

BIOVIA DISCOVERANT

2016 TRAINING COURSE CATALOG



SUMMARY

We are proud to offer a variety of courses to meet your organization's needs, ranging from navigation basics to advanced technical courses. Courses are grouped by the area in the BIOVIA Discoverant suite of products where a job task takes place. Customized courses can be designed to meet your organization's specific needs, please contact your Account Manager.

Delivery Methods:

- **Instructor-Led Training (ILT):** Facilitated by an onsite instructor, this training takes place at your location or at a selected Biovia site. Each student receives a training manual; associated eLearning modules; videos, when applicable; and access to a virtual training environment to complete hands-on exercises related to the topic of discussion.
- **Virtual Classroom:** Using WebEx, our instructors teach these courses virtually allowing students to attend from their remote location. Each student receives a training manual, associated eLearning modules, videos, when applicable; and access to a virtual training environment to complete hands-on exercises related to the topic of discussion.
- **eLearning:** Intended to be a companion to our Instructor-Led Training or Virtual Classroom offerings, these self-paced, computer-based courses cover various BIOVIA Discoverant-specific topics.
- **Videos:** New for 2016, is the delivery of supplemental, self-paced videos that cover key topics related to the Hierarchy Maintenance and Hierarchy Development courses.

Fundamental Courses

DISCOVERANT EXPLORATION

The Exploration course introduces students to the BIOVIA Discoverant suite of products by defining BIOVIA Discoverant-specific terminology and by providing hands-on exercises that allow students to explore the BIOVIA Discoverant environment. The job roles associated with each component and the process of implementing BIOVIA Discoverant are also discussed.

Objectives:

- Identify the proper BIOVIA Discoverant component required to complete the job task
- Identify and define the terminology, environment, capabilities, and job roles associated with each component in the BIOVIA Discoverant suite of products
- Identify and define the capabilities found in the BIOVIA Discoverant suite of products
- Define the BIOVIA Discoverant implementation process
- Identify training offerings available based on job roles
- Prepare for BIOVIA Discoverant implementation

Length: 1 Day
Method: Onsite or Virtual Classroom
Level: Beginner
eLearning: AG Manager
Prerequisite Courses: N/A

Discoverant Open Enrollment Attendee Feedback: "The exercises did an excellent job of reinforcing the didactic material."

Technical Courses

HIERARCHY MAINTENANCE

This course enables BIOVIA Discoverant Administrators and those first learning to create hierarchies to provide support for the most common hierarchy changes, including additions of new nodes and parameters based on existing view structures, and updates or additions to conditions applied by the hierarchy. How to create a Hierarchy-Derived Parameter (HDP) is also covered in this course.

Objectives:

- Provide an understandable BIOVIA Discoverant overview
- Add parameters from a template
- Create and add parameters to a hierarchy
- Create nodes to affect parameters
- Create a Hierarchy-Derived Parameter (HDP)
- Test hierarchy changes

Length: 1 Day
Method: Onsite or Virtual Classroom
Level: Beginner
eLearning: AG Manager, HVU Data Entry, HVU Test Execution
Videos: System Terminology, Hierarchy Edits, Migration to Production
Prerequisite Courses and Knowledge: Discoverant Exploration and SQL

Technical Courses (continued)

FUNDAMENTALS OF HIERARCHY DEVELOPMENT

This course covers all aspects of hierarchy development from design through hierarchy creation. The course walks through each step of the process of hierarchy development from connecting Discoverant to source data systems, to view creation best practices, to configuring BIOVIA Discoverant to use the views to configure a hierarchy.

Objectives:

- Understand the hierarchy definition tool
- Create and load a stub hierarchy
- Describe how data flows from the source system to BIOVIA Discoverant
- Describe source and context views in depth
- Configure a hierarchy
- Work with overlays and spec limits
- Configure a stability parameter
- Use PRIMR as a data source

Length: 2 Days

Method: Onsite

Level: Intermediate

eLearning: AG Manager, HVU Data Entry, HVU Test Execution

Videos: Loading a Hierarchy, Designing a Hierarchy, Direct Connects

Prerequisite Courses and

Knowledge: Discoverant Exploration, Hierarchy Maintenance, SQL

BIOVIA PRIMR DEVELOPMENT

This course provides both lecture and hands-on exercises surrounding the rules and configuration of BIOVIA PRIMR Book and Page Templates. Basic design concepts, creation of HTML forms, system configuration, and utilization of style sheets and JavaScript are discussed. Students then create and manage BIOVIA PRIMR Book and Page Templates using HTML editors and the BIOVIA PRIMR tools.

