[educational services]



# Waters Educational Services eLearning Catalog

Self-paced eLearning Courses

Learn anytime, anywhere, at your own pace, and save travel time and money



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**NEW** NuGenesis SDMS User

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NEW Introductory Familiarization for ACQUITY UPLC Systems (Classic and I-Class)

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(UPLC-QTof MS)

Metabonomics/Metabolomics (UPLC-QTof MS)

Peptide Mapping (UPLC-QTof MS)

(UPLC-Quadrupole MS)





## Introduction

## Waters Educational Services eLearning Tracks

Laboratories across the globe are constantly challenged to lower costs while continuing to increase staff efficiency. In this environment it is difficult to find time for the training necessary to gain new skills and boost your productivity.

With Waters' self-paced eLearning courses, you can now learn at your own pace without leaving your office or lab. Plus, with eLearning courses priced inexpensively, you can help your lab realize immediate cost savings. All eLearning courses are currently available in English only.

**Immediate** Savings **Great Solution** Cut travel costs and for New Users eliminate travel expenses Flexible **Eontrol** Options the Pace Buy modules or Learn quickly or tracks to fit your take your time budget needs [eLearning] Over 160 modules and 35 tracks Certified to choose from Affordable Developers Prices ranging from Designed by same \$50-\$1,200 classroom based quality trainers Available 24/7 Demonstration

Learn at your

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(v1.6/1.7)

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victabolyiix

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MS Instrumentation

Peptide Mapping (UPLC-QTof MS)

Quantitation (UPLC-Quadrupole MS)

UPLC





of functionality

through exercises

## eLearning Benefits

- Control the pace ...... Learn at your own pace. You're always in control.
- Focus on what you need ....... Skip what you know or don't need. Repeat difficult course sections. It's your choice.

## Flexible course format

Our eLearning courses are designed to help you focus on what you need. Purchase a specific module to enhance skills in a targeted area or purchase a full track to master a discipline or theme. This flexibility is a great way to support each phase of the lifecycle and acquire the knowledge you need to be up and running quickly.

## Self-paced eLearning training tracks are designed to:

- Teach fundamental, essential, and advanced skills
- Demonstrate functionality through hands-on exercises
- Supplement Waters classroom training

## Course designed by expert instructors

All eLearning courses are developed by certified Waters trainers who are experts within their respective areas, allowing you to get the same quality training that you receive in the classroom.

## More than 160 courses available

- HPLC, UPLC, and, LC-MS Systems (Theory, Operation, Maintenance)
- Empower® 3, MassLynx® and applicable Application Managers, NuGenesis® and UNIFI®
- Small and Large Molecule Applications
- Recertification exam for Waters SystemsQT™ Qualification Tool

(ALL COURSES ARE AVAILABLE IN ENGLISH ONLY)





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(UPLC-Quadrupole MS)

## Software eLearning Tracks

## Cancellation Policy for eLearning On Demand Courses

- Cancellation requests must be received in writing by email.
- Registrations may be cancelled for any reason with a full refund if received within 72 hours of purchase as long as no more than 25% of the course has been completed.
- If cancellation occurs after 72 hours of purchase, a refund will not be issued but Waters will grant access to another online course of equal or lesser value.

