Data Curation and Cataloging (31 min)

- Data Curation
- Data Cataloging
- Metadata and the Catalog

### Metadata Management for BI and Data Science (49 min)

- The Metadata Muddle
- Data Science and Metadata
- Data Provenance and Data Lineage
- Ontology and Taxonomy

# Data Analysis Fundamentals

Instructor: Dave Wells, Mark Peco

Duration: 4.5 hours

Data analysis is a topic that is important to everyone in business today. Data analysis is no longer the domain of technical specialists, statisticians, and data scientists. Everyone has access to data today, and we all analyze data as a routine part of our day-to-day jobs. Understanding the basics of analyzing data is important for every business professional today.

Data analysis is much more than applying statistics to data and creating charts and graphs. It is the practice of finding patterns in data and finding meaning in data. This course examines each of those activities and the skills needed to perform them well.

The course also looks at human factors in data analysis. Cultural influences are discussed as important considerations. Traits of a good analyst – curiosity, imagination, skepticism, and more – are explored along with collaboration and complementary thinking styles. This course provides a comprehensive look at the work of analyzing data. From introductory concepts through all of the technical activities, to the human side of data analysis, you'll get complete coverage of data analysis fundamentals.

## You will learn:

- Data analysis concepts, applications, and processes
- Descriptive and inferential statistics concepts and their applications in data analysis
- Preparing for data analysis – project and problem framing
- Getting the right data for analysis – data searching and data acquisition
- Understanding the data – data exploration with profiling and visualization
- Data cleansing and data structuring
- Data improvement, enrichment, and formatting
- Statistical data analysis techniques
- Algorithmic data analysis techniques
- Data visualization and storytelling
- Data analyst traits and skills

# Course Outline

## Module 0: About the Course (10 mins)

### Introduction to Data Analysis (54 mins)

- What is Data Analysis?
- Kinds of Data Analysis?

### Statistics and Data Analysis (49 mins)

- Samples and Populations
- Descriptive Statistics
- Inferential Statistics
- A Statistical Problem Example
- Framing a Statistical Problem
- The Descriptive Statistics
- Drawing Inference

### Project Framing and Data Acquisition (37 mins)

- Project Framing
- Problem Framing
- Searching for Data
- Acquiring Data

### Data Exploration and Preparation (55 mins)

- Data Exploration – What and Why?
- Exploring with Data Profiling
- Data Profiling Overview
- Exploring with Data Visualization
- Data Cleansing & Structuring
- Data Transformations to Improve, Enrich, & Format

### Analyzing Data (50 mins)

- Cycles of Data Analysis
- Statistical Data Analysis
- Algorithmic Data Analysis
- Data Visualization
- Data Storytelling

### Human Factors and Data Analysis (36 mins)

- Data Analysis and Culture
- Data Analyst Traits and Skills
- Data Analysis and Data Literacy

# Data Architecture Fundamentals

Instructor: Dave Wells, Mark Peco

Duration: 5 hours

Data architecture frames how data is managed from the point of creation or collection, through processing of many kinds, to distribution, usage, and business impact. It provides concepts, structures, guidelines, and standards needed for consistency, reliability, resilience, adaptability, and sustainability of data management processes and practices.

This 5-hour online course looks at the concepts, principles, and products of data architecture through six different lenses – business alignment, data lifecycle management, data usage, content & structure, processing & storage, and technology. Putting the pieces together, the course concludes with a look at six steps to architecture design, six methods of architecture implementation, and the importance of continuously evolving data architecture.

## You will learn:

- Multiple, complementary definitions of data architecture
- Why data architecture is needed – both business and technical cases
- How data architecture relates to enterprise architecture, data culture, and data governance
- Six perspectives of data architecture and the underlying concepts of each
- What is produced by architectural activities and processes
- How data architecture is developed, managed, and implemented
- Best practices for data architecture

## This course is geared towards:

- Practicing and aspiring data architects
- CDOs, CIOs, and other executives with a role in defining data strategy
- Enterprise, business, systems, technology, analytics, and other architects who work with data architects
- Data engineers, application designers and developers, data systems designers and developers, and others who apply data architecture
- Anyone who needs to collaborate with data architects, and everyone with an interest in data architecture