Objectives:

- Identify how BIOVIA PRIMR supports 21 CFR Part 11 compliance and other regulatory initiatives
- Define the Passport methodology and where BIOVIA PRIMR is placed in this implementation methodology
- Identify the building blocks of hierarchy development
- Identify and utilize the two parts of BIOVIA PRIMR: Template Manager and Data Entry
- Identify and utilize the BIOVIA PRIMR user roles
- Identify the lifecycle of a BIOVIA PRIMR book; from creation, to data entry, to reconciliation, and to export
- Identify the typical workflow for each BIOVIA PRIMR role

Length: 2 Days

Method: Onsite or Virtual Classroom

Level: Beginner

eLearning: AG Manager, PRIMR Data Entry

Prerequisite Courses and

Knowledge: Discoverant Exploration, HTML

SYSTEM MANAGEMENT

This course provides BIOVIA Discoverant administrators with the knowledge necessary to configure and maintain the BIOVIA Discoverant suite of products. Administrators are shown the BIOVIA Discoverant system architecture, are instructed on the administration of users, and are taken through the process of troubleshooting common issues by monitoring logs and interpreting error messages.

Objectives:

- Describe the architecture of the BIOVIA Discoverant system and manage the various components in the Windows environment
- Design a security scheme that includes user authentication mechanisms and role-based access to product features
- Enforce desired system behavior using configuration settings
- Leverage system auditing and logging to troubleshoot system issues
- Diagnose and solve database connectivity issues
- Perform first-level troubleshooting, determine when to contact BIOVIA Support, and assemble the appropriate information for Support calls

Length: 1 Day

Method: Onsite or Virtual Classroom

Level: Beginner

eLearning: AG Manager

Prerequisite Courses: Discoverant Exploration

User Courses

DATA VISUALIZATION

This course addresses the process of designing and creating graphical displays of data in BIOVIA Discoverant as an integral step in transforming raw data into useful information for decision making. Students are guided through the process of developing relevant visualizations, automating the creation process, and sharing visualizations with the appropriate audience(s).

Objectives:

- Identify, define, and prepare the necessary components to create a data visualization
- Gather and filter data to create the appropriate data visualization
- Create the appropriate data visualization in BIOVIA Discoverant
- Expose data visualizations for communication to appropriate parties
- Apply the data visualization process to a simple 'need' within your area of responsibility

Length: 0.5 Days

Method: Onsite or Virtual Classroom

Level: Beginner

eLearning: AG Manager, Constructing New Parameters

Prerequisites Courses: Discoverant Exploration

PROCESS AND PRODUCT MONITORING

The Process and Product Monitoring course introduces students to proper application of the wide array of quality monitoring techniques available within BIOVIA Discoverant that increase process intelligence. Through discussion of use cases, students will begin, or continue, to develop their quality monitoring system(s) using the alerting, automation, and data sharing tools available in BIOVIA Discoverant.

Objectives:

- Identify the purpose for quality monitoring at your company
- Identify tools used for quality monitoring
- Gather data for quality monitoring in BIOVIA Discoverant
- Locate, develop, and understand quality monitoring guidance documents at your company
- Set up a quality monitoring system.
- Set up automation tools to facilitate communication and expose data
- Conduct on-going monitoring

Length: 1.5 Days

Method: Onsite

Level: Intermediate

eLearning: AG Manager, Constructing New Parameters, Feature Extraction

Prerequisites Courses: Discoverant Exploration, Data Visualization

SIGNAL MONITORING DASHBOARD

This course provides process monitoring experts with the knowledge and skills necessary to construct a signal monitoring dashboard in BIOVIA Discoverant and share the dashboard out with stakeholders.

Objectives:

- Identify the role dashboards play in process monitoring and improvement
- Identify, gather, organize, and visualize necessary monitoring data
- Locate and utilize monitoring strategies that inform parameter-level risk assessments and out-of-trend signal evaluations
- Develop a dashboard to facilitate communication and expose process data

Length: 0.5 Days

Method: Onsite or Virtual Classroom

Level: Beginner

eLearning: Discoverant Exploration, AG Manager

Prerequisite Courses: Discoverant Exploration

STATISTICAL APPLICATIONS

This course discusses critical fundamental concepts relevant to statistical application in the pharmaceutical and biological technology fields. Students are guided through the process of determining proper statistics, conducting inferential relationship and difference analyses (e.g., t-test, ANOVA, regression), as well as interpreting BIOVIA Discoverant outputs and writing up results.