## Software eLearning Tracks

Americas	Europe/ India	Asia	eLearning Tracks		# Modules	Duration	Price (\$)*
Register	Register	Register	NEW Empower 3 SW: Reviewing Data Electronically	750002036	7	1 hr. 56 min.	400.00
Register	Register	Register	NEW Empower 3 SW: Basic Empower Custom Fields	750002038	2	40 min.	125.00
Register	Register	Register	Empower 3 SW FR2: Fundamentals Using the Pro Interface	750002022	16	4 hrs. 30 min.	900.00
Coming Soon	Register	Register	Empower 3 SW: Advanced Topics - Administrative Tools for Productivity	750002023	5	2 hrs. 30 min.	500.00
Register	Register	Register	Empower 3 SW FR2: Advanced Topics - Processing	750002032	14	5 hrs. 18 min.	650.00
Coming Soon	Register	Register	Empower 3 SW: Fundamentals of the QuickStart Interface	750002024	7	2 hrs. 45 min.	500.00
Register	Register	Register	Empower 3 SW: Workflow	750002001	6	2 hrs. 25 min.	500.00
Register	Register	Register	ChromaLynx	750002018	4	2 hrs. 25 min.	400.00
Register	Register	Register	Fundamentals of UNIFI (v1.6/1.7)	750002011	4	8 hrs. 44 min.	1,500.00
Register	Register	Register	MarkerLynx™	750002017	2	1 hr. 5 min.	250.00
Register	Register	Register	MassLynx	750002020	6	2 hrs. 30 min.	400.00
Register	Register	Register	MetaboLynx™	750002019	4	3 hrs. 15 min.	500.00
Register	Register	Register	NEW NuGenesis SDMS User	750002042	5	1 hr. 41 min.	400.00
Register	Register	Register	TargetLynx™	750002016	6	3 hrs.	400.00
Register	Register	Register	NEW Proteomics Data Processing using PLGS	750002033	4	2 hrs. 16 min.	400.00
Register	Register	Register	Transitioning from Empower 2 FR5 to Empower 3 FR2	750002026	-	1 hr. 5 min.	350.00
Register	Register	Register	Transitioning from Empower 2 FR5 to Empower 3 FR2 for System Administration	750002027	-	48 min.	150.00

<sup>\*</sup>PRICE IS BASED IN US DOLLARS, INVOICE WILL REFLECT THE EQUIVALENT COST IN YOUR LOCAL CURRENCY.





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## HW/Systems eLearning Tracks

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Register	Register	Register	NEW ACQUITY QDa	750002029	3	2 hrs. 5 min.	300.00
Register	Register	Register	Alliance HPLC Operation and Performance Maintenance Track (Video Format)	750002014	-	1 hr. 46 min.	1,000.00
Register	Register	Register	Clinical LC-MS Applications	750002030	12	5 hrs. 41 min.	1,000.00
Register	<u>Register</u>	Register	Complex Mixture Analysis (UPLC-QTof MS)	750002008	12	6 hrs. 7 min.	1,000.00
Register	Register	Register	Complex Mixture Analysis (UPLC-Quadrupole MS)	750002007	10	5 hrs. 21 min.	900.00
Register	Register	Register	General Liquid Chromatography (LC)	750002013	6	2 hrs. 36 min.	400.00
Register	Register	Register	HPLC	750002002	9	5 hrs. 35 min.	750.00
Register	Register	Register	Intact Protein Analysis (UPLC-QTof MS)	750002009	11	5 hrs. 26 min.	600.00
Register	Register	Register	NEW Introductory Familiarization for LC-MS ToF -Based Systems	750002034	4	1 hr.	150.00
Register	Register	Register	NEW Introductory Familiarization for LC-MS Quadrupole-Based Systems	7450002035	4	1 hr.	150.00
Register	Register	Register	NEW Introductory Familiarization for ACQUITY UPLC Systems (Classic and I-Class)	750002046	4	2 hrs. 56 min.	250.00
Register	Register	Register	NEW Introductory Familiarization for ACQUITY UPLC Systems (H-Class)	750002047	4	2 hrs. 46 min.	250.00
Register	Register	Register	LC-MS Principles and Concepts	750002012	6	2 hrs. 25 min.	650.00
Register	Register	Register	Metabolite Identification (UPLC-QTof MS)	750002005	11	6 hrs. 46 min.	1,200.00
Register	Register	Register	Metabonomics/Metabolomics (UPLC-QTof MS)	750002006	9	4 hrs. 36 min.	850.00
Register	Register	Register	MS Instrumentation	750002015	10	6 hrs. 50 min.	500.00
Register	Register	Register	Peptide Mapping (UPLC-QTof MS)	750002010	10	5 hrs. 41 min.	650.00
Register	Register	Register	Quantitation (UPLC-Quadrupole MS)	750002004	11	5 hrs. 26 min.	1,000.00
Register	Register	Register	UPLC eLearning Track	750002003	16	11 hrs. 35 min.	1,100.00

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(UPLC-Quadrupole MS)

## **NEW** Empower 3 SW: Reviewing Data Electronically

The track, Empower 3 SW: Reviewing Data Electronically, is divided into 7 modules. The first few modules start by explaining what electronic data is, and the policies that are the basis of Empower. As the student advances through the track, they will learn how to review and understand the results as well as the audit trails. Finally they will learn about the new feature the Result Audit Viewer.