# Course Outline

## Module 0. About the Course (5 min)

## Module 1. Introduction to Data Architecture (49 mins)

## Module 2. Data Architecture Business Perspective (29 mins)

## Module 3. Data Architecture Lifecycle Perspective (32 mins)

## Module 4. Data Architecture Usage Perspective (26 mins)

## Module 5. Data Architecture Content and Structure Perspectives (37 mins)

## Module 6. Data Architecture Processing and Storage Perspective (46 mins)

## Module 7. Data Architecture Technology Perspective (32 mins)

## Module 8. Putting the Pieces Together (37 mins)

For complete outline please visit:

[https://ecm.elearningcurve.com/Online\\_Data\\_Architecture\\_Course\\_p/da-01-a.htm](https://ecm.elearningcurve.com/Online_Data_Architecture_Course_p/da-01-a.htm)

# 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 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

# MDM Fundamentals: Architecture and Implementation

**Instructor: William McKnight**

**Duration: 4 hours and 30 minutes**

Proliferation of heterogeneous systems creates a pressing need for data sharing and data consistency. When many different systems collect data about master entities – customers, products, suppliers, employees, accounts, etc. – you can be certain that you'll find inconsistencies, conflicts, and confusion. At best, conflict and confusion leads to waste and inefficiency in business process. More severe consequences include damaged credibility and reputation when errors and inconsistencies are visible to customers, suppliers, and employees. Today's complex business and information systems must synchronize master data. That is the role and purpose of Master Data Management (MDM) systems.

MDM is not a casual endeavor. It is a complex data management challenge that requires a formal and well-managed program. The unique challenges of an MDM program are often not apparent even to seasoned data management professionals. The complexities of managing identities and resolving conflicts among disparate data sources make MDM an ambitious undertaking that must address business, architectural, people, process, project, and technology dimensions to succeed.

This course provides a comprehensive look at the elements of an MDM program and the key success factors for MDM.

## You will learn:

- The what and why of Master Data Management (MDM)
- A variety of architectural approaches to MDM and how to determine which is the best fit for your MDM program
- The human dimension of MDM including roles and responsibilities of sponsors, managers, analysts, architects, designers, and developers
- The state of MDM technologies along with techniques and guidelines for tool selection
- The process dimension of MDM including impacts upon business processes and information management processes
- The project perspective of MDM including organizing and executing the activities of planning, requirements analysis, design, development, testing, data migration, and implementation.

## This course is geared towards:

- MDM Program and Project Managers
- MDM Analysts, Designers, and Developers
- Business Data Owners, Data Stewards, and Data Consumers
- Data Architects
- Information Systems Project Managers
- Data Integration Program and Project Managers
- Data Stewards, Data Governance Professionals, and Data Quality Practitioners

## Course Outline

### About the Course (7 min)

#### Introduction (54 min)

- MDM Overview
- MDM Justification and Outcomes
- Master Data Management for Customers

#### MDM Architecture (90 min)

- Architecture Approaches
- Conforming Dimensions for the Enterprise
- Data Quality
- Syndicated Data
- Additional Considerations

#### MDM Tool Selection (48 min)

- Process Considerations
- Proof of Concept and Final Selection

#### MDM Project Execution (77 min)

- MDM Project Management
- MDM Project Roles and Responsibilities
- Organizing and Planning for MDM Success
- Case Study

# Data Warehousing Fundamentals

**Instructor: Mark Peco**

**Duration: 5 hours, 30 minutes**

The primary purpose of data warehousing is to put raw data into an "analyzable state" and deliver data and information that is useful, relevant and accessible. Though data warehousing is a mature discipline, it continues to develop driven by new perspectives, innovative ideas, evolving technology and competitive business pressures.

There are many concepts and components to be understood, integrated, and collectively implemented for data warehousing success. Many organizations fail to understand and embrace the full breadth of these components – how they interact and how they change over time. Lack of understanding brings confusion, misalignment, and failure to realize full value from data warehousing investments.