Objectives:

- Identify and comprehend key concepts and terminology of statistical application
- Combine, organize, and clean data for statistical application
- Identify, conduct, and interpret descriptive statistics
- Identify conditions appropriate to draw inferences from statistical results
- Use difference-based inferential statistics to facilitate scientific decision making
- Use relationship-based inferential statistics to facilitate scientific decision making
- Be able to communicate statistical results effectively

Length: 1 Day

Method: Onsite

Level: Advanced

eLearning: AG Manager, Constructing New Parameters

Prerequisites Courses: Discoverant Exploration, Data Visualization

Discoverant Open Enrollment

Attendee Feedback: "Thank you so much for all your help. I learned a lot & truly appreciate it."

User Courses (continued)

FUNDAMENTALS OF INVESTIGATIONS

This course introduces students to the proper application of the tools available within BIOVIA Discoverant designed to assist in investigational analysis. Through discussion of use cases and interaction with the software, students begin, or continue, to develop their investigational analysis skills in BIOVIA Discoverant.

Objectives:

- Determine how to utilize data outside of BIOVIA Discoverant and modify existing data within BIOVIA Discoverant for investigations
- Identify which statistical analyses and visualizations to use in an investigation given the data
- Conduct an investigation utilizing various BIOVIA Discoverant tools
- Report the findings of an investigation to stakeholders
- Identify the top suspects for investigations and automate their investigation

Length: 0.5 Days

Method: Onsite or Virtual Classroom

Level: Advanced

eLearning: AG Manager, Constructing New Parameters, Feature Extraction

Prerequisites Courses:

Discoverant Exploration, Data Visualization, Statistical Application

LEVERAGING PHASE DATA FOR ANALYSIS

The Leveraging Phase Data for Analysis course addresses BIOVIA Discoverant tools that clean out unwanted noise in continuous data within and between features or compare individual features to groups of similar features. Students can compare chromatographic phases, fermentation profiles with process outcomes, and filtration flux profiles within and between batches.

Objectives:

- Identify how MPA can be leveraged for continuous data and dynamic processes
- Identify, gather, visualize, and create phases for continuous data
- Identify how BIOVIA Discoverant can be used to summarize phase data and compare new batches to defined golden batches
- Utilize MPA to monitor column performance and generate HETP and asymmetry statistics for monitoring on control charts
- Analyze complex relationships among continuous parameters to identify underlying principal components and develop new hypotheses

Length: 0.5 Days

Method: Onsite or Virtual Classroom

Level: Advanced

eLearning: AG Manager, Constructing New Parameters, Feature Extraction

Prerequisites Courses:

Discoverant Exploration, Data Visualization, Statistical Application, Process and Product Monitoring

STABILITY STUDIES AND MONITORING

This course provides users with the purposes and the workflows for conducting their stability-oriented job tasks. In accordance with regulatory guidelines, this course reviews data visualizations, ANCOVA-based point-and-click models for expiration dating analysis, as well as control charts to trend and receive alerts on stability study data.

Objectives:

- Identify the purpose for stability studies and monitoring at your company
- Identify, gather, organize, and visualize necessary stability data
- Apply proper modeling for stability expiration analysis and trend monitoring
- Develop end-user automation and alerting tools to facilitate communication and expose data

Length: 0.5 Days

Method: Onsite or Virtual Classroom

Level: Advanced

eLearning: AG Manager, Constructing New Parameters

Prerequisites Courses:

Discoverant Exploration, Data Visualization

REFRESHER TRAINING

For individuals who are seeking to gain more experience leveraging BIOVIA Discoverant in order to gather data, create visualizations, generate outputs of statistical tests, and automate results, we offer a two-day refresher course to meet your organizational needs. This course is a combination of modules that focus on typical BIOVIA Discoverant output configuration in a hands-on environment.

Objectives:

- Create an Analysis Group (AG) suited to your needs
- Create appropriate data visualizations in BIOVIA Discoverant
- Set up a quality monitoring system in BIOVIA Discoverant
- Conduct basic statistical tests in BIOVIA Discoverant
- Automate the retrieval and analysis of data in BIOVIA Discoverant and share your results with stakeholders

Length: 2 Days

Method: Onsite

Level: Intermediate

eLearning: AG Manager, Constructing New Parameters, Feature Extraction

Prerequisite Courses:

Discoverant Exploration

User Courses (continued)

HIERARCHY DESIGN

This course introduces the concepts required for defining and designing a new BIOVIA Discoverant Hierarchy. Students are taken through the complete design process, from scoping the hierarchy based on the needs and resources present, to creating documents that capture essential information about the process. Students are also taught how to develop requirements for the hierarchy, capture the necessary parameters, and test the implemented hierarchy. Labs and discussion complement the lecture material so that students complete the course with the essential information for carrying out the hierarchy design process.