This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002036

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	7	1 hr. 56 min.	400.00

#### Modules

NEW Module 1: Empower 3 SW: Reviewing Data Electronically - Introduction

Part Number: 750000927

This module introduces what an electronic record is and starts the thought process of questions one should ask when reviewing electronic data.

This module can also be purchased individually:						
Americas	Europe/India	Asia	Price (\$)*	Duration		
Register	Register	Register	50,00	5 min.		

NEW Module 2: Empower 3 SW: Reviewing Data Electronically – System Policies

Part Number: 750000928

This module introduces the categories under the System Policies in Configuration Manager such as user account, project properties, system audit trails, data processing, results sign off, and email. This module will help understand the role system policies have within Empower.

This module can also be purchased individually:							
Americas	Europe/India	Asia	Price (\$)*	Duration			
Register	Register	Register	50.00	8 min.			

NEW Module 3: Empower 3 SW: Reviewing Data Electronically –
User Management

Part Number: 750000929

This module introduces the hierarchy of a user's access in the Empower Software.

Americas Europe/India Asia Price (\$)*	This module can also be purchased individually:							
Register Register 50.00	Americas	Europe/India	Asia	Price (\$)*	<b>Duration</b>			
	Register	Register	<u>Register</u>	50.00	8 min.			

NEW Module 4: Empower 3 SW: Reviewing Data Electronically –
Project Management

Part Number: 750000930

This module will explain how a project is organized, how to sort and filter through data, and how to understand projects at a global level.

	This module can also be purchased individually:							
Ī	Americas	Europe/India	Asia	Price (\$)*	Duration			
	Register	Register	Register	100.00	25 min.			

Module 5: Empower 3 SW: Reviewing Data Electronically – Reviewing and Understanding Results

Part Number: 750000931

This module will dive deep within the Empower3 Software exposing the true intricacies of the software such as result sets, calibration curves, report methods and finally electronic sign offs.

This module can also be purchased individually:							
Americas	Europe/India	Asia	Price (\$)*	Duration			
<u>Register</u>	Register	<u>Register</u>	100.00	30 min.			

NEW Module 6: Empower 3 SW: Reviewing Data Electronically – Audit Trails

Part Number: 750000932

This module explains how to understand user entered comments, the different types of audit trails, and how and what information is captured in Empower 3 software.

This module can also be purchased individually:							
Americas	Europe/India	Asia	Price (\$)*	Duration			
Register	Register	Register	50.00	20 min.			

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waters.com/ecourses

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This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002036

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	7	1 hr. 56 min.	400.00

### **Modules Continued**

NEW Module 7: Empower 3 SW: Reviewing Data Electronically – Result Audit Viewer

Part Number: 750000933

This module introduces the new feature of reviewing results in one window. It brings together the project audit trail, method history and differences, sample history, sample set history, acquisition and injection log, as well as showing if a manual integration has been performed.

This module can also be purchased individually:							
Americas	Europe/India	Asia	<b>Price (\$)*</b>	Duration			
<u>Register</u>	<u>Register</u>	<u>Register</u>	50.00	20 min.			

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MS Instrumentation

(UPLC-QTof MS)

Quantitation (UPLC-Quadrupole MS)





## **NEW** Empower 3 SW: Basic Empower Custom Fields

This track contains two modules that cover the creation of basic Empower custom fields. The modules show how to utilize the Empower Custom Field Wizard and configure parameters to optimize the use of these basic fields.