This online training course presents a holistic view of data warehousing components, concepts, and definitions

## You will learn:

- Data Warehousing concepts and terminology
- The purpose and capabilities of successful Data Warehousing and its roles in creating business value
- Roles and essential components of five critical sub-systems.
- How the sub-systems interact to constitute a complete and cohesive Data Warehousing system
- The common challenges and risks inherent in Data Warehousing

## This course is geared towards:

- DW teams who need to build a common foundation of concepts and terminology
- DW program & project managers
- Data warehouse architects
- Data warehouse designers and developers
- DW maintenance and support specialists
- Business and Data SMEs with data warehousing project roles and responsibilities
- Data Management Analysts
- Anyone who is new to data warehousing
- Anyone with an interest in understanding the capabilities, opportunities and challenges of data warehousing

# Course Outline

## About the Course (8 min)

### Introduction to Data Warehousing (67 min)

- Fundamental Ideas
- Architecture Considerations
- Systems View of Data Warehousing
- Data Warehousing System Review

### Data Acquisition and Refinement (62 min)

- Exploration & Discovery System
- Refining & Integration System
- Transportation System

### Data Provisioning and Retention (45 min)

- Storage & Packaging System
- Technology System
- Inventory System

### Information Delivery and Consumption (35 min)

- Usage System
- Delivery System
- Content Quality System

### Building and Development (58 min)

- Participation System
- Construction System
- Asset & Process Quality System

### Leadership and Control (34 min)

- Stakeholder System
- Governance System

### Putting the Pieces Together (24 min)

- Perspective & Alignment
- Data Warehousing System
- Course Summary

# Fundamentals of Business Intelligence

**Instructor: Mark Peco**

**Duration: 5 hours**

The term Business Intelligence is not well understood in the industry and is used inconsistently by many IT and business professionals alike. Although the term was defined in the mid 1990's, the meaning of Business Intelligence continues to evolve as practitioners learn more about its capabilities and challenges.

This online training course introduces a "holistic" view of Business Intelligence and presents it as a complex system composed of many sub-systems that must be aligned and work together to produce the desired business results. The real success of BI within an organization can only be achieved if a holistic understanding is developed that shapes how the various components are designed and implemented.

## You will learn:

- Business Intelligence concepts and terminology
- The purpose and capabilities of successful Business Intelligence and how value is actually generated within organizations
- How people, information, technology and business objectives are all critical components of BI success
- The common challenges and risks encountered in BI implementations
- How to utilize Systems Thinking concepts to describe Business Intelligence holistically and how it depends on the integration of many different types of components that must work together

## This course is geared towards:

- Business Managers and Executives
- Technology Managers and Executives
- Business Analysts
- Business Measurement and Performance Analysts
- IT Analysts and Developers
- Data Management Analysts
- Technology and Business Architects
- BI Program Managers and Team Members
- Anyone with an interest in understanding the capabilities, opportunities and challenges offered by Business Intelligence

# Course Outline

## About the Course (9 min)

### Introductory Concepts (73 min)

- Definitions
- System
- Architecture
- Systems View of Business Intelligence

### Generating Business Value (52 min)

- Introduction
- The Business System
- The Decision Making System
- The Participation System
- The Work Execution System

### Monitoring and Learning (96 min)

- Introduction
- The Information System
- The Measurement System
- The Analytics System
- The Technology System

### Leadership and Control (29 min)

- Introduction
- The Stakeholder System
- The Governance System

### Putting the Pieces Together (34 min)

- The Business Intelligence System
- Summary

# Fundamentals of Predictive Analytics

**Instructor: Eric Siegel**

**Duration: 5 hours**

Business metrics do a great job summarizing the past. But if you want to predict how customers will respond in the future, there is one place to turn -- predictive analytics. By learning from your abundant historical data, predictive analytics delivers something beyond standard business reports and sales forecasts: actionable predictions for each customer. These predictions encompass all channels, both online and off, foreseeing which customers will buy, click, respond, convert or cancel. If you predict it, you own it.

The customer predictions generated by predictive analytics deliver more relevant content to each customer, improving response rates, click rates, buying behavior, retention and overall profit. For online applications such as e-marketing and customer care recommendations, predictive analytics acts in real-time, dynamically selecting the ad, web content or cross-sell product each visitor is most likely to click on or respond to, according to that visitor's profile.

This online training course goes from fundamentals and best practices to hands-on discussion of predictive analytics models and their applications.

