

2016 IBM BUSINESS ANALYTICS TRAINING CATALOGUE



		
		<p>SUCCESS Mentor Teamwork Vision Goals Motivate Inspire Lead by example</p>
		



Our Training Initiative

As a Premier IBM Business Analytics Partner, Newcomp Analytics has successfully implemented over 400 IBM Business Analytics projects in North America. We believe that the most successful implementations are the result of educated and empowered users. Our training initiative is the product of our combined experience of 100 years in IBM Business Analytics. Our educators are certified Cognos professionals who bring real-life practical expertise to the classroom.

We offer IBM training in various learning formats including: in-class, online, self-paced, on-site and customized courses, based on role, current skill level and/or company objectives. Our dedicated internal training department strives to help organizations protect its IBM software investment by expanding the skill sets of employees through comprehensive training. Newcomp Analytics works directly with clients to understand the unique needs of their organization and recommend the best training paths and formats to meet their needs.

This catalogue offers information on the most popular courses that we offer. If you would like to request a course that is not listed, please feel free to reach out to us.

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Notes

Types of Training Offerings

In-Class



Newcomp directly delivers IBM Business Analytics courses for Business

Intelligence, Performance Management, and IBM Advanced Analytics through the use of in-class training facilities.

Currently, in-class courses are offered in Markham, Ottawa, Vancouver, Halifax, Calgary, Winnipeg, and Edmonton. Classes can be added to new locations based on demand.

Instructor-Led Online (ILO)



Students receive the same experience as an in-class course, with a live instructor and hands-on practice with the tool through a virtual lab environment and a hard copy of the student manual.

ILO courses reduce travel time and costs as they can be taken from home or the office and require only the use of a computer, high-speed wired Internet and a headset.



Self-Paced Virtual Class (SPVC)

Students receive the same high-quality training with the same courseware at their own speed and schedule with SPVC courses. Individuals with busy schedules can complete a course over a 30-day time frame at a lower price than in-class or ILO courses. *Please note that there is no live interaction with an instructor in this format.*

On-Site



Instructors can deliver training to your entire team/user group at your location. This option reduces travel time, lowers costs and increases flexibility in scheduling.

This format also enables students to interact with one another and ask specific questions pertaining to their organization.

Customized Courses



IBM courses can also be customized based on user roles and training needs within an organization.

This format enables students to work with their organization's data – adding value to the learning experience. This makes the training relevant and applicable to the students' daily tasks and therefore, results in a quicker path to productivity.

Educational Mentoring

Educational mentoring is ideal for individuals who are looking for assistance with various topics that do not fit in a single course. Our instructor will work with students and cover requested topics, as well as answer ad-hoc questions.

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IBM Cognos Business Intelligence Courses

Formats offered:



In-Class



Instructor-Led Online



Self-Paced Virtual Classroom



On-Site



Customized

Innovation
Branding
Solutions
Market
Analysis
Ideas
Success
Management

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

B5A08

Overview of IBM Cognos Business Intelligence (BI) (1 day)

Course Description

Overview of IBM Cognos BI provides students with a high-level overview of the IBM Cognos BI suite of products and their underlying architecture. You will examine each BI component as it relates to the comprehensive Smarter Analytics solution, and will be shown a range of resources to access additional information on each product.

Audience

This course is for multiple roles (consumers, business authors, professional authors, developers, administrators, modelers, and project managers)

Prerequisites

You should have:

- An understanding of your organization's business intelligence process and reporting needs
- Experience using basic Windows functionality
- Experience using a Web browser



B5A08: Overview of IBM Cognos Business Intelligence (BI)

Course outline

IBM Cognos Business Intelligence

- describe IBM Cognos Business Intelligence (BI) and its position within the IBM Smarter Analytics approach and offerings
- describe the IBM Cognos 10 Family of offerings
- describe IBM Cognos BI enterprise components
- describe IBM Cognos architecture at a high level
- describe IBM Cognos BI security at a high level

Consume Content in IBM Cognos BI

- where do consumers access BI content?
- use published reports
- drill-through to related data
- specify run report options
- specify properties of an entry
- add comments to saved output
- alerts and Watch Items

Create Reports in IBM Cognos BI

- overview of reporting and report authoring
- identify package types available for reporting
- examine IBM Cognos Insight
- examine IBM Cognos Workspace Advanced
- examine Report Studio
- create an Active Report

Create Workspaces in IBM Cognos BI

- describe IBM Cognos Workspace
- add report content and tools to create workspaces
- widget-to-widget communication
- filter data in the workspace
- sort, group, and ungroup data
- calculate data
- access IBM Cognos Workspace Advanced
- search and explore results
- collaborate in a workspace

Create Metadata Models in IBM Cognos BI

- describe IBM Cognos Framework Manager
- describe IBM Cognos Transformer components and capabilities
- describe IBM Cognos Cube Designer

Extend IBM Cognos BI

- introduction to IBM Cognos Mobile
- introduction to IBM Cognos BI for Microsoft Office
- examine Event Studio
- examine Metric Studio

B5150

IBM Cognos Query Studio: Build Ad-Hoc Reports (1 day)

Course Description

IBM Cognos Query Studio: Build Ad Hoc Reports is an instructor-led course designed for business authors who want to learn how to create, modify and organize ad-hoc reports. This course covers how to use different report capabilities, how to graphically display data, and how to create reports with a consistent look and feel through the use of templates. The course also covers basic administrative tasks, such as scheduling reports and delivering reports in different formats (e.g. HTML, PDF, Excel).

Please Note: Screen captures and labs in this course are taken from the V10.1 of the product. However, the concepts, procedures, and tasks are all applicable to a V10.2 environment and are suitable for V10.2 user education.

Audience

This intermediate course is intended for business authors.

Prerequisites

- Knowledge of business requirements
- Experience using basic Windows functionality
- Experience using a Web browser



B5150: IBM Cognos Query Studio: Build Ad-Hoc Reports

Course outline

Overview of IBM Cognos BI

- IBM Cognos and Performance Management
- IBM Cognos BI components
- IBM Cognos architecture at a high level
- IBM Cognos BI groups and roles

Introduction to Query Studio

- packages available for reporting
- report types
- add and save data to ad-hoc reports
- view data by using charts

Create Reports in Query Studio

- create list, grouped list, and crosstab reports
- list the charts available and their appropriate use
- calculate and sort report data
- define a custom group to create your own report
- use shared dimensions to create multi-fact queries

Enhance Reports in Query Studio

- highlight report items using conditional styles
- focus the scope of a report using filters
- format report objects
- apply a report template

End-to-End Workshop

- create a grouped list report
- filter data based on revenue and order year
- add a prompt to view sales of selected sales representatives
- format the report
- create a crosstab report
- add a chart to the crosstab report
- generate report outputs

Manage Content in IBM Cognos Connection

- schedule and manage reports
- view lineage information
- add comments to saved output
- personalize and organize content
- set alerts and watch rules
- design a portal page and dashboard
- set permissions using IBM Cognos BI groups and roles

B5151

IBM Cognos Analysis Studio: Analyze Data (1 day)

Course Description

IBM Cognos BI Analysis Studio: Analyze Data is an instructor-led course that teaches business authors to navigate and analyze data in Analysis Studio. Through a combination of lectures and hands-on workshops, attendees will discover trends, identify opportunities and learn how to make better business decisions. Participants will learn techniques such as ranking, filtering, asymmetrical crosstabs and graphing to help them analyze large volumes of data (whether OLAP or dimensionally modeled relational metadata). They will also learn to manage reports through IBM Cognos Connection.

Please Note: Screen captures and labs in this course are taken from the V10.1 of the product. However, the concepts, procedures, and tasks are all applicable to a V10.2 environment and are suitable for V10.2 user education.

Audience

This is a basic course for Business Authors.

Prerequisites

- Knowledge of business requirements
- Experience using basic Windows functionality
- Experience using a Web browser



B5151: IBM Cognos Analysis Studio: Analyze Data

Course outline

Overview of IBM Cognos BI

- IBM Cognos and Performance Management
- IBM Cognos BI components
- IBM Cognos architecture at a high level
- IBM Cognos BI groups and roles
- how to extend IBM Cognos BI

Analysis Studio Fundamentals

- define the fundamental terms of Analysis Studio
- explain how to insert objects
- define and create sets
- identify the work area, overview area, and properties pane

Tools for Investigation in Analysis Studio

- drilling down and up to different levels of detail
- changes to rows, columns, and measures in the analysis
- explain how to change the display of data
- use charts to display data graphically

Nest Data in Crosstabs in Analysis Studio

- apply depth to rows and columns by nesting data
- drill behavior in nested rows and columns
- how to swap nested levels

Advanced Crosstabs in Analysis Studio

- how to view a complete level of data
- design a crosstab without retrieving data
- compare multiple measures
- apply stacked sets to the crosstab
- construct an asymmetrical crosstab
- compose a custom sort

Focus with Filters in Analysis Studio

- apply filters using expressions
- apply filters using the Context area
- create top and bottom lists
- use several techniques to remove rows and columns

Extend the Analysis

- apply summary calculations
- apply item-based calculations
- practice ranking items
- demonstrate how to customize the report display

Manage Content in IBM Cognos Connection

- schedule and manage reports
- view lineage information
- add comments to saved output
- personalize and organize content
- set alerts and watch rules
- design a portal page and dashboard
- set permissions using IBM Cognos BI groups and roles

B5157

IBM Cognos Metric Studio: Design Scorecards (3 days)

Course Description

IBM Cognos Metric Studio: Design Scorecards is an instructor-led course in which students will learn how to plan, create, set up, and maintain scorecard applications using IBM Cognos Metric Studio. Students will load data from supported data sources using IBM Cognos Metric Designer, and learn alternative data loading methods such as flat files and SQL scripts. Students will also learn how to secure objects within the scorecard application, as well as the application itself.

Please Note: Screen captures and labs in this course are taken from the V10.1 of the product. However, the concepts, procedures, and tasks are all applicable to a V10.2 environment and are suitable for V10.2 user education.

Audience

This intermediate course is for Developers.

Prerequisites

- Knowledge of Performance Management (PM) concepts
- Knowledge of scorecarding methodologies and applications
- Knowledge of your business requirements
- Experience using the Windows operating system
- Experience using a Web browser
- Basic knowledge of IBM Cognos BI and IBM Cognos Connection
- Basic knowledge of RDBMS (e.g. SQL Server)



B5157: IBM Cognos Metric Studio: Design Scorecards

Course outline

Overview of IBM Cognos BI

- IBM Cognos BI components and architecture at a high level
- IBM Cognos BI groups and roles
- how to extend IBM Cognos BI

Overview of IBM Cognos BI Metric Studio

- scorecarding methodologies
- identify and map requirements
- architecture and data sources
- enhance Metric Studio application
- security in Metric Studio

Define the Application Environment

- create a Metric Studio application
- define a data source connection
- scorecard structure by creating metric types, qualifiers and metrics
- identify ways metric status is calculated
- administration tasks and scheduling

Overview of Loading and Calculating Data

- data loading architecture
- potential data sources
- data management processes
- how data is staged prior to being loaded into the metric store
- scores and trends

Load Data using BI Metric Designer

- examine Metric Designer
- create extracts and objects extracts
- extracts from different source types
- publish extracts and load data
- Import metrics/scorecards

Load Data using Alternative Methods

- load data from flat files, relational database, IBM Cognos Planning

Manually Create Metrics and Calculate Data

- types of calculated metrics
- derived metric, derived index metric type
- formula-based calculated metric

Refine the Scorecard Application

- organize metrics by strategy
- track long-term goals using projects
- view performance graphically
- Metric Studio data in Cognos BI report
- Metric Studio default analysis reports
- Add Metric Studio content to the portal

Set Application- and Object-Level Security

- authentication and authorization
- groups and roles
- pre-defined IBM Cognos BI roles
- secure application and objects

Modify Default Environment Properties

- modify default business calendar settings, display settings, appearance of metric names
- set status indicator properties
- manage custom units of measurement

End-to-end Workshop

- create roles, add members and define access permissions, set capabilities, create folders, define access to entries, create an export, create an import

Sample Metric Map

Monitor Performance with Metrics

- sort and filter metrics by performance
- group metrics by strategic objectives
- record corrective actions against metrics
- track initiatives
- modify data values for a metric
- monitor important metrics

B5A19

IBM Cognos BI Administration: Architecture and Logging (2 days)

Course Description

IBM Cognos BI Administration: Architecture and Logging is an instructor-led course that teaches participants how to identify components and sub-components of the IBM Cognos BI architecture and how to use tools and techniques to provide a foundation to troubleshoot issues. Through lecture and interactive exercises, participants will identify IBM Cognos BI components, examine how these components will interact with Java, and will explore logging to assist when troubleshooting issues.

Audience

This advanced course is intended for Administrators responsible for administering the IBM Cognos BI environment.

Prerequisites

- IBM Cognos BI Administration course (*refer to page 23*) or equivalent experience administering the IBM Cognos BI environment.



B5A19: IBM Cognos BI Administration: Architecture and Logging

Course outline

Architecture:

Introduction and Service-Oriented Architecture

- identify IBM Cognos 10 architectural components
- Service-Oriented Architecture in IBM Cognos

Explore the IBM Cognos Dispatcher

- IBM Cognos Dispatcher
- request routing
- routing process
- Content Manager Cache Service

Examine IBM Cognos Services

- identify IBM Cognos Services
- review collaboration functionality
- explore the architecture in IBM Cognos 10

Explore Java Memory Management

- overview of Java memory layout
- manage Java memory
- use tools to monitor Java

Logging:

Examine Audit Logging and Indication Processing Facility Logging

- overview of installation logs and configuration logs
- explore audit logging
- explore IPF logging

Perform Dye Tracing

- determine requirements
- perform dye tracing

Explore Dynamic Query Mode

- Dynamic Query Mode (DQM) logging
- IBM Cognos Dynamic Query Analyzer (DQA)

Explore Component Logging

- component logging for Gateway, Dispatcher, Report Server, and Universal Data Access layer

Examine Additional Tools and Special Task Logging

- diagnostic tools and utilities for special task logging

B5A52

IBM Cognos Framework Manager: Design Metadata Models (5 days)

Course Description

IBM Cognos Framework Manager: Design Metadata Models introduces participants to advanced knowledge of metadata modeling concepts, including how to model metadata for predictive reporting and how to analyze results using Framework Manager. Participants will learn the full scope of the metadata modeling process including initial project creation, publishing metadata to the Web, enabling end users to easily author reports and analyzing data.

Audience

This advanced course is intended for Developers.