This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002038

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	2	40 min.	125.00

#### Modules

**NEW Module 1:** Empower 3 SW: Introduction to Empower Custom Fields

Part Number: 750000939

This module is an introduction to basic custom fields in Empower 3. It covers custom field theory, steps in creating a custom field, custom field privileges, types of custom fields and custom field data types.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	<u>Register</u>	<u>Register</u>	50.00	10 min.	

**NEW Module 2:** Empower 3 SW: Creating Empower Custom Fields

Part Number: 750000940

This module covers how to create basic custom fields using the Empower 3 Custom Field Wizard. It gives examples of custom field types: sample, sample set, component, peak and result. In addition, it covers the display of custom fields results.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	<b>Duration</b>	
Register	Register	Register	100.00	30 min.	

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Quantitation (UPLC-Quadrupole MS)





## Empower 3 SW FR2: Fundamentals Using the Pro Interface

This track contains a series of modules that cover the Fundamentals of Empower 3 SW FR2: Using the Pro Interface. It covers the following areas - Overview, Creating Instrument Methods, Method Sets and Sample Set Methods for data acquisition, acquiring data, reviewing data and creating and modifying processing methods, processing data, reviewing results, using Report Methods and Modifying Report Methods.

This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002022

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	16	4 hrs. 30 min.	900.00

#### Modules

Module 1: Empower 3 SW: Pro Fund - Introduction and Login

Part Number: 750000813

This module provides an introduction to Empower Software and shows the user how to log into the Pro Interface.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
Register	<u>Register</u>	<u>Register</u>	50.00	8 min.	

#### Module 2: Empower 3 SW: Pro Fund - Creating an Instrument Method

Part Number: 750000814

This module shows the user how to create a method set which is needed for data acquisition.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	<b>Duration</b>	
Register	Register	Register	50.00	14 min.	

#### Module 3: Empower 3 SW: Pro Fund - Creating a Method Set

Part Number: 750000816

This module shows the user how to create a method set which is needed for data acquisition.

This module can also be purchased individually:					
America Register		Asia Register	Price (\$)* 50,00	<b>Duration</b> 10 min.	
riogiotoi	<u> </u>	<u> </u>	00.00	10 1111111	

#### Module 4: Empower 3 SW: Pro Fund - Creating a Sample Set Method

Part Number: 750000817

This module shows the user how to create a sample set method. The sample set method defines what samples will be run and how the data will be collected.

This module can also be purchased individually:				
Americas Register	Europe/India Register	Asia Register	Price (\$)* 200.00	Duration 45 min.
negistei	<u>negister</u>	negister	200.00	43 11111.

#### Module 5: Empower 3 SW: Pro Fund - Acquiring Data

Part Number: 750000818

This module shows the user how to acquire data with Empower Software. This includes making a single injection, loading and running a sample set method, altering a running sample set and queuing multiple sample sets.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	<b>Duration</b>	
Register	Register	<u>Register</u>	100.00	20 min.	

## Module 6: Empower 3 SW: Pro Fund - Theory of Traditional Peak Detection and Integration

Part Number: 750000819

This module describes the theory behind traditional peak detection and integration.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
Register	Register	Register	50.00	10 min.	

\*PRICE IS BASED IN US DOLLARS, INVOICE WILL REFLECT THE EQUIVALENT COST IN YOUR LOCAL CURRENCY.

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## Empower 3 SW FR2: Fundamentals Using the Pro Interface

This track contains a series of modules that cover the Fundamentals of Empower 3 SW FR2: Using the Pro Interface. It covers the following areas - Overview, Creating Instrument Methods, Method Sets and Sample Set Methods for data acquisition, acquiring data, reviewing data and creating and modifying processing methods, processing data, reviewing results, using Report Methods and Modifying Report Methods.

This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002022

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	16	4 hrs. 30 min.	900.00

#### **Modules Continued**

Module 7: Empower 3 SW: Pro Fund - Theory of the Apex Track Peak
Detection and Integration

Part Number: 750000820

This module describes the theory behind Apex Track peak detection and integration.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	<u>Register</u>	<u>Register</u>	50.00	12 min.	