## You will learn:

- Applications: Business, marketing and web problems solved with predictive analytics
- The techniques, tips and pointers you need in order to run a successful predictive analytics and data mining initiative
- How to strategically position and tactically deploy predictive analytics and data mining at your company
- How to bridge the prevalent gap between technical understanding and practical use
- How a predictive model works, how it's created and what it looks like
- Evaluation: How well a predictive model works and how much revenue it generates
- Detailed case studies that demonstrate predictive analytics in action and make the concepts concrete
- Two tool demonstrations showing how predictive analytics really works

## This course is geared towards:

- Managers. Project leaders, directors, CXOs, vice presidents, investors and decision makers of any kind involved with analytics, direct marketing or online marketing activities.
- Marketers. Personnel running or supporting direct marketing, response modeling, or online marketing who wish to improve response rates and increase campaign ROI for retention, up-sell and cross-sell.
- Technology experts. Analysts, data scientists, BI directors, developers, DBAs, data warehousing professionals, web analysts, and consultants who wish to extend their expertise to predictive analytics.

## Course Outline

### About the Course (10 min)

#### Introduction (56 min)

- Introduction to Predictive Analytics
- How It Works?
- Decision Trees
- Response Modeling

#### Applications and Data Requirements (76 min)

- Applications
- Attrition Modeling Examples
- Data Preparation

#### Predictive Modeling Methods (68 min)

- More on Decision Trees
- Other Modeling Methods
- Methods Comparison

#### Management and Deployment (63 min)

- Project Management
- Killer Application: Content Selection
- Case Study: Targeting Ads

#### Software Demonstrations (24 min)

# Data Integration Fundamentals & Best Practices

**Instructor: Dave Wells**

**Duration: 5 hours**

Integrated data is at the heart of many business and technical disciplines today. Data warehousing, operational data integration, and master data management focus on integration as a key part of managing data as an asset. Business intelligence, performance management, and business analytics depend on integrated data to meet business requirements for management and decision-making information. Legacy system replacement, ERP implementation, and application integration all have integrated data dependencies. Integration is important, but it is challenging to understand data sources, select and apply integration techniques, and design and deliver integrated databases.

This online training course discusses architectures, requirements, methods, roles and activities of data integration that can be applied to achieve successful data integration projects for a variety of applications and circumstances.

## You will learn:

- Fundamental concepts, principles, and terminology of data integration
- Common methods of data integration with attention to techniques, timing, and integration process automation
- How to perform the essential steps of data integration including requirements definition, data capture, data transformation, and data delivery
- Data integration techniques and technologies including ETL, ELT, virtualization, and federation
- Techniques for source-to-target mapping and data transformation
- Roles, purpose, and variations of data integration architecture including architectural constructs for data warehousing, master data management, and operational data integration
- Business and technical roles, responsibilities, knowledge, and skills that are central to data integration projects and processes

## This course is geared towards:

- Data integration architects, designers, and developers
- Business intelligence practitioners, project managers and architects

- Data warehousing practitioners, project managers, and architects
- MDM practitioners, project managers, and architects
- ERP implementers and system integrators
- Business subject experts and data subject experts with roles in data integration projects and processes

## Course Outline

### About the Course (5min)

#### Data Integration Concepts (44 min)

- Data Integration Defined
- Data Integration Dependent Programs
- Data Integration Projects

#### Data Integration Methods (49 min)

- Data Integration Techniques
- Data Integration Frequency
- Data Integration Systems
- Data Integration Challenges
- Data Integration Activities

#### Understanding Data (61 min)

- Identifying Data Sources
- Profiling Data
- Qualifying Data Sources
- Documenting Data Sources

#### Integrating Data (78 min)

- Integration Requirements
- Data Capture
- Data Transformation
- Data Delivery

#### Data Integration Architecture (37 min)

- Architecture Concepts
- Data Warehousing Architecture
- MDM Architecture
- Operational Data Integration Architecture

#### Roles & Responsibilities (28 min)

- Knowledge and Skills
- Understanding the Data
- Getting the Data
- Transforming the Data
- Delivering the Data
- Using the Data

# Big Data Fundamentals

Instructor: William McKnight & Jake Dolezal

Duration: 3.5 hours

Big data has gone main stream. It reaches well beyond the initial group of Silicon Valley “new economy” tech companies and the new media companies that helped launch the industry. The big data adoption landscape has expanded to include automakers, big finance, big insurance companies, telecommunications, healthcare companies and big retailers. Big data is past the hype phase and adoption is accelerating, but success is not a given and challenges remain.

This informative technical general session is full of the “need to know” for anyone involved in an enterprise data landscape. Learn from experienced enterprise information strategists with real project experience about the path that big data is on, the obstacles along the path, and how to confidently join the big data revolution. Learn the players in the technology landscape and the ideal workloads for big data in enterprises. Learn where big data adds value to an existing enterprise information strategy and how to get the projects started and dropping the “not in production” label.