Prerequisites

Required:

- Knowledge of common industry standard data structures and design
- Experience with SQL
- Experience gathering requirements **and** analyzing data

Recommended:

- IBM Cognos Report Studio: Author Professional Reports - Fundamentals (*please refer to page 25*).



B5A52: IBM Cognos Framework Manager: Design Metadata Models

Course outline

Overview of IBM Cognos BI

- IBM Cognos and Performance Management
- IBM Cognos components
- IBM Cognos architecture at a high level
- IBM Cognos groups and roles
- how to extend IBM Cognos

Identify Common Data Structures

- characteristics of operational databases and databases designed for reporting
- relationships and cardinality
- different data traps
- dimensional data sources

Gather Requirements

- key modeling recommendations
- reporting requirements
- explore data sources to identify data access strategies

Create a Baseline Project

- IBM Cognos BI and Framework Manager workflow processes
- define a project and its structure
- Framework Manager environment
- create a baseline project
- enhance the model with additional metadata

Prepare Reusable Metadata

- identify facts and dimensions
- examine relationships and data traps
- verify relationships and query item properties
- ensure efficient filters by configuring prompt properties

Model for Predictable Results: Identify Reporting Issues

- multi-fact queries and full outer joins
- how IBM Cognos BI uses cardinality
- identify reporting traps
- use tools to analyze the model

Model for Predictable Results: Virtual Star Schemas

- advantages of modeling metadata as a star schema
- model in layers
- create aliases to avoid ambiguous joins
- merge query subjects

Model for Predictable Results: Consolidate Metadata

- virtual facts to simplify writing queries
- virtual dimensions to resolve fact-to-fact joins
- consolidated modeling layer for presentation purposes
- consolidate snowflake dimensions with model query subjects
- simplify facts by hiding unnecessary codes

Calculations and Filters

- create commonly-needed query items for authors
- static filters to reduce the data returned
- use macros and parameters in calculations and filters to dynamically control the data returned

B5A52: IBM Cognos Framework Manager: Design Metadata Models

Course outline

Implement a Time Dimension

- time-based queries
- resolve confusion caused by multiple relationships between a time dimension and another table

Specify Determinants

- specify multiple levels of granularity and prevent double-counting

Create the Presentation View

- dimensions associated with a fact table
- conformed vs. non-conformed dimensions
- star schema groupings to provide authors with logical groupings of query subjects
- Model Design Accelerator

Work with Different Query Subject Types

- using data source, model, and stored procedure query subjects
- effects on generated SQL when modifying query subjects, SQL settings and relationships

Set Security in Framework Manager

- IBM Cognos BI security environment
- restrict access to packages
- create and apply security filters
- restrict access to objects in the model

Create Analysis Objects

- apply dimensional information to relational Metadata to enable OLAP-style queries
- members and member unique names
- changes that impact a MUN
- sort members for presentation and predictability

Manage OLAP Data Sources

- connect to an OLAP data source (cube) in a Framework Manager project
- publish an OLAP model
- publish a model with multiple OLAP data sources
- publish a model with an OLAP data source and a relational data source

Advanced Generated SQL Concepts and Complex Queries

- governors that affect SQL generation
- stitch query SQL
- conformed and non-conformed dimensions in generated SQL
- multi-fact/multi-grain stitch query SQL
- variances in Report Studio generated SQL
- dimensionally modeled relational SQL generation
- cross join SQL
- various results sets for multi-fact queries

Use Advanced Parameterization Techniques in Framework Manger

- identify environment and model session parameters
- leverage session, model, and custom parameters
- create prompt macros
- leverage macro functions associated with security

B5A52: IBM Cognos Framework Manager: Design Metadata Models

Course outline

Model Maintenance and Extensibility

- basic maintenance and management on a model
- remap metadata to another source
- import and link a second data source
- run scripts to automate/update a model
- create a model report

Optimize and Tune Framework Manager Models

- identify and implement techniques to optimize and tune your Framework Manager models
- Dynamic Query Mode in Framework Manager

Work in a Multi-Modeler Environment

- segment and link a project
- branch a project and merge results

Manage Framework Manager Packages

- package languages and function sets
- control model versioning
- nest packages

B5A55

IBM Cognos BI Administration (3 days)

Course Description

This course provides training to new administrators on the fundamental tasks of installing and configuring IBM Cognos BI, and administering servers and content in the environment. In the course, you will install and configure the IBM Cognos BI software, implement security, and manage the server components. You will also monitor and schedule tasks, create data sources, manage and deploy content in IBM Cognos Connection and IBM Cognos Administration.

Audience

This course is intended for Administrators.

Prerequisites

- Knowledge of Web application server architectures
- Security systems administration
- Experience using basic Windows functionality
- Experience using a Web browser
- Knowledge of your business requirements



B5A55: IBM Cognos BI Administration

Course outline

Introduction to IBM Cognos BI Administration

- role of the Administrator in IBM Cognos BI administration workflow process
- role of IBM Cognos Administration and IBM Cognos Configuration user interface components

Identify IBM Cognos BI Architecture

- IBM Cognos BI architecture
- Cognos BI servlets and services
- Cognos BI request processing
- performance planning and installation options and configurations
- Cognos Application Firewall
- distributed installation and configuration

Secure the IBM Cognos BI Environment

- IBM Cognos BI security model
- authentication and authorization
- security policies
- secure administrative capabilities (access to functionality)
- specify security settings after installation
- implement security in Framework Manager and Transformer

Administer the IBM Cognos BI Server Environment

- administrative tasks in IBM Cognos Administration
- monitor system metrics
- manage dispatchers and services
- tune server performance
- audit IBM Cognos BI
- identify issues while troubleshooting the server environment
- IBM Cognos BI backup strategy

Manage Run Activities

- manage current, past, and upcoming run activities and schedules

Manage Content in IBM Cognos Administration

- add and manage a data source
- distribute data and create a distribution list
- deploy IBM Cognos BI content
- maintain IBM Cognos BI content store
- customize appearance of IBM Cognos BI

Additional Configuration and Customization of the Environment

- manage user profiles
- add objects to the toolbox tab
- create a custom template option
- manage packages in IBM Cognos Connection

Overview of IBM Cognos BI (Optional)

IBM Cognos BI for Consumers (Optional)

Drill-Through Definitions (Optional)

- enable users to navigate to related data in IBM Cognos BI
- parameter-driven drill through vs. dynamic drill through
- steps to enable drill-through access for a package
- limit the items that users can drill through from (set scope)
- set a measure as the scope
- Drill Through Assistant

End-to-End Workshop (Optional)

- create roles
- add members and define access permissions
- set capabilities
- create folders
- define access to entries
- create an export
- create an import

B5A58

IBM Cognos Report Studio: Author Professional Reports - Fundamentals (3 days)

Course Description

IBM Cognos Report Studio: Author Professional Reports - Fundamentals is designed for professional report authors to learn report-building techniques using relational data models, including methods of enhancing, customizing, and managing professional reports. Attendees will participate in hands-on demos and workshops that illustrate key concepts while learning how to use the software.

Audience

This intermediate course is intended for Professional Report Authors.

Prerequisites

Recommended:

- Overview of IBM Cognos BI (*Refer to page 9*).
- IBM Cognos BI for Consumers WBT

You Should Have:

- Knowledge of your business requirements
- Experience using the Windows operating system
- Experience using a Web browser



B5A58: IBM Cognos Report Studio: Author Professional Reports - Fundamentals

Course outline

Introduction to the Reporting Application

- Report Studio and its interface
- different report types
- create a simple, sorted, and formatted report
- explore how data items are added to queries

Create List Reports

- format, group, and sort list reports
- describe options for aggregating data
- create a multi-fact query
- create a report with repeated data

Focus Reports Using Filters

- create filters to narrow the focus of reports
- examine detail and summary filters
- when to apply filters on aggregate data

Create Crosstab Reports

- format and sort crosstab reports
- convert a list to a crosstab
- crosstabs using unrelated data items
- complex crosstabs using drag and drop functionality

Present Data Graphically

- charts containing peer and nested items
- add context to charts
- create and reuse custom chart palettes
- present key data in a single dashboard report

Focus Reports Using Prompts

- prompt types
- use parameters and prompts to focus data
- search for prompt items
- customize prompts to facilitate users' choices
- navigate between pages
- display users' prompt selections in the report

Extend Reports Using Calculations

- calculations based on data in the data source
- add run-time information to the reports
- create expressions using functions

Use Additional Report Building Techniques

- re-use objects within the same report
- share layout components among separate

reports

- report templates
- adding pages to a report
- choose options to handle reports with no available data

Customize Reports with Conditional Formatting

- create multilingual reports
- highlight exceptional data
- show and hide data
- conditionally render objects in reports

Drill-Through From One Report to Another

- let users navigate from a specific report to a target report
- pass parameter values to filter the data in drill-through targets

Drill-through Definitions

- enable users to navigate to related data
- parameter-driven vs. dynamic drill-through
- enable drill-through access for a package
- limit items users can drill through from (set scope)
- set a measure as the scope
- Drill-Through Assistant

Enhance Report Layout

- force page breaks in reports
- modify existing report structures
- apply horizontal formatting
- specify print options for PDF reports
- combine data containers displaying data from different queries
- format data and report objects

Appendix A: Overview of IBM Cognos BI

- describe IBM Cognos BI and Financial Performance Management
- describe IBM Cognos BI components
- describe IBM Cognos BI architecture at a high level
- define IBM Cognos groups and roles
- explain how to extend IBM Cognos

B5A59

IBM Cognos Report Studio: Author Professional Reports - Advanced (2 days)

Course Description

Building on topics learned in the Fundamentals course, the IBM Cognos Report Studio: Author Professional Reports - Advanced course is designed for professional report authors wanting to learn advanced report building techniques using mostly relational data models, including enhancing, customizing, and managing professional reports. Attendees will participate in interactive demos and workshops that illustrate key concepts while learning how to use the software.

Audience

This advanced course is intended for Professional Report Authors using relational data models to build reports.

Prerequisites

- Knowledge of their business requirements and basic knowledge of SQL, XML
- IBM Cognos Report Studio: Author Professional Reports - Fundamentals course (*please refer to page 25*).



B5A59: IBM Cognos Report Studio: Author Professional Reports - Advanced

Course outline

Create Query Models

- build query models and connect them to the report layout
- edit SQL statement to author custom queries
- add filters and prompts to a report using query model

Create Query Reports Based on Relationships

- create reports by merging query results
- create reports by joining queries
- combine data containers based on relationships from different queries

Create Advanced Dynamic Reports

- filter reports on session parameter values
- navigate a briefing book using table of contents
- create dynamic headers and titles
- let users navigate to specific locations in reports
- create a customer invoice report

Design Effective Prompts

- control report displays using prompts
- specify conditional formatting values using prompts
- specify conditional rendering of objects based on prompt selection
- create sorted and filtered reports based on prompt selection

Create Additional Advanced Reports

- create report that displays summarized data before detailed data
- highlight alternate rows in a list report

- create a report using external data file
- use single data items to summarize report information

Examine the Report Specification

- examine report specification structure
- modify a report specification
- add custom toolbox objects and custom template options

Distribute Reports Through Bursting

- distribute reports using bursting
- create burst keys
- identify report recipients and data items using burst tables
- distribute reports using email and IBM Cognos Connection

Enhance User Interaction with HTML

- create tooltips that clarify report data
- send emails using links in a report

End-to-End Workshop (Optional)

- various managers have requested that professional report authors create reports to answer business questions pertaining to their areas of interest

Explore the Prompt API (Optional)

- describe the Prompt API
- describe the uses of the Prompt API
- describe the primary objects, methods and properties used in the Prompt API
- review prompt values
- explore the enhancement of prompts in reports with the Prompt API

B5A61

IBM Cognos Report Studio: Author Professional Reports with Multidimensional Data (2 days)

Course Description

In this course, professional report authors build on their experience with Report Studio by applying dimensional techniques to reports. Through interactive demonstrations and workshops, students will learn how to author reports that navigate and manipulate dimensional data structures using specific dimensional functions and features available in Report Studio.

Audience

This advanced course is intended for Professional Report Authors using dimensional data sources to build reports.

Prerequisites

- Knowledge of their business requirements.
- Basic knowledge of dimensional data
- Windows and Web functionality
- IBM Cognos Report Studio: Author Professional Reports - Fundamentals course (*refer to page 25*).



B5A61: IBM Cognos Report Studio: Author Professional Reports with Multidimensional Data

Course outline

Introduction to Dimensional Concepts

- identify different data sources and models
- investigate the OLAP dimensional structure
- identify dimensional data items and expressions
- differentiate the IBM Cognos BI query language from SQL and MDX
- differentiate relational and dimensional report authoring styles

Introduction to Dimensional Data in Reports

- work with members
- identify sets and tuples in Report Studio

Dimensional Report Context

- understand the purpose of report context
- understand how data is affected by default and root members

Focus Your Dimensional Data

- compare dimensional queries to relational queries
- explain the importance of filtering dimensional queries
- evaluate different filtering techniques
- filter based on dimensions and members
- filter based on measure values
- filter using a slicer
- dynamically filter using a tree prompt

Calculations and Dimensional Functions

- use IBM Cognos BI dimensional functions to create sets and tuples
- perform arithmetic operations in OLAP queries
- identify coercion errors and rules

Functions for Navigating Dimensional Hierarchies

- navigate dimensional data using family functions

Relative Functions

- navigate dimensional data using relative functions
- navigate dimensional data using relative time functions

Advanced Drilling Techniques and Member Sets

- understand default drill-up and drill-down functionality
- identify cases when you need to override default drilling behavior
- configure advanced drilling behavior to support sophisticated use cases
- define member sets to support advanced drilling
- define member sets to support functions

Set Up Drill-Through Reports

- navigate from a specific report to a target report
- drill down to greater detail and then navigate to target report
- navigate between reports created using different data sources

End-to-End Workshop

B5A63

IBM Cognos Cube Designer: Design Dynamic Cubes (2 days)

Course Description

IBM Cognos Cube Designer: Design Dynamic Cubes provides participants with introductory to advanced knowledge of how to model metadata for predictable reporting and analysis results using IBM Cognos Cube Designer. Participants will learn the full scope of the metadata modeling process, from initial project creation, to publishing dynamic cubes, and enabling end users to easily author reports and analyze data.

Audience

This intermediate course is intended for Data Modelers.

Prerequisites

You should have:

- Knowledge of dimensional modeling and design.
- Experience using IBM Cognos Connection and Administration.