Objectives:

- Create a document outlining the primary objectives for creating the hierarchy
- Identify the information required to assess a client's needs with regards to a hierarchy
- Apply knowledge about BIOVIA Discoverant tools, manufacturing processes, and client needs to create Analytical Goals
- Identify the information required to map a process and create a document that captures that process
- Translate Analytical Goals and the corresponding process into a hierarchy
- Evaluate design changes to the hierarchy during implementation and determine if they impact the Analytical Goals
- Confirm that the Analytical Goals are met by the implemented hierarchy

Length: 1 Days

Method: Onsite

Level: Intermediate

eLearning: AG Manager, Constructing New Parameters, Feature Extraction

Prerequisite Courses: Data Exploration, Data Visualization, PPM, Stability Studies and Monitoring, Leveraging Phase Data Analysis

eLEARNING Courses

BIOVIA DISCOVERANT EXPLORATION eLEARNING

This course introduces students to the various aspects of BIOVIA Discoverant by defining the terminology, interacting with the environment, and exploring job roles associated with each component in the BIOVIA Discoverant suite of products.

Objectives:

- Identify barriers to successful data aggregation and analysis in the life science industry
- Identify and describe relationships among the BIOVIA Discoverant suite of products to produce a software solution that improves process understanding
- Identify and define the terminology, environment, and capabilities associated with each component in the BIOVIA Discoverant suite of products
- Identify the job roles associated with each component in the BIOVIA Discoverant suite of products.
- Define the BIOVIA Discoverant implementation process
- Identify training offerings based on job roles

Length: 1 Hour

Type: User or Technical

Level: Beginner

Prerequisite Courses: N/A

Discoverant Open Enrollment

Attendee Feedback: "I found last week's training extremely useful and heard similar comments from other participants."

AG MANAGER eLEARNING

This course is for users who are currently able to navigate and use BIOVIA Discoverant at a basic level. The course focuses on how to create and manage Analysis Groups (AGs). Students learn the process for creating an AG, and how to access and utilize the AG Manager. An AG is a manageable subset of data extracted from various source systems that you can use to more effectively analyze data.

Objectives:

- Identify how AG Manager fits into the BIOVIA Discoverant suite of products
- Utilize BIOVIA Discoverant terminology
- Identify the structure and function of a hierarchy
- Describe how to utilize AGs within BIOVIA Discoverant for gathering and sharing process data
- View and manage data in Table View
- Navigate and view batch genealogy in BIOVIA Discoverant

Length: 1 Hour

Type: User or Technical

Level: Beginner

Prerequisite Courses: Discoverant Exploration

eLEARNING Courses (continued)

HVU DATA ENTRY eLEARNING

Technical users who are currently able to navigate BIOVIA Discoverant at a basic level and are familiar with hierarchy structure and source data may be interested in this course. The focus for the HVU Data Entry course is on how to enter parameter data for a published hierarchy

Objectives:

- Access HVU Data Entry
- Identify data entry best practices
- Manually enter Parameter Set Names and data for discrete, continuous, and replicate parameters
- Upload data from a tab-delimited data source
- Copy and paste data from a spreadsheet

Length: 1 Hour

Type: Technical

Level: Beginner

Prerequisite Courses:
Discoverant Exploration

HVU TEST EXECUTION eLEARNING

The focus of the HVU Test Execution course is on how to use the Hierarchy Verification Utility (HVU) to publish hierarchies, execute tests, and view test results within Hierarchy Manager. Technical users who are currently able to navigate both BIOVIA Discoverant and Hierarchy Manager at a basic level will benefit from this course.

Objectives:

- Access Hierarchy Manager
- Publish a hierarchy for use with HVU
- Execute HVU for testing a new configuration and for regression testing
- View and evaluate test results

Length: 1 Hour

Type: Technical

Level: Beginner

Prerequisite Courses:
Discoverant Exploration

CONSTRUCTING NEW PARAMETERS eLEARNING

Targeted for users who are currently able to navigate and use BIOVIA Discoverant at a basic level and who can perform basic Table View functions, this course shows how to use BIOVIA InVision to create new parameters for analysis and reporting.