Module 8: Empower 3 SW: Pro Fund - Creating a Processing Method with the Traditional Algorithm

Part Number: 750000821

This module shows how to create a processing method using the traditional algorithm. A processing method is needed to generate results.

This module can also be purchased individually:					
Americas	Europe/India	<b>Asia</b>	<b>Price (\$)*</b>	Duration	
Register	Register	<u>Register</u>	100.00	22 min.	

Module 9: Empower 3 SW: Pro Fund - Creating a Processing Method with Apex Track Algorithm

Part Number: 750000822

This module shows how to create a processing method using the Apex Track algorithm. A processing method is needed to generate results.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	Register	Register	100.00	22 min.	

Module 10: Empower 3 SW: Pro Fund - Reviewing Data with a Processing Method

Part Number: 750000823

This module shows how to apply an existing processing method to a sample set without generating any results.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	<u>Register</u>	<u>Register</u>	50.00	5 min.	

Module 11: Empower 3 SW: Pro Fund - Modifying an Existing Processing Method

Part Number: 750000824

This module shows how to modify and fine tune an existing processing method.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
Register	Register	Register	50.00	12 min.	

Module 12: Empower 3 SW: Pro Fund - Alter Sample and Processing a Sample Set

Part Number: 750000825

This module shows how to use Alter Sample to modify sample information post run and how to process a sample set.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	<b>Duration</b>	
Register	Register	Register	50.00	11 min.	

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Track Part Number: 750002022

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	16	4 hrs. 30 min.	900.00

#### **Modules Continued**

#### Module 13: Empower 3 SW: Pro Fund - Reviewing Results

Part Number: 750000826

This module shows how to review a result set including the individual results and calibration curves.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	<u>Register</u>	<u>Register</u>	50.00	13 min.	

#### Module 14: Empower 3 SW: Pro Fund- Using Report Methods

Part Number: 750000827

This module shows how to use an existing report method to preview and print results.

This module can also be purchased individually:					
Americas Register	Europe/India Register	<b>Asia</b> Register	Price (\$)* 50.00	Duration 11 min.	
ricgister	ricgistor	ricgistor	30.00		

## Module 15: Empower 3 SW: Pro Fund - Modifying an Individual Report Method

Part Number: 750000828

This module shows how to modify an individual report method. Topics include modifying a chromatogram group and a peaks table group.

This module can also be purchased individually:					
Americas	Europe/India	Asia	<b>Price (\$)*</b>	Duration	
Register	Register	Register	100.00	22 min.	

#### Module 16: Empower 3 SW: Pro Fund - Modifying a Summary Report Method

Part Number: 750000829

This module shows how to modify a summary report method. Topics include understanding sorting and grouping and creating a composite group.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
Register	<u>Register</u>	Register	100.00	27 min.	

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## Empower 3 SW: Advanced Topics - Administrative Tools for Productivity

The track contains a series of 5 modules that cover the administrative tools of Empower 3 software. It covers the following 5 topics: Administration Tools, User Management, Project Management, The Project Window, and Nodes and Chromatographic Systems.

This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002023

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Coming Soon	Register	Register	5	2 hrs. 30 min.	500.00

#### Modules

#### Module 1: Empower 3 SW: Administration Tools

Part Number: 750000780

In this module we will demonstrate how a user can correctly login to Empower with a given username and password; explain what the message center is and how to use it; explain how to use the configuration manager and system monitor; and how to manage database properties.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
Coming Soon	Register	<u>Register</u>	100.00	30 min.	

#### Module 2: Empower 3 SW: User Management

Part Number: 750000781

In this module we will demonstrate how a user and user type(s); how to assign multiple users types per user; how to modify user properties; how to create user groups and user groups administrators.

This module can also be purchased individually:						
Americas	Europe/India	Asia	Price (\$)*	Duration		
Coming So	on <u>Register</u>	<u>Register</u>	100.00	30 min.		

#### Module 3: Empower 3 SW: Project Management

Part Number: 750000782

This module will demonstrate how a user can learn how to create, manage, and clone Empower projects. Also, how to determine project properties, lock and unlock a project, archive, back up, delete, and restore a project.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
Coming Soon	Register	Register	100.00	30 min.	