B5A63: IBM Cognos Cube Designer: Design Dynamic Cubes

Course outline

Introduction to IBM Cognos Dynamic Cubes

- define and differentiate dynamic cubes
- identify challenges of very large data and how Dynamic Cubes resolves those issues
- examine dynamic cube characteristics and requirements
- examine high-level architecture
- IBM Cognos Dynamic Query
- review dimensional data structures
- describe the dynamic cube process flow and lifecycle
- examine how dynamic cubes use caching

Create and Design a Dynamic Cube

- explore IBM Cognos Cube Designer
- review the cube development process
- examine the automatic cube generator
- the manual development process
- examine modeling Strategies

Deploy and Configure a Dynamic Cube

- deploy and publish a dynamic cube
- use the Hardware Sizing Wizard
- configuration and management of a published cube
- assign an Access Account
- examine query service administration tasks
- explore dynamic cube properties
- configure a dynamic cube to trigger a report
- run Administrative Commands with the DCAdmin Command Line Tool

Advanced Dynamic Cube Modeling

- identify advanced modeling techniques and caveats
- examine calculated members and measures
- model a relative time dimension
- explore Custom Relative Time
- explore the Current Period Property
- define Period Aggregation Rules for Measures
- create and Use Named Sets
- examine the Shared Dimension Property

Advanced Features of Cube Designer

- examine Multilingual Support
- define Parent-Child Dimensions (ragged hierarchies)
- refresh Metadata in an Existing Cube
- import Framework Manager packages into Cube Designer
- filter measures and dimensions

Optimize Performance with Aggregates

- examine aggregation in dynamic cubes
- identify types of aggregates (database and in-memory)
- examine user-defined, in-memory aggregates
- use Aggregate Advisor to identify aggregates
- use Automatic In-Memory Aggregate Optimization
- allocate memory for cache and aggregates
- explore the aggregate workflow
- explore the aggregate advisor
- use Slicers

Define Security

- overview of dynamic cube security
- types of Security, examine Security Scope
- identify roles and capability requirements
- define Security Using Relational Database Tables
- use security filters to define hierarchy security views
- assign users and groups to security views

Model a Virtual Cube

- examine the benefits, requirements, and build process of virtual cubes
- explore virtual cube objects: dimensions and hierarchies
- examine virtual levels in merged hierarchies
- explore Currency Conversion using virtual cube
- apply security to virtual cubes
- publish a virtual cube

Overview of IBM Cognos BI

B5A70

Essentials for IBM Cognos BI

(5 days)

Course Description

This accelerated offering is intended for core project team members wishing to acquire a broad understanding of a Business Intelligence platform implementation. Participants will perform hands-on demos and workshops that cover three essential topic areas: **modeling, report authoring**, and **administration** of a BI platform. Students will be guided to more-in depth training offerings and paths leading to certification. At the end of this course, there is an option to purchase additional e-learning modules for further practice. Please contact the Newcomp training team for details on these modules.

Audience

This advanced course is intended for Project Managers, Technical Analysts and Developers.

Prerequisites

You should have:

- Knowledge of your business requirements
- Experience using the Windows operating system
- Experience using a web browser



B5A70: Essentials for IBM Cognos BI

Course outline

Overview of IBM Cognos BI

- IBM Cognos 10 Family of offerings
- IBM Cognos BI enterprise components
- IBM Cognos architecture at a high level
- IBM Cognos BI security at a high level
- how to extend IBM Cognos BI

Identify Common Data Structures

- the role of metadata model in Cognos BI
- characteristics of common data structures
- understand the relative merits of each model type
- examine relationships and cardinality
- identify different data traps
- identify data access strategies

Defining Requirements

- examine key modeling recommendations
- define reporting requirements
- explore data sources to identify data access strategies
- identify the advantages of modeling metadata as a star schema
- model in layers

Create a Baseline Project

- IBM Cognos BI workflow processes
- define a project and its structure
- Framework Manager environment
- create a baseline project
- enhance the model with additional metadata

Prepare Reusable Metadata

- verify relationships and query item properties
- create efficient filters by configuring prompt properties

Model for Predictable Results: Identify Reporting Issues

- multi-fact queries and when full outer joins are appropriate
- how IBM Cognos BI uses cardinality
- identify reporting traps
- use tools to analyze the model

Model for Predictable Results: Virtual Star Schemas

- benefits of using model query subjects
- use aliases to avoid ambiguous joins
- merge query subjects to create as view behavior
- resolve a recursive relationship
- create a complex relationship expression

Model for Predictable Results: Consolidate Metadata

- virtual facts to simplify writing queries
- virtual dimensions to resolve fact-to-fact joins
- consolidated modeling layer for presentation purposes
- consolidate snowflake dimensions with model query subjects
- simplify facts by hiding unnecessary codes

Calculations and Filters

- create commonly needed query items for authors
- static filters to reduce the data returned
- macros and parameters in calculations and filters to dynamically control data returned

Implementing a Time Dimension

- make time-based queries simple to author by implementing a time dimension
- resolve confusion caused by multiple relationships between a time dimension and another table

B5A70: Essentials for IBM Cognos BI

Course outline

Specify Determinants

- use determinants to specify multiple levels of granularity and prevent double-counting

Create the Presentation View

- dimensions associated with a fact table
- conformed vs. non-conformed dimensions
- star schema groupings to provide authors with logical groupings of query subjects
- Model Design Accelerator

Create Analysis Objects

- apply dimensional information to relational metadata to enable OLAP-style queries
- sort members for presentation and predictability
- define members and member unique names
- identify changes that impact a MUN

Introduction to the Reporting Application

- Report Studio and its interface
- report types
- simple, sorted, and formatted report
- how data items are added to queries

Create List Reports

- group, format, and sort list reports
- describe options for aggregating data
- create a multi-fact query
- create a report with repeated data

Focus Reports Using Filters

- create filters to narrow the focus of reports
- examine detail filters and summary filters
- determine when to apply filters on aggregate data

Create Crosstab Reports

- format and sort crosstab reports
- create complex crosstabs using drag and drop functionality
- create crosstabs using unrelated data items

Present Data Graphically

- create charts containing peer and nested columns
- present data using different chart type options
- add context to charts
- create and reuse custom chart palettes
- introduction to visualization
- present key data in a single dashboard report

Focus Reports Using Prompts

- identify various prompt types
- use parameters and prompts to focus data
- search for prompt types
- navigate between pages

Extend Reports Using Calculations

- create calculations based on data in the data source
- add run-time information to the reports
- create expressions using functions

Customize with Conditional Formatting

- create multi-lingual reports
- highlight exceptional data
- show and hide data
- conditionally render objects in reports
- conditionally format one crosstab measure based on another
-

Drill-Through From One Report to Another

- let users navigate from a specific report to a target report
- pass parameter values to filter the data in drill-through targets
- navigate through multiple reports

B5A70: Essentials for IBM Cognos BI

Course outline

Create Reports using Relational Data

- relational data
- report layouts
- build a report
- explain how to add data query items
- use calculations

Introduction to IBM Cognos BI Administration

- role of the Administrator in relation to the IBM Cognos BI administration workflow process
- role of IBM Cognos Administration and IBM Cognos Configuration

Identify IBM Cognos BI Architecture

- identify and explain:
 - features of IBM Cognos BI architecture
 - the three architectural tiers
 - IBM Cognos BI servlets and services
 - the default servlet container and alternatives to its use
 - an example of IBM Cognos BI request processing
 - installation options
 - load balancing mechanisms
 - configuration options
 - the IBM Cognos Application Firewall

Secure the IBM Cognos BI Environment

- IBM Cognos BI security model
- define authentication and authorization in IBM Cognos BI
- identify security policies
- secure the IBM Cognos BI environment

Manage Run Activities

- manage current, upcoming and past activities
- manage schedules

Manage Content in IBM Cognos Administration

- view data sources associated with a package and add a data source
- add multiple connections for a single data source
- create a distribution list
- create an export and import archive
- save content to the file system

B5280

IBM Cognos Data Manager: Build Data Marts with Enterprise Data (5 days)

Course Description

IBM Cognos Data Manager: Build Data Marts with Enterprise Data teaches participants how to move, merge, consolidate, and transform data from a range of data sources to build and maintain subject-area data marts. In the process, students will create a catalog and add connections to data sources and targets. They will also deliver fact and dimension data to a data mart through the use of builds and the dimensional framework. In addition, students will learn how to automate common functionality and handle complex data issues, such as unbalanced hierarchical structures.

Audience

This advanced course is intended for Developers.

Prerequisites

- Knowledge of basic Windows functionality, database and dimensional analysis concepts, as well as a working knowledge of SQL



B5280: IBM Cognos Data Manager: Build Data Marts with Enterprise Data

Course outline

Getting Started

- identify the purpose of IBM Cognos Data Manager
- define data warehousing and its key underlying concepts
- identify how Data Manager creates data warehouses
- examine the Data Manager architecture and user interface

Create a Catalog

- purpose and contents of Data Manager catalogs
- create a catalog
- define connections to source and target data
- access data using SQLTerm
- configure flat data source files using SQLTXT

Create Hierarchies

- role of the dimensional framework in Data Manager
- hierarchies and their data sources
- identify how to create hierarchies from the columns of one table, the rows of one table, and from multiple tables
- test and view hierarchies
- create a hierarchy of static date values
- handle weeks in a date hierarchy

Create Basic Builds

- Data Manager builds and build-related terminology
- create a dimension build using the Dimension Build wizard
- create a fact build using the Fact Build wizard
- test and execute a fact build
- document a catalog
- create catalog schema

Create Derivations

- examine derivations
- apply operators and functions to derivations
- examine the derivation timing model
- add derivations to a fact build

Create Conformed Dimensions

- examine conformed dimensions and their advantages
- design conformed dimensions
- create conformed dimensions
- create data integrity lookups that use conformed dimensions

Customize Reference Structures

- create hierarchies manually using different approaches
- examine the features of a hierarchy
- examine literals
- set data access for hierarchy levels
- examine static and dynamic members
- examine fostering
- use derivations in a hierarchy

Process Dimensional History and Late Arriving Facts

- examine slowly changing dimensions (SCDs)
- use surrogate keys in SCDs
- manage type 1 and type 2 changes to dimensional data
- load historical data for a dimension
- examine late arriving facts
- process late arriving facts in a fact build

Transform Data Using Lookups and Derived Dimensions

- identify when to use lookups
- identify the requirements for a lookup
- create a translation lookup
- create an optional lookup
- add derived dimensions to fact builds

B5280: IBM Cognos Data Manager: Build Data Marts with Enterprise Data

Course outline

Customize Data Delivery

- configure fact and dimension delivery modules
- create indexes on fact and dimension tables
- update fact data using keys

Customize Fact Data Processing

- filter fact data
- merge duplicate fact data
- examine fact data integrity checking
- reject fact data

Aggregate, Filter, and Partition Fact Data

- aggregate fact data
- examine aggregate rules
- vertically restrict fact data
- horizontally restrict fact data
- partition fact data

Implement Job Control

- examine where job control fits into the data warehouse lifecycle
- create a JobStream
- add, link, and reposition nodes
- execute a JobStream and view the results

Automate Functionality Using Commands

- differentiate between the Command Line Interface (CLI) and Data Manager Designer
- identify common commands
- use commands in a batch file
- examine variables

Customize Functionality with User-Defined Functions and Variables

- examine user defined functions (UDFs)
- create an internal UDF
- create a user-defined variable

Process Unbalanced Hierarchical Data

- examine balanced, unbalanced, and ragged hierarchies
- add a recursive level to a hierarchy
- identify ways to balance a hierarchy and delivered flattened data
- examine circular references

Pivot Fact Data

- examine pivoting
- use the single pivot technique
- use the advanced pivot technique
- examine reverse pivoting

Resolve Data Quality Issues

- identify data quality and cleansing issues
- handle fostered and unmatched members
- perform debugging using SQLTerm and functions
- assess the quality of output data

Troubleshoot and Tune the Data Manager Environment

- use build logging to ensure that data marts are being loaded properly
- perform dimension breaking
- manage memory and resources
- export DDL statements

Organize and Package Data Manager Components

- export and import components using packages
- search for components in a catalog using Navigator

Integrate with IBM Cognos BI

- examine IBM Cognos BI
- identify the role of metadata dimensions, metadata collections, and metadata stars
- export Data Manager metadata to XML
- import Data Manager XML into Framework Manager

B5280: IBM Cognos Data Manager: Build Data Marts with Enterprise Data

Course outline

Integrate with IBM Cognos BI (continued)

- use Data Manager metadata with IBM Cognos BI
- publish a data movement task to IBM Cognos Connection

End-to-End Workshop

Entity-Relationship Model of the GO_Demo Database (Optional)

Work in a Multi-Developer Environment (Optional)

- examine collaborative development support
- examine the source code repository
- examine the component dependency model
- identify planning considerations

Standardizing Dimensions and Facts Exercise (Optional)

Review of Data Manager Essentials (Optional)

- data warehouse design
- the purpose of Data Manager components
- development steps in Data Manager to create data marts
- track dimensional changes and late arriving facts

Work with SAP R/3 Data (Optional)

- identify how to access SAP R/3 data sources using the IBM Cognos Data Manager Connector for SAP R/3 tool

B5A81

IBM Cognos Workspace Advanced: Author Self-Service Reports (2 days)

Course Description

IBM Cognos Workspace Advanced: Author Self-Service Reports will develop the skills that participants will need to use IBM Cognos Workspace Advanced in order to create effective reports with relational and dimensional data. Through interactive demos and workshops, this course will present topics related to creating reports with IBM Cognos Workspace Advanced for the business author.

Audience

This course is intended for Business Authors looking to build ad-hoc reports.

Prerequisites

- Knowledge of your business requirements.



B5A81: IBM Cognos Workspace Advanced: Author Self-Service Reports

Course outline

Examine IBM Cognos Workspace Advanced

- user interface components of IBM Cognos Workspace Advanced
- launch IBM Cognos Workspace Advanced through different methods
- browser options

Create a Report using Relational Data

- relational data
- object types
- define report layouts
- add data query items
- use calculations

Create a Report using Dimensional Data

- Dimensional Data
- drill down and drill up with hierarchies
- identify sets
- Financial reports

Group and Sort Your Data

- sorting (relational and dimensional)
- aggregated data
- grouping data
- dividing data into sections

Filter Your Data + B20

- suppression options
- filtering data (relational and dimensional)
- filtering aggregated data

Highlight and Visualize Report Data

- query item properties
- formatting to improve the visual effectiveness of reports
- conditional styles to highlight query items on a report
- Rave visualizations

Integrate External Data

- define external data
- discuss security permissions for user access to external data capability
- discuss steps to integrate external data
- discuss mapping data
- explain how to link external data
- discuss data attributes

Analyze Data Using Charts and Graphs

- discuss data analysis processes
- explain types of reports and best practice for report analysis

Integrate Cognos Workspace Advanced with other BI Tools

- discuss Report Studio functionality that can add additional value to meet business needs
- discuss integration of Cognos Workspace Advanced within Cognos Workspace

Appendix A: Overview of IBM Cognos BI (Optional)

- describe IBM Cognos BI and Financial Performance Management
- describe IBM Cognos BI components
- describe IBM Cognos BI architecture at a high level
- define IBM Cognos groups and roles
- explain how to extend IBM Cognos

B5A82

IBM Cognos Transformer: Design OLAP Models (4 days)

Course Description

IBM Cognos Transformer: Design OLAP Models provides developers with knowledge of OLAP modeling concepts using Transformer. Participants will learn how to design, build, and maintain PowerCubes for use in IBM Cognos BI so that end users can easily analyze data.