This 3.5-hour online course addresses the technical community as well as the user community, providing guidance on how to penetrate and benefit the enterprise. This practical session will help you make the most of big data and make the best choices to ensure information remains an unparalleled corporate asset.

## You will learn:

- A workable definition of big data so you know it when you see it
- Drivers for big data
- Big data in the enterprise
- The Hadoop framework for analytical big data
- NoSQL and operational big data
- An overall information architecture with big data

## This course is geared towards:

- Business and Data Analysts
- BI Architects and BI Developers
- Data Architects
- Data Integrators
- Analytics Developers and Consumers
- Anyone who needs to understand the business and technical implications of Big Data

# Course Outline

## About the Course (8 min)

### Big Data Definition (34 mins)

- Big Data Introduction
- Big Data Technology
- Enablers for Big Data

### Big Data Drivers (28 mins)

- Value Density of Data
- Before Data was Big...
- Once Big Data Grew, Value was Realized
- Data is too Valuable to Discard
- Data is too Valuable to Ignore
- Focus Before Big Data
- Focus After Big Data
- Performance/Workload Optimization
- Cost of Storage
- Other Cost Drivers
- Analytic Need
- Implication for IT Skills

### Big Data in the Enterprise (21 mins)

- The Great Database Thaw
- Data Access in the Modern Enterprise
- Marz’s Lambda Architecture
- Row vs. Columnar Stores
- In-Memory
- Big Data & Analytics
- Leveraging Hadoop for Analytics

### Hadoop Ecosystem (40 mins)

- Hadoop Overview
- Hadoop Distributions
- Hadoop Framework

### NoSQL (31 mins)

- NoSQL “Schemaless” Data Modeling
- NoSQL Heartburn
- Key-Value Stores
- Document Oriented Database
- Graph Oriented Database
- Stream Processing Engines
- NewSQL

### Enterprise Architecture with Big Data (45 mins)

- Modern Components of Information Architecture
- ETL with Big Data Systems
- Analytic Patterns with Hadoop
- Where Do We go from Here?

# Analytics Fundamentals

Instructors: Mark Peco and Dave Wells

Duration: 6 hours

Analytics is a mainstream topic in almost every walk of life today. In business, it is discussed in the boardroom, at strategy sessions, in operational settings, in marketing campaigns and in technology groups. In everyday life, it is used to manage social networks, personal fitness, personal health, and much more.

Analytics offers tremendous potential for organizations to improve competitive positioning, generate new insights, guide decision makers, and shape positive outcomes. Success with analytics requires a understanding of many parts that must work together to turn potential into. The ability to harness data, technology, people, and processes cohesively is fundamental to success.

This 6-hour online course provides a foundation to understand the scope and the key success factors of analytics. Concepts and terminology are introduced, and scope of analytics is discussed to set context and provide a frame of reference for topics that follow. Business analytics is described and made tangible through a variety of industry use cases and functional examples.

## You will learn:

- Key definitions, concepts and terminology
- Use cases and functional applications
- Descriptions and scope of data analytics
- Common techniques and how to apply them
- Some examples to address a variety of applications
- Key processes and methodologies to manage analytics work and activities

## This course is geared towards:

- Business Managers and Executives
- Technology Managers and Executives
- Business Analysts
- Statisticians and Analytic Modelers
- Process Managers and Decision Makers
- Business Measurement/Performance Analysts
- IT Analysts and Developers
- Data Management Analysts
- Technology and Business Architects
- BI and Analytics Program Managers
- Anyone with interest in understanding analytics

# Course Outline

## About the Course (6 min)

### The Analytics Landscape (29 min)

- Analytics Defined
- Two Kinds of Analytics
- The Language of Analytics
- Summary

### Introduction to Business Analytics (49 mins)

- What is Business Analytics
- Why Business Analytics? Part 1 & 2
- Example: Business Analytics Value
- Strategic Positioning of Business Analytics Part 1-5
- Industry Use Cases
- Business Function Use Cases

### Introduction to Data Analytics, Part 1 (73 mins)

- What and Why
- Definitions and Context
- Data Sources
- Data Management

### Introduction to Data Analytics, Part 2 (57 mins)

- Data Discovery
- Data Analysis

### Analytics Capabilities – Doing the Work (33 mins)

- Describing Capabilities
- The Analytics Layer

### Analytic Techniques (58 mins)

- Techniques
- Examples Overview
- Linear Regression Example
- Logistic Regression Example
- Decision Tree Example