Objectives:

- Successfully create a new, derived, discrete parameter using mathematical functions available in BIOVIA InVision
- Create an empty discrete parameter to be able to manually add new data in BIOVIA InVision
- Create a new categorical parameter based on a numeric parameter for categorization and analysis

Length: 1 Hour

Type: User

Level: Beginner

Prerequisite Courses:
Discoverant Exploration

FEATURE EXTRACTION eLEARNING

The BIOVIA Discoverant feature extraction tool helps end users analyze and compare continuous data trends by extracting summarized discrete values from the curves. This course is targeted for users who are currently able to navigate BIOVIA Discoverant at a basic level, create Analysis Groups (AGs) that contain continuous data, and identify the concept of offset groups for continuous data.

Objectives:

- Identify common use cases to apply the feature extraction tool in process monitoring and investigations
- Align continuous data for analysis
- Select the desired area and extract a discrete feature (slope, area under the curve, etc.) from continuous data
- Save the new feature and view the data in a table

Length: 1 Hour

Type: User

Level: Intermediate

Prerequisite Courses:
Discoverant Exploration

PRIMR DATA ENTRY eLEARNING

Targeted to BIOVIA PRIMR users with a data entry role who have a basic familiarity with browsers, this course walks students through how to enter data from paper records into the BIOVIA PRIMR data entry tool for use in BIOVIA Discoverant.

Objectives:

- Create a new data entry Book from Book Templates
- Create new data entry Pages for a Book
- Enter data into online forms
- Correct and reject data entry forms
- Generate productivity and accuracy reports
- Import XML data

Length: 1 Hour

Type: User

Level: Beginner

Prerequisite Courses:
Discoverant Exploration

Bundled Courses

IMPLEMENTATION BUNDLE WITH BIOVIA PRIMR

Intended to accompany a full implementation of BIOVIA Discoverant with BIOVIA PRIMR, this training bundle includes the following onsite courses: Discoverant Exploration, Data Visualization, Process and Product Monitoring, Statistical Application, Fundamentals of Investigations, Hierarchy Maintenance, Fundamentals of Hierarchy Development, System Management, and PRIMR Development.

eLearning modules provided with this bundle: AG Manager, Constructing New Parameters, Feature Extraction, PRIMR Data Entry, HVU Data Entry, HVU Test Execution

Videos provided with this bundle: System Terminology, Migrating to Production, Hierarchy Edits, Loading a Hierarchy, Direct Connect, Designing a Hierarchy

Length: 10.5 Days

Method: Onsite, instructor-led; self-paced eLearning modules; self-paced videos

Type: User and Technical

Level: Beginner - Advanced

IMPLEMENTATION TRAINING BUNDLE WITHOUT BIOVIA PRIMR

Intended to accompany a full implementation of BIOVIA Discoverant without BIOVIA PRIMR, this training bundle includes the following onsite courses: Discoverant Exploration, Data Visualization, Process and Product Monitoring, Statistical Application, Fundamentals of Investigations, Hierarchy Maintenance, Fundamentals of Hierarchy Development, and System Management.

eLearning modules provided with this bundle: AG Manager, Constructing New Parameters, Feature Extraction, HVU Data Entry, HVU Test Execution.

Videos provided with this bundle: System Terminology, Migrating to Production, Hierarchy Edits, Loading a Hierarchy, Direct Connect, Designing a Hierarchy

Length: 8.5 Days

Method: Onsite, instructor-led; self-paced eLearning modules; self-paced videos

Type: User and Technical

Level: Beginner - Advanced

TRAINING PILOT BUNDLE WITH BIOVIA PRIMR

Intended to accompany a Proof of Concept implementation of BIOVIA Discoverant with BIOVIA PRIMR, this training bundle includes the following onsite courses: Abbreviated Discoverant Exploration; Refresher, which includes portions of Data Visualization, Process and Product Monitoring, and Univariate Statistics; System Management; and PRIMR Development

eLearning modules provided with this bundle: AG Manager, Constructing New Parameters, Feature Extraction, PRIMR Data Entry

Length: 5.5 Days

Method: Onsite, instructor-led; self-paced eLearning modules

Type: User and Technical

Level: Beginner - Advanced

TRAINING PILOT BUNDLE WITHOUT BIOVIA PRIMR

Intended to accompany a Proof of Concept implementation of BIOVIA Discoverant without BIOVIA PRIMR, this training bundle includes the following onsite courses: Abbreviated Discoverant Exploration; Refresher training, which includes portions of Data Visualization, Process and Product Monitoring, and Univariate Statistics; and System Management.

eLearning modules provided with this bundle: AG Manager, Constructing New Parameters, Feature Extraction

Length: 3.5 Days

Method: Onsite, instructor-led; self-paced eLearning modules

Type: User and Technical

Level: Beginner - Advanced

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