Audience

This course is intended for Developers who design OLAP models for use in IBM Cognos BI.

Prerequisites

Required:

- Understanding the business need for ad hoc queries and analysis
- Experience gathering requirements and analyzing data

Recommended:

- IBM Cognos Report Studio: Author Professional Reports - Fundamentals course (*refer to page 25*).



B5A82: IBM Cognos Transformer: Design OLAP Models

Course outline

Overview of IBM Cognos BI

- IBM Cognos and Performance Management
- IBM Cognos BI components
- how to extend IBM Cognos BI

Transformer Fundamentals

- basics of OLAP analysis
- Transformer capabilities and its role in IBM Cognos BI
- Transformer components
- categories and members

The Transformer Development Process

- purpose of a model plan
- match business requirements to model
- creating a model plan

Data Sources in Transformer

- types of data used by Transformer
- create data source files and define properties
- preview source data and SQL
- add IBM Cognos data sources to model
- discuss data filtering

Building a Model

- create model structures and modify property sheets
- confirm the data source origin
- generate categories to populate model
- modify model using the dimension diagram
- verify model and create a PowerCube
- publish as a data source and package

Considerations for Designing Successful PowerCubes

- model types and data entities
- members and member unique names
- address changes that impact a MUN
- when category codes can change

The Time Dimension

- regular time dimension
- standard and nonstandard time dimensions
- limit the range of valid dates

Relative Time

- compare trends over time
- set the current period
- relative time categories
- customize relative time categories

Use Multiple Data Sources

- use of multiple data sources
- plan the data sources
- data source types

Uniqueness

- identify and resolve conflicts between data sources
- validate a multiple data source model
- discuss a unique move

Working with Measures

- purpose and uses of measures
- regular and calculated measures
- set measure properties
- compare rollup options
- calculated measure
- calculations before or after rollups
- category count

Allocated Measures

- discuss measure allocation
- allocate measures as a constant and by another measure
- check measure distribution

Currency Conversion

- currency conversion techniques

B5A82: IBM Cognos Transformer: Design OLAP Models

Course outline

Alternate Hierarchies within a Dimension

- primary and alternate hierarchies
- benefits of alternate hierarchies
- alternate drill-down path
- convergence levels and uniqueness issues
- alternate drill-down path
- define convergence levels and identify uniqueness issues

Advanced Dimensional Modeling

- techniques for customizing dimensions
- add a new source level to an existing dimension
- manual level in a dimension
- orphan categories
- modify a dimension using a subdimension
- special category
- scenario dimension
- calculated columns and categories

Customize Cube Content

- create various types of PowerCubes
- omit dimensions and exclude measures
- create and apply dimension views

Examine IBM Cognos Security

- security environment
- IBM Cognos BI security model
- authentication and authorization
- security policies

Applying Security

- review model security
- create custom views
- assign security to custom views
- assign Custom Views to PowerCubes
- combine custom views with dimension views
- examine a union of custom views

Maintain Models and PowerCubes

- data source, model, cube updates
- synchronize the model and data source

- incrementally update PowerCubes
- copy and activate a newer version of the PowerCube without affecting users

Considerations for Drill Through

- identify conformed values between data sources
- drill through in IBM Cognos BI
- report drill through
- package-based drill through
- drill-through values
- modeling recommendations

Optimize PowerCubes

- cube groups
- plan for disk space
- optimize PowerCube inputs and outputs
- determine factors that affect PowerCube build time and user response time

Partition PowerCubes

- pros and cons
- partitioning strategy
- time-based partitioned cube
- automatic vs. manual partitioning
- multi-file PowerCubes

Identify Common Data Structures (Optional)

B5A98

IBM Cognos Report Studio: Author Active Reports (1 day)

Course Description

This course is designed to guide professional report authors in incorporating interactivity and disconnected functionality to reports using active report controls. Through interactive demonstrations and workshops, participants will learn how to author reports with interactive content, as well as reports optimized to work on mobile devices, or in disconnected environments.

Audience

This course is for professional report authors who need to create reports that will be consumed by an audience in an interactive manner.

Prerequisites

- IBM Cognos Report Studio: Author Professional Reports - Fundamentals course (*refer to page 25*).
- Basic understanding of IBM Cognos Report Studio and report authoring.



B5A98: IBM Cognos Report Studio: Author Active Reports

Course outline

Introduction to IBM Cognos Active Reports

- Explain active reports and their value
- Save active reports
- Create active report templates
- Convert existing reports to active reports
- Explain security considerations in active reports
- Debug active report behavior
- Use active report content in Cognos Workspace

Use Active Report Connections

- Describe active report connections
- Apply Filter and Select behavior to active report controls
- Modify the interactive behavior of report controls
- Identify active report controls and variables in a report
- Use variables to control multiple controls independently
- Control multiple controls from a single variable
- Author and optimize active reports for mobile consumption

Active Reports Charts and Decks

- Describe characteristics of traditional charts in active reports
- Control data display using decks and data decks
- Use decks and data decks to display traditional charts
- Optimize decks for performance
- Describe characteristics of RAVE Visualizations

NOASF

Cognos Analysis Studio

(1 day)

Course Description

This module focuses on Cognos BI's ad-hoc tool for multidimensional analysis: Analysis Studio.

Students will be introduced to some general dimensional concepts (dimensions, cubes, measures) before learning how to manipulate multidimensional data in the studio.

The module covers simple “slice and dice” actions such as drilling, swapping, filtering and nesting before moving on to more advanced analysis features such as stacking, navigating levels and creating asymmetric crosstabs.

Students will also learn custom sorting and the creation of summary and item-based calculations to extend the user's analysis.

Audience

- Business authors

Module Outline

What is Analysis Studio?

- What is a Dimension?
- What are Measures?
- Launching Analysis Studio
- The Analysis Studio Layout
- The Insertable Objects Pane

Adding Items to the Analysis

- Dragging Items into the Analysis
- Drilling (Row, Column, & Intersection)
- Searching for Items
- Context Filters
- Swapping Columns & Rows
- Saving the Analysis

Rearranging the Analysis

- Changing the number of Items Shown
- Sorting (by Measure & Label)
- Formatting the Display of Missing Data
- Nesting Sets
- Swapping Items in Nested Sets
- Removing Nested Sets
- Drilling on Nested Sets
- Swapping Nested Sets

Enhancing the Analysis

- Adding & Interacting with Charts
- Design without Retrieving Data
- Navigating (vs Drilling on single item)
- Keep, Exclude & Hide
- Zero Suppression
- Stacked Crosstabs
- Asymmetrical Crosstabs

Advanced Analysis

- Custom Sorts
- Filters
- Summary Calculations
- Item-Based Calculations
- Running a Report



NOCWF

Cognos Workspace

(1/2 day)

Course Description

This half-day module introduces Cognos Workspace: a self-service, web-based dashboarding tool that allows users to assemble and share “Workspaces” of content available in their Cognos BI environment.

Users will be able to arrange content in an intuitive and interactive manner via “Widgets” that can be personalized and extended without requiring IT assistance.

During the module students will add multiple report objects to their workspaces and then customize them. The module covers creating new calculations, adding comments and annotations, and modifying the formats and visualizations of the Widgets.

Audience

- Business authors

Module Outline

Overview of Cognos Workspace

- What is Cognos Workspace?
- Key Features & Benefits
- Layout & Menu
- Interacting with the workspace
- Typical Workspace
- Common Workspace Interactions

Creating a New Workspace

- Creating a Cognos Workspace
- Filter Workspace Widgets
- Filter Widgets
- Widget Communication
- Report Widget Source Updates

Creating a Workspace with an Existing Prompt

- Reports with Prompts
- Changing Prompt Values in a Report
- Formatting a Workspace
- Resizing Widgets

Additional Workspace Actions

- Adding Tabs to Workspace
- Calculations
- Grouping List Reports
- Sorting Reports in a Workspace
- Navigating a Dimensional Report
- Display Types
- Business Insight Technique
- Do More with Cognos Workspace Advance



NOCWF-A

Cognos Workspace Advanced - Relational and Dimensional Data with DMR Datasource (2 days)

Course Description

This module introduces Cognos Workspace Advanced, a self-service web-based reporting studio that can work with both relational and dimensional data packages.

Cognos Workspace Advanced was designed to combine the features of Query Studio, Analysis Studio, and Report Studio Express; the goal being to eliminate “studio hopping” for users that require a variety of reporting techniques and functions.

During this module, students will build reports **from relational and dimensional data packages** and learn studio features designed to leverage both types of data sources. This module is often combined with the Cognos Workspace course as there is some integration between the studios.

Module Outline

Overview

- What is Cognos Workspace Advanced?
- Launch Cognos Workspace Advanced
- Workspace Advanced Layout
- Existing Reports
- CWA Report Types
- Opening Cognos Workspace Advanced Reports

Creating List Reports

- Insertable Objects – Source
- Insertable Objects – Toolbox
- Relational Package Objects
- Adding Data Items to a Report
- Reorganizing Report Data Items
- Remove/Re-Order/Add Columns
- Adding Report Titles
- Naming Report Objects
- Saving Reports
- Running Reports

Grouping & Sorting Reports

- Grouping Data
- Report Sections
- Sorting a Report
- Layout Sorting
- Summary Rows & Columns



NOCWF-A: Cognos Workspace Advanced - Relational and Dimensional Data with DMR Datasource

Module Outline

Filtering and Prompts

- Filtering Data
- Advanced Filters
- Detail & Summary Filters
- Model Filters
- Combining Filters
- Prompts
- Filtering on a Measure

Creating Crosstab Reports

- Crosstab Reports
- Pivot a List to a Crosstab

Adding Calculations to Your Report

- Adding Calculated Data Items
- Query Calculations

Reporting with Charts

- Adding Charts
- Chart Formatting
- Visualizations

Enhancing Your Report

- Enhancing Reports
- Text Objects and Images
- Report Style References
- Formatting Objects
- Custom Grouping
- No Data Property
- Visual Aids

Applying Conditional Styles

- Apply Conditional Styles
- Conditional Formatting

Integrating External Data

- Working with External Data
- External Data File Wizard
- External Data Process
- My Data Sets
- My Data Sets vs. External Data
- My Data Sets Import Process

Extending Cognos Workspace Advanced to Report Studio

- Extending Reports to Report Studio
- Additional Capabilities

Working with Dimensional Data

- Dimensional Layout
- Insertable Objects
- Context Filters
- Page Layers
- Drilling Up & Down
- Set Operations
- Custom Groups
- Show Values As
- Copy Data
- Shared Sets

Advanced Dimensional Reporting

- Nested Crosstabs
- Creating Asymmetric Ranges
- Stacked Crosstabs
- Filter Dimensional Data by Attribute

Workshops

NOCWF-AM

Cognos Workspace Advanced with Cognos PowerCubes (2 days)

Course Description

This module introduces Cognos Workspace Advanced, a self-service web-based reporting studio. Cognos Workspace Advanced was designed to combine the features of Query Studio, Analysis Studio, and Report Studio Express; the goal being to eliminate “studio hopping” for users that require a variety of reporting techniques and functions.

During this module, students will build reports from dimensional data packages and learn studio features designed to leverage **PowerCubes as a data source**. This module is often combined with the Cognos Workspace course as there is some integration between the studios.

Audience

- Business authors

Module Outline

Overview of Cognos Workspace Advanced

- What is Cognos Workspace Advanced?
- Launch Cognos Workspace Advanced
- Cognos Workspace Advanced Layout
- Existing Reports
- Cognos Workspace Advanced Report Types
- Opening Cognos Workspace Advanced Reports

Creating List Reports

- Insertable Objects – Source, Toolbox
- Adding Items to the Report
- What are Dimensions, Hierarchies, Levels Attributes and Measures
- Reorganizing Report Data Items
- Removing/Re-ordering/Adding Columns
- Adding Report Titles
- Naming Report Objects
- Saving and Running Reports



NOCWF-AM: Cognos Workspace Advanced with Cognos PowerCubes

Module Outline

Grouping and Sorting Reports

- Grouping Data
- Report Sections
- Sorting a Report
- Layout Sorting
- Summary Rows and Columns

Creating Crosstab Reports

- Crosstab Reports

Filtering and Drilling

- Context Filters and Page Layers
- Drilling Up and Down

Reporting with Charts

- Adding Charts
- Chart Formatting

Enhancing Your Report

- Enhancing Reports
- Text Objects and Images
- Table Styles
- Formatting Objects
- Visual Aids
- Pivot a List to a Crosstab

Applying Conditional Styles

- Apply Conditional Styles
- Conditional Formatting

Working with Sets

- Sets vs Members
- Working with Sets

Nesting and Stacking

- Nested Crosstabs
- Creating Asymmetric Ranges
- Stacked Crosstabs
- Stacked and Nested in Series
- Stacked and Nested in Categories

Report Calculations

- Inserting Calculations
- Measure and Member Calculations
- Custom Grouping
- Applying Percent of Total

Cognos Workspace

- What is Cognos Workspace
- Developing a Cognos Workspace

Advanced Topics (Optional)

- Query Calculations
- Dimensional Functions
- The Expression Editor

NOCWF-ATM

Cognos Workspace Advanced - Multidimensional Data with TM1 Cubes (2 days)

Course Description

This module introduces Cognos Workspace Advanced, a self-service web-based reporting studio.

Cognos Workspace Advanced was designed to combine the features of Query Studio, Analysis Studio, and Report Studio Express; the goal being to eliminate “studio hopping” for users that require a variety of reporting techniques and functions.

During this module, students will build reports from TM1 Cubes and learn studio features designed to leverage **TM1 as a data source**. This module is often combined with the Cognos Workspace course as there is some integration between the studios.