#### Module 4: Empower 3 SW: The Project Window

Part Number: 750000783

In this module we will demonstrate how a user can access the project window; determine the properties of the project window; use sorting tools and create JIT (Just-in-time) filters; copy data and information between projects; and modify method properties without guidance.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
Coming Soon	Register	Register	100.00	30 min.	

#### Module 5: Empower 3 SW: Nodes and Chromatographic Systems

Part Number: 750000784

This module will show how a user can define Empower nodes, acquisition servers, and chromatographic systems; how to create new Empower nodes and modify these properties; and how to create new chromatographic systems to control within Empower.

Americas Europ				
•	e/India	Asia	Price (\$)*	<b>Duration</b>
	<u>lister</u> <u>l</u>	Register	100.00	30 min.

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## Empower 3 SW FR2: Advanced Topics - Processing

This track contains 14 modules that cover Empower 3 FR2 Advanced Topics regarding processing methods and processing data. It covers the following areas – Peak Detection & Integration Algorithms, Component Information, Impurity processing, Creating Grouped Peaks, Suitability Calculations, Setting Limits, Smoothing Data, Process Only Sample Sets, Deriving Channels, the Result Audit Viewer and using an old calibration curve.

This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002032

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	14	5 hrs. 18 min.	650.00

#### Modules

Module 1: Empower 3 SW FR2: Advanced Topics - Traditional Integration

Part Number: 750000872

This module describes how the Traditional Algorithm performs peak detection and integration. This includes a discussion of peak width and threshold and the role they play in peak detection and integration.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	<b>Duration</b>	
Register	Register	Register	200.00	45 min.	

Module 2: Empower 3 SW FR2: Advanced Topics - Apex Track Integration

Part Number: 750000873

This module describes how the Apex Track Algorithm performs peak detection and integration. This includes a discussion of how peak detection is decoupled from integration.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	<b>Duration</b>	
Register	Register	Register	200.00	45 min.	

Module 3: Empower 3 SW FR2: Advanced Topics - Traditional Processing Wizard

Part Number: 750000874

This module demonstrates how to create a Processing Method with the Traditional Algorithm. This includes working with global peak detection and integration parameters and using timed events.

	This module can also be purchased individually:						
<u>negister</u> <u>negister</u> 100.00 S	ration ) min.						

#### Module 4: Empower 3 SW FR2: Advanced Topics - Apex Track Processing Wizard

Part Number: 750000876

This module demonstrates how to create a Processing Method with the Apex Track algorithm. This includes working with peak detection parameters separately from baseline determination parameters.

This module can also be purchased individually:					
Americas	Europe/India	<b>Asia</b>	Price (\$)*	Duration	
Register	Register	Register	100.00	30 min.	

Module 5: Empower 3 SW FR2: Advanced Topics - Component Tab

Part Number: 750000878

This module demonstrates how to work with the Components tab in the processing method. This includes a discussion of the global parameters and the various fields in the table.

This module can also be purchased individually:						
rope/India	Asia Register	Price (\$)*	Duration 20 min.			
	•	rope/India Asia	rope/India Asia Price (\$)*			

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This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002032

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	14	5 hrs. 18 min.	650.00

#### **Modules Continued**

Module 6: Empower 3 SW FR2: Advanced Topics - Impurity Tab

Part Number: 750000879

This module demonstrates how to work with the Impurity Tab in the Processing Method. This includes a discussion of specifying parameters to identify, calculate, group and set limits for impurity peaks.

This module of	This module can also be purchased individually:						
Americas	Europe/India	Asia	Price (\$)*	Duration			
<u>Register</u>	<u>Register</u>	Register	200.00	1 hr.			

#### Module 7: Empower 3 SW FR2: Advanced Topics - Groups Tab

Part Number: 750000880

This module demonstrates how to group peaks to together. This includes Named groups and Timed groups.

This module can also be purchased individually:				
Americas	Europe/India	Asia	Price (\$)*	Duration
<u>Register</u>	Register	<u>Register</u>	50.00	8 min.