### Module 6. Analytics Processes (42 mins)

- Oversight Process
- Development Process
- Delivery Process
- Organizations and Processes

# Data Science Fundamentals

**Instructors: Mark Peco & Natasha Balac**

**Duration: 5 hours**

Data science has matured into a cross functional discipline. In simple terms, its main purpose is to extract meaningful information from a variety of data sources. This definition is very general and must be explored in more detail to understand the building blocks needed for success. Related workgroups must understand each other and work together to make meaningful impact.

Effective data science is a critical enabler for companies to become “data-driven” and to “compete on analytics”. To give shape to data science as a discipline, this course introduces core principles and concepts to provide a solid foundation of understanding. Data science is described in terms of its, purpose, capabilities, techniques, approaches and skills. It’s dependencies on other disciplines and how it enables value creation within the broader “data-driven” ecosystem is also provided.

This course introduces data science and sets the stage for understanding how process, data, skills, culture, methodology and technical building blocks collectively drive results.

## You will learn to:

- Key concepts needed for successful data science
- How data science relates to other related disciplines
- Practical data science process lifecycle steps
- Common data science tools, techniques and modeling categories
- Recommended data science approaches, methods and processes
- The data science process
- Critical success factors for data science
- Why organizational culture and data literacy are challenges that must be managed

## This course is geared towards:

- Business managers and executives
- Technology managers and executives
- Data science and data engineering team members
- Business analysts, statisticians and modelers
- Process managers and decision makers
- Business measurement and performance analysts
- IT analysts and developers
- Data management analysts
- Technology and business architects
- Analytics, business intelligence, data science and data engineering program leaders
- Anyone with an interest in understanding the capabilities, opportunities and challenges offered by data science

# Course Outline

## About the Course (10 min)

### Setting the Stage (60 min)

- Basic Concepts
- Value Chain Analysis
- Thinking Styles
- Research Methods
- 

### Introducing Data Science (49 min)

- Data Science Concepts
- Aspects of Science in Data Science
- Value Framework
- Module Summary

### Being Data Driven (26 min)

- Pursuit of Value
- Data Driven Organizations
- Success Factors

### Data and Technology Landscape (88 min)

- Big Data – The Open Catalyst
- Data Resources
- Data Management
- Discovery and Exploration
- Model Building
- Model Execution and Analysis
- Interpretation and Storytelling

### Modeling and Analysis Techniques (55 min)

- Problem Framing
- Research Methods
- Modeling Techniques
- Model Deployment

## OUR INSTRUCTORS

### Natasha Balac

Natasha Balac is currently director at Interdisciplinary Center for Data Science (ICData) at Calit2/Qualcomm Institute, and lectures in the area of big data and data science. She received her master's and PhD in computer science from Vanderbilt University with an emphasis in machine learning from large data sets.

### 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.

### 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.

### Eric Siegel

Eric Siegel, Ph.D., is a consultant in data mining and analytics, an acclaimed industry instructor, and an award-winning teacher of graduate-level courses in these areas. Dr. Siegel is the instructor of an in-person training workshop that served as the basis to form his eLearningCurve online course, "Fundamentals of Predictive Analytics".

### 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. His career of more than thirty-five years has encompassed both business and technical roles. Dave is a frequent contributor to trade publications and is a co-author of the book *BI Strategy: How to Create and Document*.

### Jake Dolezal

Jake Dolezal has over 16-years' experience in the Information Management with expertise in BI, analytics, data warehousing, statistics, data modeling and integration, data visualization, master data management, and data quality. Jake has industry experience in healthcare, education, government, manufacturing, engineering, hospitality and gaming.

### Arkady Maydanchik

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, often the result of corporate mergers.

### Mark Peco

Mark Peco is an experienced consultant, educator, and practitioner in the fields of BI 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 in the areas of Strategy Development, Process Improvement, Data Management and Business Intelligence.

### 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.

## 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, Ireland



**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

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# IM FOUNDATIONS COURSE PRICING

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CIMP All Course Access License	\$4,995.00
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## Exams

CIMP Exam for each course	\$100.00
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## Enterprise Discounts

We offer discounts to Enterprise customers who purchase in bulk. Please contact us for more information.

## 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.

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