Audience

- Business Authors

Module Outline

Overview of Cognos Workspace Advanced

- What is Cognos Workspace Advanced?
- Launch Cognos Workspace Advanced
- Workspace Advanced Layout
- Existing Reports
- CWA Report Types
- Opening Cognos Workspace Advanced Reports

Creating List Reports

- Insertable Objects – Source
- Insertable Objects – Toolbox
- Adding Data Items to a Report
- What are Dimensions?
- What are Hierarchies?
- What are Levels?
- What are Attributes?
- What are Measures?
- Reorganizing Report Data Items
- Remove/Re-Order/Add Columns
- Adding Report Titles
- Naming Report Objects
- Saving Reports
- Running Reports



NOCWF-ATM: Cognos Workspace Advanced - Multidimensional Data with TM1 Cubes

Module Outline

Grouping & Sorting Reports

- Grouping Data
- Report Sections
- Sorting a Report
- Layout Sorting
- Summary Rows & Columns

Creating Crosstab Reports

- Crosstab Reports

Filtering & Drilling

- Context Filters & Page Layers
- Context Filters
- Page Layers
- Drilling Up & Down

Reporting with Charts

- Adding Charts
- Chart Formatting

Enhancing Your Report

- Enhancing Reports
- Text Objects and Images
- Table Styles
- Formatting Objects
- Visual Aids
- Pivot a List to a Crosstab

Applying Conditional Styles

- Apply Conditional Styles
- Conditional Formatting

Working with Sets

- Sets vs. Members
- Working with Sets

Nesting & Stacking

- Nested Crosstabs
- Creating Asymmetric Ranges
- Stacked Crosstabs
- Can “Nest” and “Stack” on Edges
- Stacked in Series
- Nested in Series
- Stacked in Categories
- Nested in Categories

Report Calculations

- Inserting Calculations
- Measure Calculations
- Member Calculations
- Custom Grouping
- % of Total

Additional Calculations (Optional)

- Query Calculations
- Dimensional Functions
- The Expression Editor

NORSF

Cognos Report Studio Fundamentals (2 days)

Course Description

This two-day module walks students through the fundamentals of Report Studio; a powerful web-based tool in Cognos BI designed for developers who need a fine level of control over the functionality and formatting of their reports.

Focusing on relationally-modeled data, the students will be introduced to Lists, Crosstabs and Charts as well as interactive features like prompts and report-to-report drill through.

During the course, students will also learn how to add advanced formatting to the objects in their reports and apply conditional styles and rendering.

Audience

- Professional report authors

Module Outline

Overview

- What is Report Studio?
- Report Studio Layout

Building a List Report

- Adding Items to the Report
- Grouping and Group Spans
- Adding a Summary Calculation
- Formatting Items in the Report
- Adding a Title to the Report
- Saving and Running the Report

Filtering a List Report

- Adding a Subject to the Report
- Removing a Column
- Adding Additional Data Items to the Report
- Sorting the List
- Modify the Expression of a Data Item
- Adding List Headers and Footers
- Filtering the Report

Prompting a Report

- Turn on Auto Summary for Groups
- Rename a Column Header
- Copy Formatting Using the Eyedropper Tool
- Creating a Prompt Page
- Using a Layout Calculation
- Set the Number of Rows per Page
- Simple Page Breaks



NORSF: Cognos Report Studio Fundamentals

Module Outline

Simple Crosstabs

- Building a Simple Crosstab
- Format Measures in a Crosstab
- Swap Rows and Columns

Creating Advanced Crosstabs

- Nesting Items in a Crosstab
- Stacking Items in a Crosstab
- Creating an Asymmetric Crosstab

Additional List Features

- Using Tables for Layout
- Pivoting a List to a Crosstab
- Creating Sections
- Changing the Summary Label

Add Calculations to Reports

- Cascading Prompts
- Adding a Search Prompt
- Adding a Calculation
- Applying Conditional Styles
- Sharing Layout Components
- Handling No Data

Add Charts to Reports

- Sharing a Query between Report Objects
- Setting Chart Properties
- Adding Pages to a Report

Additional Chart Properties

- Include a Calculation in a Chart
- Additional Formatting Options
- Add Chart Trendlines & Baselines
- Conditionally Format a Chart
- Apply Table Styles

Additional Formatting Options

- Apply Conditional Formatting
- Apply Conditional Rendering
- Unlocking Report Objects

Drill Through Reports

- Drill Through Report to Report
- Microcharts

Dashboards Exercises and Additional Techniques (Optional)

- Creating a Dashboard
- The “In-Column Filter” Technique
- Additional Functions in Query Calculations

NOCCF

Cognos Connection

(1/2 day)

Course Description

This half-day module introduces students to the basics of Cognos Connection; the portal to your enterprise's Cognos BI content and data.

Students will learn how to navigate the public and private areas of Cognos Connection, set preferences and also how to run, personalize, and schedule existing reports.

This module also includes an introduction to pages, dashboard, and portal tabs.

Audience

- This is a basic course for users.

Module Outline

Cognos Connection

- What is Cognos Connection?
- Welcome Page
- Public Folder
- My Folders
- Creating Folders
- Navigating Folders
- Home View
- Setting Preferences

Running and Managing Reports

- Running Reports
- Running Reports with Options
- Downloading a Report
- Shortcuts
- Report Views

Scheduling Reports

- Scheduling a Report
- Monitoring Schedules
- Disabling a Schedule
- Removing a Schedule

Creating Pages and Dashboards

- Pages and Dashboards
- Creating a Portlet Tab



NOQSF

Cognos Query Studio

(1 day)

Course Description

Through this module, students will learn how to create reports in Query Studio. Query Studio is a self-service, web-based tool designed for business users that are interested in manipulating data with a simple, drag & drop interface that does not require any technical skills or coding.

By the end of the module, users will be able to arrange content in both List and Crosstab layouts and apply filters and sorts to the data in the report.

During the course, students will also add easy-to-create calculations to provide additional insight and apply conditional formatting to the numeric data in their reports.

Module Outline

Query Studio

- What is Query Studio?
- Query Studio Layout

Building a Report

- Adding Items to the Query
- Filtering the Query
- Grouping Items

- Adding and Moving Additional Data Items
- Adding a Title to our Query
- Giving the Query a Name and Saving

Adding Features to a Report

- Adding a Query to the Canvas
- Removing a Column
- Prompting the Query
- Modifying a Filter
- Removing a Filter

Leveraging an Existing Report

- Deleting a Column without Affecting a Filter
- Sorting Items
- Adding a chart to a report
- Renaming a Column Heading
- Changing Summary Row Aggregation
- Running Report Options

Adding Calculations

- Filtering without Adding Columns to a Report
- Adding Calculation to a Report
- Defining Conditional Styles

Creating a Crosstab Report

- Formatting Data
- Crosstab Report



IBM Cognos Performance Management Courses

Formats offered:



In-Class



Instructor-Led Online



Self-Paced Virtual Classroom



On-Site



Customized

Notes

1K210

IBM Cognos Disclosure Management (3 days)

Course Description

IBM Cognos Disclosure Management is designed to teach professionals to create, manage, and administer internal and external reports and workflows. Through a series of lectures and hands-on exercises, participants will create and generate a report and configure the CDM application. Dashboards, Views, and the Yearly Rollover are also covered.

Audience

This intermediate course is for individuals responsible for critical internal or external narrative or disclosure reporting. To find this training valuable, you should have a strong background in developing such reports.

Prerequisites

- Strong understanding of financial accounting concepts
- Experience using the Windows operating system and a Web browser

Course outline

- Describe IBM Cognos Disclosure Management and its role in the IBM Cognos performance management solution
- Generate the report
- Create and edit report objects
- Add content to report objects
- Perform additional configuration
- Analyze reports using views
- Perform rollover and cascade
- Create dashboards
- Administer security



P8252

IBM Cognos TM1: Design and Develop Models in Performance Modeler (5 days)

Course Description

IBM Cognos TM1: Design and Develop Models is an intermediate instructor-led course. This offering will teach modelers how to build a complete model in TM1. Through a series of lectures and hands-on exercises, participants will learn how to create and customize dimensions and cubes, import and link data and build and maintain applications.

Audience

This intermediate course is for Modelers.

Prerequisites

Required:

- Basic knowledge of OLAP and TM1
- Significant experience with Excel spreadsheets (functions, macros, etc.)
- Understanding of the metrics and drivers of your business

Recommended:

- IBM Cognos TM1: Interact with Data (*refer to page 65*).



P8252: IBM Cognos TM1: Design and Develop Models in Performance Modeler

Course outline

Overview of IBM Cognos TM1

- financial performance management
- TM1's position in a performance management system
- components and architecture
- applications
- environment
- manage and organize a model

Create and Customize Dimensions

- review cubes, dimensions, and elements
- create dimensions manually
- import dimensions
- edit dimensions
- create dimension calculations
- use Guided Import to create a dimension

Create and Customize Cubes

- construct a new cube
- discuss cube properties
- edit a cube structure
- review and use a picklist
- create cube calculations

Import Data

- identify data sources
- create processes to load data
- create a process to delete data in a cube
- create processes to update and maintain the model

Share Data Across Cubes with Links

- discuss and list types of links
- create and modify links
- review rule- and process-based links

Complete the Income Statement Model

- discuss the model development process
- complete objects for the model
- review tools to aid in model development

Create Applications

- explain the application types
- access an IBM Cognos TM1 application
- create a new application
- set the available clients
- apply security in the application
- activate and de-activate an application

Additional Modeling Techniques

- create dynamic subsets
- use dimension functions
- implement business logic
- improve cube performance
- use TM1 utilities

Convert Currencies

- discuss currency challenges
- review control cubes
- create rules for currency conversion
- TM1 techniques to reduce maintenance

Model Data with Architect

- describe IBM Cognos TM1 Architect
- record MDX queries
- customize drill-through paths

Model for Different Fiscal Requirements

- discuss time considerations
- use discrete time dimensions
- implement a continuous time dimension model

Contribute to Planning Applications (Optional)

Integrate with IBM Cognos BI (Optional)

Administer IBM Cognos Insight (Optional)

Additional Workshop (Optional)

Optimize and Tune Models (Optional)

Identify Common Data Structures (Optional)

Customize Business Rules (Optional)

Optimize Rule Performance (Optional)

P8253

IBM Cognos TM1: Interact with Data (1 day)

Course Description

This course is designed to teach contributors how to navigate and interact with TM1, and how to use the front end tools and Microsoft Excel Spreadsheets with Multidimensional Cubes. An introduction to Cognos Insight is also included in the course. Students will learn how to connect and access TM1, build views, browse data, and navigate through the user interface.

Audience

This basic course is for contributors

Prerequisites

- Experience using the Windows operating system and a Web browser
- Experience using Microsoft Excel
- Knowledge of your business requirements



P8253: IBM Cognos TM1: Interact with Data

Course outline

Getting Started Using TM1

- financial performance management
- how TM1 enables financial performance management
- TM1 user community
- components and objects of TM1

Explore and Customize Multidimensional Data

- structure of a cube
- Cube Viewer to understand how to browse data in a cube
- subsets to focus data in a cube

Work with Data in IBM Cognos TM1 Perspectives

- analyze cube data with Excel using snapshot and slice methods
- examine the process from the cube viewer, to Excel, and then to the web
- contribute data to a cube using spread methods
- sandboxes
- filter data in a cube
- create dynamic reports using Active Forms

Organize Reports

- use TM1 application to organize reports
- publish Excel reports to the Web
- access Websheets

Work with Data in IBM Cognos Analysis for Microsoft Excel

- connect to TM1 from within Microsoft Excel
- explore and analyze a TM1 cube
- build complex reports showing multiple cubes and views
- change data and commit it back to TM1

Explore Data with TM1 Web

- explore TM1 Web
- work with TM1 websheets
- use TM1 Web Cube Browser

Work with Planning Applications

- explore the TM1 Applications environment
- navigate the data in the grid
- enter data into the grid
- submit and Review data

Work with Planning Applications in IBM Cognos Insight

- open an application in IBM Cognos Insight
- work offline and commit changed data when online
- import data into a node

P8255

IBM Cognos TM1: Administer the Technical Environment (2 days)

Course Description

IBM Cognos TM1: Administer the Technical Environment combines lecture material and interactive practice in installing and administering the Cognos TM1 environment. The course outlines how the architecture can be customized to fit into various infrastructures. Students will learn how to install and configure Cognos TM1, monitor system performance, and secure Cognos TM1 applications.

Audience

This advanced course is for Administrators.

Prerequisites

- Basic knowledge of OLAP and TM1
- Basic knowledge of networking
- IBM Cognos TM1: Interact with Data (recommended) (*refer to page 65*).



P8255: IBM Cognos TM1: Administer the Technical Environment

Course outline

Cognos TM1 Architecture

- IBM Cognos Performance Management (PM) system and Cognos TM1's role in PM
- components of the Cognos TM1 architecture

Cognos TM1 Installation and Configuration

- install Cognos TM1 components
- configure Cognos TM1 components

Administer Cognos TM1 Servers with the Cognos TM1 Operations Console

- add your Cognos TM1 admin server and Cognos TM1 server to the Cognos TM1 Operations Console
- check the health status of the servers
- filter the statuses shown
- dynamically monitor Cognos TM1 server threads

Monitor Server Performance

- use Cognos TM1 log files
- monitor performance with control cubes
- monitor Cognos TM1 server performance in real time

Manage the Server

- broadcast messages to clients
- connect and disconnect users from a Cognos TM1 server
- shut down a remote Cognos TM1 server
- use command line utility to execute operations

Implement Cognos TM1 Security

- Cognos TM1 authentication options
- create users and groups
- assign object security rights to groups
- use rules to maintain security rights

Maintain Applications

- identify migration approaches
- document objects in Cognos TM1 application
- manage the application metadata
- transfer data in Cognos TM1 Performance Modeler
- identify backup approaches
- create processes to back up data
- plan for backup and recovery of Cognos TM1 applications

Use the IBM Cognos TM1 Package Connector (Optional)

- install Cognos TM1 package connector
- import dimensions and a cube from a Cognos package

Customize Business Rules (Optional)

- describe a rule
- review automatically generated rules
- describe and re-order rule blocks
- disable and enable auto-generated rules
- review manual rules

Replicate and Synchronize Servers (Optional)

- describe the replication process
- identify replication relationships
- identify possible server configurations
- replicate cubes
- remove cube replications
- synchronize replications

Disaster Recovery Plan Template (Optional)

- complete a disaster recovery plan

P8257

IBM Cognos TM1: Analyze and Share Data (3 days)

Course Description

IBM Cognos TM1: Analyze and Share Data is designed to teach students how to use TM1 in order to analyze data to discover trends and exceptions, create and customize reports and templates, and contribute to plans. Through a series of lectures and hands-on exercises, participants will learn how to create analyses and enter data in Microsoft Excel and on the Web, create custom views of the data, and build reports and forms in Microsoft Excel that communicate with TM1.

Audience

This intermediate course is for Analysts.

Prerequisites

- Knowledge of your business requirements
- Experience using the Windows operating system and a Web browser
- Experience using Microsoft Excel



P8257: IBM Cognos TM1: Analyze and Share Data

Course outline

Examine TM1 Components

- performance management
- how TM1 enables performance management
- TM1 user community
- components of TM1

Customize Cube Views in IBM Cognos TM1

- understand the solution a model represents
- view cube data from different perspectives
- use aliases to display alternate element names
- filter subsets to view only specific elements
- differentiate between static and dynamic subsets
- add user-defined consolidations in subsets

Enter and Spread Data

- edit individual cells
- store private data in sandboxes
- spread data to multiple cells at once
- exclude cells from being adjusted
- enter data quickly using shortcuts

Analyze Data using IBM Cognos Analysis for Microsoft Excel

- connect to TM1 from within Microsoft Excel
- explore and analyze a TM1 cube
- build complex reports showing multiple cubes and views
- change data and commit it back to TM1

Analyze Data using IBM Cognos TM1 Perspectives

- use slices and snapshots to export TM1 data to Microsoft Excel
- retrieve and send data to TM1 using TM1 worksheet functions

create reports in Microsoft Excel and PDF formats

Create Dynamic Reports with Active Forms

- create interactive reports and data input templates using Active Forms
- customize Active Forms using TM1 Functions
- apply formatting to Active Forms
- add Action buttons to enhance functionality

Contribute to Plans using TM1 Applications

- explain the different application types and connection modes
- application user roles and workflow states
- enter data using shortcuts and spreading
- submit and reject data
- populate an application with external data by using IBM Cognos Insight

Analyze and Enter Data in IBM Cognos Insight

- the uses of IBM Cognos Insight
- import data into a workspace
- explore and restructure data
- add calculations and highlight exceptions
- design a compelling workspace

Explore Data and Edit Subsets in TM1 Web

- work with a TM1 cube view on the Web
- build simple and complex subsets in TM1 Web

Organize and Distribute Content (Optional) Workshop (Optional)

P8261

IBM Cognos TM1: Design and Develop Models in Architect (5 days)

Course Description

This course is designed to teach modelers how to build a basic cube model in TM1 using the **Architect tool**. Through a series of lectures and hands-on exercises, students will learn how to set up and verify dimensions, cubes, and views, manually enter data into these structures, and define the data that users can see. Students will also learn how to transfer data into the TM1 model, including the use of TurboIntegrator processes. This course is ideal for users who already have models built with Architect and need a high degree of customization, or whose model complexity has evolved past Performance Modeler capabilities.

Audience

This advanced course is for Modelers looking to use Architect to build models.

Prerequisites

Required:

- Basic knowledge of OLAP and TM1
- Significant experience with Microsoft Excel spreadsheets (functions, macros, etc.)
- Understanding of the metrics and drivers of your business

Recommended

- IBM Cognos TM1: Analyze and Share Data (*refer to page 69.*)



P8261: IBM Cognos TM1: Design and Develop Models in Architect

Course outline

Introduction to IBM Cognos TM1

- architecture and components of TM1
- TM1 server fundamentals
- fundamental modeling concepts

Create Dimensions

- describe cubes and dimensions
- create dimensions manually
- edit dimensions
- create dimensions using TurboIntegrator

Build Cubes and Views

- describe cubes and data points
- create cubes
- construct views of data in cubes
- create and use a pick list

Load and Maintain Data

- identify data sources
- processes to load data and delete data in a cube
- processes to update and maintain the model

Add Business Rules

- describe a rule
- construct rules for elements or consolidations
- use functions in rules
- optimize rule performance
- describe rules in a rule worksheet

Optimize Rule Performance

- describe consolidations and sparsity
- enhance consolidation performance using SKIPCHECK
- use FEEDERS to optimize aggregations
- check the accuracy of rules and feeders

Transfer Data into Your Model

- describe Advanced tabs in TurboIntegrator
- load custom data into a cube
- add a subset to a dimension
- use logic in scripts
- export data to ASCII
- move data between versions
- construct chores

Customize Drill Paths

- view related data
- create a drill process
- create a drill assignment rule
- edit a drill process

Using Rules for Advanced Modeling

- describe virtual cubes
- list uses for lookup cubes
- create and use a spread profiles cube
- implement moving balances in a cube

Convert Currencies

- describe currency challenges
- create a currency dimension, currency cube
- create rules for currency conversion

Model for Different Fiscal Requirements

- identify time considerations
- use discrete time dimensions
- implement continuous time dimension model

Deploy TM1 Applications

- explain the application types
- create a new application
- set the available clients
- apply security in the application
- activate and de-activate an application

Integrate TM1 with IBM Cognos BI

- use TM1 data in IBM Cognos BI reports
- enable BI security for Architect and TM1 Web
- view sparse TM1 data in a BI report
- use filler members to enable gapped security access in BI
- use TM1 dimension hierarchy levels in BI
- consume TM1 content in IBM Cognos Workspace

NOPFO

IBM Cognos TM1 Fundamentals (1 day)

Course Description

This module introduces students to the essential objects, concepts and techniques required to build and maintain TM1 models.

The class will build multiple dimensions & cubes both manually and programmatically from a variety of data sources and practice creating cube views and subsets.

Students will also be introduced to cube rules and slices/Active Forms.

Module Outline

Introduction

Unit 1 – Overview of OLAP & TM1

- what is OLAP?
- how is TM1 Special?
- what is TM1 Ideal For?
- OLAP and TM1 terminology
- how to pivot, nest, filter, drill, and zero suppress

Unit 2 – Building our First Model

- building dimensions manually
- using Turbo Integrator to build dimensions
- creating alternate hierarchies
- how the weight attribute works
- creating a string element

Unit 3 – Building and Loading Cubes

- how to build a TM1 cube
- how to Load a TM1 cube with Turbo Integrator
- what cube rules are

Unit 4 – Interacting with TM1 (Optional)

- dimensions subsets
- cube views
- spreading and sandboxes
- slices & active forms



NOPRO

IBM Cognos TM1 Reporting (1 day)

Course Description

IBM Cognos TM1 Reporting is a one-day, instructor-led module that introduces several of the client interfaces of TM1: Architect, Perspectives, and TM1Web.

Attendees will extract data from TM1 cubes using a variety of the available options and build input templates using the most common interfaces; Slices and Active Forms.

Module Outline

TM1 Reporting Overview

- TM1 reporting options
- TM1 dimension subsets
- private subsets and the rollup function
- TM1 MDX in dynamic subsets
- the subset editor toolbar
- TM1 cube views
- application folders
- TM1Web
- TM1Web cube viewer toolbar
- TM1Web websheets

TM1 Perspectives

- TM1 perspectives
- snapshots
- slices
- active forms



NOPCR

IBM Cognos TM1 Cube Rules (1 day)

Course Description

IBM Cognos TM1 Cube Rules is a one-day, instructor-led module designed to provide students with the fundamentals of writing TM1 cube rules. Both intra and inter-cube rules are discussed along with C-level and String rules.

Skipcheck and Feeders are introduced and students will learn how to trace & check both rules and feeders. This module will also introduce TM1 Picklists.

Module Outline

Introduction

Unit 1 – Purpose & Syntax of Cube Rules

- concepts we'll use today
- cube rules overview
- basic syntax
- rules vs. consolidations
- evaluation order

Unit 2 – Simple Cube Rules

- a simple rule
- simple rule with an exception
- using a function in a rule

Unit 3 – Inter-Cube & Consolidated Rules

- inter-cube rule
- conditionally disabling a rule
- pulling from higher detail
- overriding aggregations
- rule at all levels
- percent of parent rule
- string rules

Unit 4 – Skipcheck & Feeders

- overview
- when do they fire?
- some feeder examples



NOTIO

IBM Cognos TM1 Turbo Integrator (1 day)

Course Description

IBM Cognos TM1 Turbo Integrator is a one-day module that focuses on TM1's ETL tool: Turbo Integrator. Using this tool, students will practice performing common maintenance, and import/export tasks in the TM1 environment.

Students will build a planning model from scratch using ODBC and file data sources. Once the model is built, processes will be created to perform common maintenance tasks such as creating subsets and updating reporting cubes.

Module Outline

Introduction

Unit 1 – Overview of Turbo Integrator

- turbo integrator basics
- common uses of turbo integrator

Unit 2 – Building Dimensions with Turbo Integrator

- a simple dimension
- modifying the TI script
- dimensions with multiple hierarchies
- handling changes over time
- dimensions from a parent/child source
- dimensions from a file

Unit 3 – Using the Turbo Integrator Script

- creating a utility process
- loading a cube data
- creating a reporting cube

Unit 4 – Additional Turbo Integrator Functions

- create views dynamically
- export a cube to aSQL table
- calling an external script



NOPBP

IBM Cognos TM1 Administration, Optimization & Additional Features (1 day)

Course Description

IBM Cognos TM1 Administration, Optimization & Additional Features is a one-day module that covers the administration side of TM1 along with design principals & configuration for efficient models.

Participants will learn how to access TM1's logs and configuration files, and both monitor and end threads on the TM1 server. The module will also introduce TM1 object security, and conclude with a look at some best practices for designing and developing a TM1 model.

Module Outline

Part 1: Additional Features & Concepts

- drill-through
- picklists
- numeric attributes vs. measures

Part 2: TM1 Administration & Architecture

- TM1 components
- creating a new TM1 model
- TM1 logs
- TM1Top
- sandboxes
- TM1 object security
- migration options

Part 3: Optimization & Design

- editing the tm1s.cfg file
- setting dimension order
- handling adjustments
- general tips & best practices

Part 3: Optimization & Design

- TM1 applications pros & cons
- type 3 planning
- TM1 in Cognos BI





IBM Information Management Courses

Learn by
Example

Motivate

Adviser

Formats offered:



In-Class

Example



Instructor-Led Online

Study

Mentor

Innovation
Branding
Solution
Marketing
Analysis
Ideas
Success
Management



Self-Paced Virtual Classroom



On-Site



Customized



KM204

IBM InfoSphere DataStage Essentials

(4 days)

Course Description

This course enables the project administrators and ETL developers to acquire the skills necessary to develop parallel jobs in DataStage. The emphasis is on developers. Only administrative functions that are relevant to DataStage developers are fully discussed. Students will learn to create parallel jobs that access sequential and relational data and combine and transform the data using functions and other job components.

Audience

- This is a basic course for project administrators and ETL developers responsible for data extraction and transformation using DataStage.

Prerequisites

- You should have basic knowledge of the Windows operating system and some familiarity with database access techniques.

Course Outline

- Unit 01: Introduction to DataStage
- Unit 02: Deployment
- Unit 03: DataStage Administration
- Unit 04: Working With Metadata
- Unit 05: Creating Parallel Jobs
- Unit 06: Accessing Sequential Data
- Unit 07: Partitioning and Collecting
- Unit 08: Combining Data
- Unit 09: Group Processing Stages
- Unit 10: Transformer Stage
- Unit 11: Repository Functions
- Unit 12: Working with Relational Data
- Unit 13: Job Control



KM403

IBM InfoSphere Advanced DataStage - Parallel Framework (3 days)

Course Description

This course is designed to introduce advanced parallel job development techniques in IBM InfoSphere DataStage. In this course you will develop a deeper understanding of the DataStage architecture, including a deeper understanding of the DataStage development and runtime environments. This will enable you to design parallel jobs that are robust, less subject to errors, reusable, and optimized for better performance

Audience

- project administrators and ETL developers responsible for data extraction and transformation using DataStage.

Prerequisites

- You should have completed the DataStage Essentials course or equivalent and at least one year of experience developing parallel jobs using DataStage.

Course Outline

- Unit 1: Introduction to the Parallel Framework Architecture
- Unit 2: Compilation and Execution
- Unit 3: Partitioning and Collecting Data
- Unit 4: Sorting Data
- Unit 5: Buffering in Parallel Jobs
- Unit 6: Parallel Framework Data Types
- Unit 7: Reusable components
- Unit 8: Balanced Optimization



Notes

IBM SPSS Advanced Analytics Courses

Formats offered:



In-Class



Instructor-Led Online



Self-Paced Virtual Classroom



On-Site



Customized



0A005

Introduction to IBM SPSS Modeler and Data Mining (2 days)

Course Description

Introduction to IBM SPSS Modeler and Data Mining provides an overview of data mining and the fundamentals of using IBM SPSS Modeler. The principles and practice of data mining are illustrated using the CRISP-DM methodology. The course structure follows the stages of a typical data mining project, from reading data, to data exploration, data transformation, modeling, and effective interpretation of results. The course provides training in the basics of how to read, explore, and manipulate data with IBM SPSS Modeler, and introduces the student to modeling.

Audience

- Anyone with little or no experience in using IBM SPSS Modeler
- Anyone with little or no experience in data mining
- Anyone who is considering purchasing IBM SPSS Modeler

Prerequisites

Required:

- General computer literacy
- No statistical background is necessary.

Recommended:

- An understanding of your organization's data, as well as any of your organization's business issues that are relevant to the use of data mining.



0A005: Introduction to IBM SPSS Modeler and Data Mining

Course outline

Introduction to Data Mining

- list two applications of data mining
- explain the stages of the CRISP-DM process model
- describe successful data-mining projects and the reasons why projects fail
- describe the skills needed for data mining

Working with Modeler

- describe the MODELER user-interface
- work with nodes
- run a stream or a part of a stream
- open and save a stream
- use the online Help

A Data-Mining Tour

- explain the basic framework of a data-mining project
- build a model
- deploy a model

Collecting Initial Data

- explain the concepts “data structure”, “unit of analysis”, “field storage” and “field measurement level”
- import Microsoft Excel files
- import IBM SPSS Statistics files
- import text files
- import from databases
- export data to various formats

Understanding your Data

- audit the data
- explain how to check for invalid values
- take action for invalid values
- explain how to define blanks

Setting the Unit of Analysis

- set the unit of analysis by removing duplicate records
- set the unit of analysis by aggregating records
- set the unit of analysis by expanding a categorical field into a series of flag fields

Integrating Data

- integrate data by appending records from multiple datasets
- integrate data by merging fields from multiple datasets
- sample records

Deriving and Reclassifying Fields

- use the Control Language for Expression Manipulation (CLEM)
- derive new fields
- reclassify field values

Looking for Relationships

- examine the relationship between two categorical fields
- examine the relationship between a categorical field and a continuous field
- examine the relationship between two continuous fields

Introduction to Modeling

- list three modeling objectives
- use a classification model
- use a segmentation model

0A035

Advanced Predictive Modeling with IBM SPSS Modeler (1 day)

Course Description

This course builds on the courses **Classifying Customers Using IBM SPSS Modeler** and **Predicting Continuous Targets Using IBM SPSS Modeler**. It presents advanced techniques to predict categorical and continuous targets. Before reviewing the modeling techniques, data preparation issues are addressed such as partitioning and detecting anomalies. Also, a method to reduce the number of fields to a number of core fields, referred as components or factors, is presented. The next two modules focus on advanced predictive models, such as Decision List, Support Vector Machines and Bayes Net. Following this presentation, two modules present methods to combine individual models into a single model in order to improve predictive power, including running and evaluating many models in a single run, both for categorical and continuous targets.

Audience

This intermediate-level course is for users of IBM SPSS Modeler responsible for building predictive models (also known as classification models).

Prerequisites

You should have:

- Completion of the course Introduction to IBM SPSS Modeler and Data Mining (*please refer to page 83*) or experience in analyzing data with IBM SPSS Modeler.
- Familiarity with basic modeling techniques, either through completion of the courses Classifying Customers Using IBM SPSS Modeler (*please refer to page 91*) and Predicting Continuous Targets Using IBM SPSS Modeler (*please refer to page 93*), or by experience with predictive models in IBM SPSS Modeler.



0A035: Advanced Predictive Modeling with IBM SPSS Modeler

Course outline

Preparing Data for Modeling

- addressing general data quality issues
- handling anomalies
- selecting important predictors
- partitioning the data to better evaluate models
- balancing the data to build better models

Reducing Data with PCA/Factor

- explain the basic ideas behind PCA/factor
- customize two options in the PCA/factor node

Using Decision List to Create Rulesets

- explain how Decision List builds a ruleset
- using Decision List interactively
- creating rulesets directly with Decision List

Advanced Predictive Models

- explain the basic ideas behind SVM
- customizing two options in the SVM node
- explain the basic ideas behind Bayes Net
- customizing two options in the SVM node

Combining Models

- using the Ensemble node to combine model predictions
- improving the model performance by meta-level modeling

Finding the Best Predictive Model

- find the best model for categorical targets
- find the best model for continuous targets

0A045

Clustering and Association Modeling using IBM SPSS Modeler (1 day)

Course Description

This course demonstrates how to segment or cluster data with all clustering techniques available in IBM SPSS Modeler. This course also provides examples of creating association models to find rules describing the relationships among a set of items, and of creating sequence models to find rules describing the relationships over time among a set of items.

Audience

This course is for IBM SPSS Modeler Analysts who want to become familiar with the full range of modeling techniques available in IBM SPSS Modeler to segment (cluster) data and to create models using association or sequence data.

Prerequisites

You should have:

- Experience using IBM SPSS Modeler, including a familiarity with the IBM SPSS Modeler environment

Recommended:

- Introduction to IBM SPSS Modeler and Data Mining (*refer to page 83*).



0A045: Clustering and Association Modeling using IBM Modeler

Course outline

Introduction to Association and Cluster Modeling

- modeling techniques
- clustering types
- association rules
- sequence detection
- which technique, and when?

Clustering Techniques and K-Means Clustering

- cluster analysis and principles
- explore K-Means clustering
- examine the K-Means Node
- explore clustering profiles
- clustering with a Kohonen Network
- examine the Kohonen Node
- TwoStep clustering
- examine the TwoStep algorithm
- the TwoStep node

Association rules

- examine the Apriori association detection algorithm
- rule and measure formats
- explore the Apriori Model Node dialog
- identify browsing rules and display statistics
- use the associations
- explore the generate ruleset dialog
- examine the Ruleset in a stream

Advanced Association Rules

- advanced association rules
- explore the Apriori algorithm
- explore the Carma algorithm
- Apriori expert options
- explore Apriori evaluation measures
- Carma Expert options

- choose a method and Expert Options
- missing data with association rules

Sequence Detection

- examine sequences
- examine the sequence node
- explore sequence rulesets
- rule support
- sorting rulesets
- supernodes
- export rules

Advanced Sequence Detection

- explore the sequence node
- identify sequence node options
- examine expert options
- examine time field guidelines
- generate sequence results
- generate and edit the ruleset
- explore the results

OA055

Advanced Data Preparation Using IBM SPSS Modeler (1 day)

Course Description

Advanced Data Preparation Using IBM SPSS Modeler covers additional topics to aid in the preparation of data for a successful data mining project. Students will learn how to use functions, handle missing values, use advanced field operations, handle sequence data, apply advanced sampling methods, and improve efficiency.

Audience

This advanced course is intended for IBM SPSS Modeler Analysts and IBM SPSS Modeler Data Experts who wishes to become familiar with the full range of techniques available in IBM SPSS Modeler for data manipulation.

Prerequisites

- General computer literacy.
- Some experience using IBM SPSS Modeler including familiarity with the Modeler environment, creating streams, reading data files, and doing simple data exploration and manipulation.
- Prior completion of Introduction to IBM SPSS Modeler and Data Mining is strongly encouraged (*refer to page 83*).



OA055: Advanced Data Preparation Using IBM SPSS Modeler

Course outline

Using Functions

- use date functions
- use conversion functions
- use string functions
- use statistical functions
- use missing value functions

Data Transformations

- use the Filler node to replace values
- use the Binning node to recode continuous fields
- use the Transform node to change a field's distribution

Working with Sequence Data

- use cross-record functions
- use the Count mode in the Derive node
- use the Restructure node to expand a continuous field into a series of continuous fields
- use the Space-Time-Boxes node to work with geospatial and time data

Sampling Records

- use the Sample node to draw simple and complex samples
- draw complex samples
- partition the data into a training and a testing set
- reduce or boost the number of records

Improving Efficiency

- use database scalability by SQL pushback
- use the Data Audit node to process outliers and missing values
- use the Set Globals node
- use parameters
- use looping and conditional execution

0A0U5

Classifying Customers with IBM SPSS Modeler

(1 day)

Course Description

This course is an instructor-led, intermediate level course that provides an overview of how to use Modeler to predict the category to which a customer belongs based on selected data. Some examples include: whether a customer switches to another provider or brand, whether a customer responds to a particular advertising campaign, or how well a student will perform in a specific academic setting.

Audience

This intermediate course follows the **Introduction to IBM SPSS Modeler and Data Mining** course and is essential for anyone who wishes to become familiar with a number of modeling techniques available in IBM SPSS Modeler used to classify customers. This would include Data Analysts and analytics business users.

Prerequisites

- Experience using IBM SPSS Modeler
- Prior completion of Introduction to IBM SPSS Modeler and Data Mining (*refer to page 83*) is recommended
- An introductory course in statistics, or equivalent experience, is helpful



OA0U5: Classifying Customers with IBM SPSS Modeler

Course outline

Introduction to Classifying Customers

- list three modeling objectives
- list two business questions that involve classifying customers
- explain the concept of field measurement level and its implications for selecting a modeling technique
- list three types of models to classify customers
- determine the classification model to use

Building Your Tree Interactively with CHAID

- explain how CHAID grows a tree
- build a customized model using CHAID
- evaluate a CHAID model by means of accuracy, risk, response and gain
- use the model nugget to score records

Building Your Tree Interactively with C&R Tree and Quest

- explain how C and R Tree grows a tree
- explain how Quest grows a tree
- build a model interactively using C and R Tree and Quest
- list two differences between CHAID, C and R Tree, and Quest

Building Your Tree Directly

- customize two options in the CHAID node
- customize two options in the C and R Tree node
- customize two options in the Quest node
- customize two options in the C5.0 node
- use the Analysis node and the

Evaluation node to evaluate and compare models

- list two differences between CHAID, C and R Tree, Quest, and C5.0

Using Traditional Statistical Models

- explain key concepts for Discriminant
- customize one option in the Discriminant node
- explain key concepts for Logistic
- customize one option in the Logistic node
- list two differences between Discriminant and Logistic

Using Machine Learning Models

- explain key concepts for Neural Net
- customize one option in the Neural Net node

0A0V5

Predicting Continuous Targets Using IBM SPSS Modeler (1 day)

Course Description

Predicting Continuous Targets Using IBM SPSS Modeler is an intermediate level course that provides an overview of how to use IBM SPSS Modeler to predict a target field that describes numeric values. Students will be exposed to rule induction models such as CHAID and C&R Tree.

They will also be introduced to traditional statistical models such as Linear Regression. Machine learning models will also be presented. Business use case examples include: predicting the length of subscription (for newspapers, telecommunication, job length, and so forth) and predicting claim amount (insurance).

Audience

This intermediate course is for IBM SPSS Modeler Analysts who have completed the **Introduction to IBM SPSS Modeler and Data Mining** course and want to become familiar with the modeling techniques available in IBM SPSS Modeler to predict a continuous target.

Prerequisites

- Experience using IBM SPSS Modeler
- Prior completion of Introduction to IBM SPSS Modeler and Data Mining (*refer to page 83*) is recommended
- An introductory course in statistics, or equivalent experience, is helpful



0A0V5: Predicting Continuous Targets Using IBM SPSS Modeler

Course outline

Introduction to Predicting Continuous Targets

- list three modeling objectives
- list two business questions that involve predicting continuous targets
- explain the concept of field measurement level and its implications for selecting a modeling technique
- list three types of models to predict continuous targets
- determine the classification model to use

Building Your Tree Interactively

- explain how CHAID grows a tree
- explain how C&R Tree grows a tree
- Build CHAID and C&R Tree models interactively
- evaluate models for continuous targets
- use the model nugget to score records

Building Your Tree Directly

- customize two options in the CHAID node
- customize two options in the C&R Tree node
- list one difference between CHAID and C&R Tree

Using Traditional Statistical Models

- explain key concepts for Linear
- customize one option in the Linear node
- explain key concepts for Cox
- customize one option in the Cox node

Using Machine Learning Models

- explain key concepts for Neural Net
- customize one option in the Neural Net node

0A105

Introduction to IBM SPSS Text Analytics for IBM SPSS Modeler (2 days)

Course Description

Introduction to IBM SPSS Modeler Text Analytics teaches students how to analyze text data using IBM SPSS Modeler Text Analytics. Students will see the complete set of steps involved in working with text data, from reading the text data to creating the final categories for additional analysis. After the final model has been created, there is an example of how to apply the model to perform Churn analysis. Topics include how to automatically and manually create and modify categories, how to edit synonym, type, and exclude dictionaries, and how to perform Text Link Analysis and Cluster Analysis with text data. Also included are examples of how to create resource templates and Text Analysis packages to share work with other projects and other users.

Audience

This course is for:

- anyone who needs to analyze text data for the purpose of creating predictive models or reports based in part on text data
- users of IBM SPSS Modeler Text Analytics

Prerequisites

- Practical experience with coding text data is not a prerequisite but would be helpful.
- Introduction to IBM SPSS Modeler and Data Mining course (*refer to page 83*) or prior experience with IBM SPSS Modeler.
- General computer literacy



0A105: Introduction to IBM SPSS Text Analytics for IBM SPSS Modeler

Course outline

Introduction to Text Mining

- describe text mining and its relationship to data mining
- explain CRISP-DM methodology as it applies to text mining
- describe the steps in a text mining project

Overview of Text Mining in IBM SPSS Modeler

- explain the text mining nodes available in Modeler
- complete a typical text mining modeling session

Reading Text Data

- read text from documents
- view text from documents within Modeler
- read text from Web Feeds

Linguistic Analysis and Text Mining

- describe linguistic analysis
- describe the process of text extraction
- describe categorization of terms and concepts
- describe Templates and Libraries
- describe Text Analysis Packages
-

Creating a Text Mining Concept Model

- develop a text mining concept model
- compare models based on using different Resource Templates
- score model data
- analyze model results

Reviewing Types and Concepts in the Interactive Workbench

- use the Interactive Workbench
- review extracted concepts
- review extracted types
- update the modeling node

Editing Linguistic Resources

- linguistic Editing Preparation
- develop editing strategy
- add Type definitions
- add Synonym definitions
- add Exclusion definitions
- text re-extraction to review modifications

Fine Tuning Resources

- review Advanced Resources
- adding fuzzy grouping exceptions
- adding non-Linguistic entities
- extracting non-Linguistic entities
- forcing a word to take a particular part of speech

Performing Text Link Analysis

- use Text Link Analysis interactively
- use visualization pane
- use Text Link Analysis node
- create categories from a pattern
- create text link rules

Clustering Concepts

- create clusters
- use visualization pane
- create categories from a cluster

0A105: Introduction to IBM SPSS Text Analytics for IBM SPSS Modeler

Course outline

Categorization Techniques

- describe approaches to categorization
- describe linguistic based categorization
- describe frequency based categorization
- describe results of different categorization methods

Appendix A: The Process of Text Mining

- overview of Text Mining process

Creating Categories

- develop categorization strategy
- create categories automatically
- create categories manually
- use conditional rules to create categories
- assess category overlap
- extend categories
- import coding frames
- create Text Analysis Packages

Managing Linguistic Resources

- use the Template Editor
- save resource templates
- describe local and public libraries
- add libraries
- publishing libraries
- share libraries
- share templates
- backup resources

Using Text Mining Models

- explore text mining models
- develop a model with quantitative and qualitative data
- score new data

OG073

Advanced Techniques: Regression (2 days)

Course Description

Advanced Techniques: Regression is an instructor-led course that examines regression techniques used to explore the relationships between interval scale variables in detail. Students will develop an understanding of when to apply each technique, how to apply it and how to interpret the results. Additionally, the course will cover some preliminary data analysis steps, how to check the underlying assumptions and suggestions of how to proceed when your assumptions fail.

Audience

This advanced course is for those who want to know when to use and how to set up regression in SPSS as well as how to interpret the results. SPSS users who want to improve their understanding of regression techniques.

Prerequisites

- Interest in knowing when to use and how to set up regression in SPSS
- Interest in regression techniques.
- For users of SPSS for Windows Base System, SPSS Regression Models and SPSS Advanced Models.

Course Outline

Running stepwise regression
Stepwise regression output
Running multiple regression
Assumptions of the linear model
Residuals and influential points
Introduction to regression
Simple regression output
Fitting lines to data
Logistic regression output
Running logistic regression
Influential points and multicollinearity
Examining the data
Running simple regression
Multiple regression output



OG096

Time Series Analysis and Forecasting with IBM SPSS Forecasting (3 days)

Course Description

This three-day course gets you up and running with a set of procedures for analyzing time series data. Learn how to forecast using a variety of models which take into account different combinations of trend, seasonality and prediction variables. The new Expert Modeler features in SPSS Trends 14.0 will be covered in this course. Generate predicted values along with standard errors, confidence intervals and residuals. This course will emphasize the graphical display of your results so you can visualize your forecasting models.

Audience

This is an advanced course for SPSS users who are interested in getting up to speed quickly and efficiently using the SPSS forecasting capabilities. Those who want to know the full capabilities of the Trends module and its Expert Modeler.

Prerequisites

- On the job experience with SPSS for Windows or completion of the Basics and/or Intermediate SPSS for Windows courses.
- For users of SPSS for Windows Base System, SPSS Trends
- Basic understanding of regression analysis.
- No previous forecasting experience required.

Course Outline

Basics of forecasting
Smoothing time series data
Outliers and error in time series data
Automatic forecasting with the Expert Modeler
Assessing model performance
Fitting curves to time series data
Regression with time series data
Exponential smoothing models
ARIMA models
Applying a model to new data
Seasonal decomposition
Modeling seasonality
Intervention analysis
Transfer functions in ARIMA
Automatic forecasting of several time series



OG170

Presenting Data with IBM SPSS Custom Tables (2 days)

Course Description

Presenting Data with IBM SPSS Custom Tables is a two day instructor-led classroom course that teaches students, who are familiar with IBM SPSS Statistics, how to create and edit tables using the IBM SPSS Custom Tables Module. Specifically, students will learn how to create several tables by performing cross-tabulations, stacking, layers and nesting of variables within tables. They will also learn how to create tables for variables with shared categories as well as work with multiple response sets and use the statistical techniques available within the module. Finally, they will learn how to edit tables using techniques both within and outside of the IBM SPSS Custom Tables Module.

Audience

This course is for IBM SPSS Statistics users who are responsible for presenting data.

Prerequisites

- Users who know the basics of using IBM SPSS Statistics or who have taken Introduction to IBM SPSS Statistics (*refer to page 103*).



OG170: Presenting Data with IBM SPSS Custom Tables

Course outline

Introduction to STATISTICS Tables

Tables Basics

- components of Table Builder interface
- Summary Statistics and total for categorical variable
- tables for Categorical Variables
- create a crosstabulation
- control labels and display formats of summary statistics

Stacking, Nesting and Layers

- create tables with stacking, nesting, layers
- tables for Scale Variables
- stack scale variables
- tables for scale summaries grouped in categories
- multiple summary statistics and obtain different statistics for different scale variables

Totals, Subtotals, and Categories

- totals and subtotals for categorical variables
- hide categories for subtotals
- sort categories, exclude categories

Computing New Categories

- differences within the Custom Tables procedure
- ratios within the Custom Tables procedure
- cumulative percents within Custom Tables
- nest tables with shared categories

Tables for Variables with Shared Categories

- change the category position of variables
- request summary statistics and totals for tables with shared categories
- tables with percents and means
- tables for variables with shared categories without labels

Multiple Response Sets

- multiple response sets in STATISTICS, Custom Tables, co-occurrence tables in Custom Tables, and other variables

Test Statistics

- Independence test
- compare Column Proportions test
- compare Column Means test

Formatting and Editing Tables Within Custom Tables

- modify data column width, data cell appearance
- hide small cell counts
- add titles, captions, corner texts to a table

Formatting and Editing Tables Outside of Custom Tables

- features of the Pivot Table Editor
- orientation of labels
- cell and table properties of a table
- default TableLook applied to pivot tables

Missing Values

- default handling of missing values
- include missing values in tables
- obtain net totals

Moving Tables to Other Software

- clipboard to move output from STATISTICS to other applications
- Export Output facility to export pivot tables
- Output Management System to control, manage, and export output from STATISTICS

Introduction to Tables Syntax

- create and run syntax
- features of the Syntax Editor

Using Syntax for Recurring Analyses

- produce multiple tables using syntax
- make simple changes to syntax
- obtain syntax from the Journal File
- features of the Production Job dialog box

Special Purpose Tables

- create tables for comparing specific groups, cell suppression, differences between variables, proportions (ratios), and variable counts

Tips for Tables

- impact of initial variable placement
- spacing between stacked variables
- tables with percents and means
- charts from tables and view large tables

0G2K9

Introduction to IBM SPSS Decision Trees (2 days)

Course Description

Introduction to IBM SPSS Decision Trees is an instructor led classroom course that covers the principles and practice of the tree-based decision and regression methods available in IBM SPSS Decision Trees. A general introduction to the features of the IBM SPSS Decision Trees module and an overview of decision tree based methods will be covered. These methods (CHAID, Exhaustive CHAID, CRT, and QUEST) are used to perform classification, segmentation, and prediction modeling in a wide range of business and research areas. The techniques are discussed and compared, analyses are performed, and the results interpreted.

Audience

This intermediate course is for:

- Analysts building prediction or decision models for which many predictor variables of different types may be involved
- Survey and Market researchers who need to perform automated decision or segmentation analysis

Prerequisites

Required:

- Familiarity with the Windows interface
- Knowledge of basic statistics through regression (topics covered in Introduction to Statistical Analysis using IBM SPSS) is very useful (*refer to page 105*).

Recommended:

- Advanced statistical training in predictive models (for example discriminant, logistic regression covered in Advanced Statistics Using SPSS for Windows or Market Segmentation Using SPSS)

Course Outline

Introduction to IBM SPSS Decision Trees
CHAID Analysis
CHAID Extensions and Additional Features
CRT Decision Trees
CRT Regression Trees
Quest Analysis



OG504

Introduction to IBM SPSS Statistics (2 days)

Course Description

Introduction to IBM SPSS Statistics guides you through the fundamentals of using IBM SPSS Statistics for typical data analysis process. You will learn the basics of reading data, data definition, data modification, and data analysis and presentation of analytical results. In addition to the fundamentals, you will learn shortcuts that will help you save time. This course uses the IBM SPSS Statistics Base features.

Audience

This basic course is for:

- Students with minimal experience in using IBM SPSS Statistics
- Those who are new to using a statistical package for data analysis
- Those considering purchasing IBM SPSS

Prerequisites

You should have:

- Experience using applications, such as word processors or spreadsheets, in the Microsoft Windows, Macintosh or Linux environment
- Experience with IBM SPSS Statistics is not necessary, though a basic understanding of purpose and functions of the software is helpful



OG504: Introduction to IBM SPSS Statistics

Course outline

Introducing IBM SPSS Statistics

- basic steps of data analysis using IBM SPSS Statistics
- roles of the primary windows within IBM SPSS Statistics
- basic layout of IBM SPSS Statistics dialog boxes

Reading Data

- choices on the File menu to read and save data files
- read Excel files
- read from an Access database
- read delimited text files

Variable Properties

- describe all variable properties
- define variable properties in the Variable View window
- define variable properties using the Define Variable Properties dialog
- save variable properties with data in an IBM SPSS Statistics data file
- Variables Utility
- Display Data Dictionary facility and Codebook procedure

Working with the Data Editor

- insert, delete, and move variables and cases
- use Split Screen view
- copy information from one dataset to another
- use the Copy Data Properties feature

Modifying Data Values: Recode

- use the features of Visual Binning to group a scale variable
- use the features of Recode into a Different Variable for categorical variables
- use Automatic Recode to recode long string variables

Modifying Data Values: Compute

- use Compute Variable to create a new variable based on a logical expression
- create new variables with numeric expressions
- create new variables with conditional numeric expressions

Summarizing Individual Variables

- define levels of measurement
- frequencies procedure to produce tables and charts appropriate for nominal variables
- frequencies procedure to produce tables and charts appropriate for ordinal variables
- frequencies and descriptives procedures to produce tables and charts for scale variables

Describing Relationships Between Variables

- select the appropriate procedure to summarize the relationship between two variables
- use Crosstabs procedure to summarize the relationship between categorical variables
- use Means procedure to summarize the relationship between a scale and a categorical variable

Selecting Cases

- Select Cases dialog
- Split File dialog

Creating and Editing Charts

- Chart Builder to create various types of graphs
- format and edit the graph in the Chart Editor

Output in the Viewer

- navigate through the Viewer
- customize a pivot table
- create and apply a template for a pivot table
- export output to other applications

Syntax Basics

- use the Syntax Editor environment
- create syntax
- run syntax
- edit syntax using auto-completion of commands

Menus and the Help System

- Use the menus
- Use the toolbars
- Use all types of help in Statistic

OG514

Introduction to Statistical Analysis Using IBM SPSS (2 days)

Course Description

Introduction to Statistical Analysis Using IBM SPSS Statistics provides an application-oriented introduction to the statistical component of IBM SPSS Statistics. You will review several statistical techniques and discuss situations in which they would use each technique, the assumptions made by each method, how to set up the analysis, as well as how to interpret the results. This includes a broad range of techniques for exploring and summarizing data, as well as investigating and testing underlying relationships. You will gain an understanding of when and why to use these various techniques as well as how to apply them with confidence, interpret their output, and graphically display the results.

Audience

This intermediate course is for:

- anyone who has worked with IBM SPSS Statistics and wants to become better versed in the basic statistical capabilities of IBM SPSS Statistics Base
- anyone with limited or no statistical background
- anyone who wants to refresh their knowledge and statistical experience that were gained many years ago

Prerequisites

You should have:

- General computer literacy
- Completion of the “Introduction to IBM SPSS Statistics” (*please refer to page 103*) and/or “Data Management and Manipulation with IBM SPSS Statistics” (*please refer to page 107*) courses or experience with IBM SPSS Statistics



OG514: Introduction to Statistical Analysis Using IBM SPSS

Course outline

Introduction to Statistical Analysis

- explain the difference between a sample and a population
- explain the difference between an experimental research design and a non-experimental research design
- explain the difference between independent and dependent variables

Examine Individual Variables

- describe the levels of measurement used in IBM SPSS Statistics
- use graphs to examine variables
- use summary measures to examine variables
- explain normal distributions
- explain standardized scores and their use

Test Hypotheses - Theory

- explain the difference between a sample and a population
- design a test of a hypothesis
- explain the alpha level
- explain the difference between statistical and practical significance
- describe the two types of errors in testing a hypothesis

Test Hypotheses about Individual Variables

- explain the sampling distribution of a statistic
- explain the difference between the standard deviation and the standard error
- use the One-Sample T Test to test a hypothesis about a population mean
- use the Paired-Samples T Test to test on an “before-after treatment” effect
- use the Binomial Test to test a hypothesis about a population proportion

Test the Relationship between Categorical Variables

- use the Chart Builder to visualize the relationship between two categorical variables
- use percentages in Crosstabs to describe the relationship between two categorical variables
- use the Chi-Square test in Crosstabs to test the relationship between two categorical variables

Test the Difference between the Means of Two Groups

- use the Chart Builder to create an error bar and boxplot to visualize the difference between groups
- use Explore and Means to describe the differences between groups
- use the Independent-Samples T Test to test whether the difference between two group means is statistically significant

Test the Differences between More than Two Group Means

- use One-Way ANOVA to determine whether there are statistically significant differences between means of three or more groups
- use post hoc tests to identify differences between group means

Test the Relationship between Scale Variables

- use the Chart Builder to create a scatterplot to assess the relationship between two scale variables
- explain when the correlation can be used
- perform a hypothesis test on the correlation

Predict a Scale Variable

- use Regression to predict a scale variable with one or more scale variables
- use Automatic Linear Modeling to predict a scale variable with categorical and scale variables

Use Nonparametric Tests

- describe when Nonparametric Tests should and can be used
- use Nonparametric Tests for two or more independent samples
- use Nonparametric Tests for two dependent samples

OG524

Data Management and Manipulation with IBM SPSS Statistics (2 days)

Course Description

Data Management and Manipulation with IBM SPSS Statistics is a two day course on the use of a wide range of transformation techniques, ways to automate data preparation work, manipulate data files and analytical results. You will gain an understanding of the various options for controlling the IBM SPSS Statistics operating environment and how to perform data transformations efficiently.

Audience

This advanced course is for:

- Anyone who has worked with IBM SPSS Statistics and wants to explore additional data management and manipulation features of IBM SPSS Statistics and generally increase their efficiency with IBM SPSS Statistics.
- Anyone who has learned the basic operations of IBM SPSS Statistics on their own

Prerequisites

You should have:

- General computer literacy
- Completion of the Introduction to IBM SPSS Statistics (*please refer to page 103*) course or experience with IBM SPSS Statistics including familiarity with defining data, basic uses of Recode and Compute transformations, the Frequencies, Descriptives, and Crosstabs procedures, and creating and editing tables and charts.
- No statistical background is necessary



OG524: Data Management and Manipulation with IBM SPSS Statistics

Course outline

Helpful Data Management Features

- read from a database using the Database Wizard
- customize variable attributes
- compare datasets
- use Variable Sets
- rename datasets

Use Functions

- identify the general form of a function
- use statistical functions
- use logical functions
- use missing value functions
- use conversion functions
- use system variables

Additional Data Transformations

- use Automatic Recode to recode string variables into numeric variables
- use Count Values within Cases to count values across variables

Set the Unit of Analysis

- remove duplicate cases
- create aggregated datasets
- restructure datasets

Merge Files

- add cases from one dataset to another
- add variables from one dataset to another
- enrich a dataset with aggregated information

Analyze Multiple Response Questions

- describe the two ways to encode a multiple response set
- define multiple response sets
- use the Multiple Response Frequencies and Crosstabs procedures

Edit Tables and Charts

- use the features of the Pivot Table Editor
- create and apply customized TableLooks
- use the features of the Chart Editor
- create and apply customized chart templates

Introduction to the Output Management System

- explain Output Types
- specify an OMS request to suppress output
- specify an OMS request to export output

Automate IBM SPSS Statistics

- describe and use the features of the Syntax Editor
- make simple changes to syntax
- describe and use the features of the production Facility dialog box
- run a simple production job
- describe the use of external programming languages with Statistics
- describe and use the features of the Syntax Editor
- make simple changes to syntax

Control the IBM SPSS Statistics Environment

- describe the features of the Options dialog box
- reset the display of variables
- set the default working data folders
- change transformation options for variables

Frequently Asked Questions

1. What courseware do I receive after I register for a course?

In-Class: Upon arrival to the classroom you will receive a hard copy of the student manual, a notebook & pen to take notes and a laptop already set up with the virtual machine.

Instructor-Led Online: You will receive a hard copy of the student manual approximately a week before course start-date. You will also receive the login information for virtual machines and the audio-conferencing tool the day before the course start date.

Self-Paced Virtual Course: You will receive access to a virtual machine to run exercises and a PDF copy of the student manual with the option to print one copy.

2. Is there a specific sequence of courses I should take?

Yes, based on your role, there is a certain recommended training path. Whether you are an administrator, professional author, or developer, there is a training path for you! Please contact Newcomp Analytics' training advisors at training@newcomp.com or (888) 892-4276 to discuss which training path would be most relevant to you.

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