#### Module 8: Empower 3 SW FR2: Advanced Topics - Suitability Tab

Part Number: 750000881

This module demonstrates how to work with the Suitability tab in the Processing Method. This includes a discussion of calculating USP Plate Count and Tailing factor as well as different ways to calculate the signal to noise ratio.

This module can also be purchased individually:					
Americas Register	Europe/India Register	<b>Asia</b> Register	Price (\$)* 50.00	<b>Duration</b> 15 min.	
riogiotor	<u>riogiotor</u>	<u>ITOGIOTOI</u>	00.00	10 111111	

#### Module 9: Empower 3 SW FR2: Advanced Topics - Limits Tab

Part Number: 750000882

This module demonstrates how to work with the Limits Tab in the Processing Method. This includes using the Limits tab for data tracking and trending as well as Acceptance Criteria limits to set limits between chromatograms.

This module can also be purchased individually:				
Americas	Europe/India	Asia	Price (\$)*	Duration
Register	Register	Register	50.00	15 min.

#### Module 10: Empower 3 SW FR2: Advanced Topics - Smoothing Offset Tab

Part Number: 750000884

This module demonstrates how to work with the Smoothing Offset tab in the Processing Method. This includes how to smooth data and how to use the time offset for data collected from 2 detectors connected in series.

This module can also be purchased individually:				
Americas	Europe/India	Asia	Price (\$)*	Duration
<u>Register</u>	<u>Register</u>	<u>Register</u>	50.00	10 min.

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This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002032

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	14	5 hrs. 18 min.	650.00

#### **Modules Continued**

Module 11: Empower 3 SW FR2: Advanced Topics - Processing Sample Set

Part Number: 750000885

This module demonstrates how to create and work with Derived Channels. This includes both 2D and 3D data.

This module can also be purchased individually:					
Americas	Europe/India	Asia	<b>Price (\$)*</b>	Duration	
<u>Register</u>	<u>Register</u>	<u>Register</u>	50.00	15 min.	

Module 12: Empower 3 SW FR2: Advanced Topics - Process Only Sample Sets

Part Number: 750000886

This module demonstrates how to create and work with Process Only Sample Sets.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
Register	<u>Register</u>	<u>Register</u>	50.00	10 min.	

Module 13: Empower 3 SW FR2: Advanced Topics - Reviewing Results

Part Number: 750000887

This module demonstrates how to work with the Result Audit Viewer. This includes a discussion of Superseded Results.

This module can also be purchased individually:				
Americas	Europe/India	Asia	<b>Price (\$)*</b>	Duration
Register	Register	Register	50.00	10 min.

Module 14: Empower 3 SW FR2: Advanced Topics - Reprocessing

Part Number: 750000888

This module demonstrates how to use older calibration curves to quantitate data.

This module can also be purchased individually:				
Americas	Europe/India	Asia	<b>Price (\$)*</b>	Duration
Register	Register	Register	50.00	10 min.

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## Empower 3 SW: Fundamentals of the QuickStart Interface

The QuickStart Interface is a single-window access point for data collection, processing, and reporting. Use a wizard to set up methods and run assays without confusion. You can navigate the entire Empower environment from one screen, including instrument control, a real-time view of plotted data, and a work area to look at raw data.

This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002024

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Coming Soon	Register	Register	7	2 hrs. 45 min.	500.00

#### Modules

#### Module 1: Overview/Login of QuickStart Interface

Part Number: 750000795

In this module you will learn how to log into Empower 3 QuickStart Interface, select a project and chromatographic system, complete an overview of the QuickStart Interface, view the message center, and use online help.

#### This module can also be purchased individually:

Americas	Europe/India	Asia	Price (\$)*	Duration
Coming Soon	<u>Register</u>	<u>Register</u>	100.00	30 min.

#### Module 2: Instrument Methods and Data Acquisition

Part Number: 750000796

In this module you will learn how to create an instrument method, create a method set, create a shutdown instrument method, and add the instrument method to the method set.

#### This module can also be purchased individually:

Americas	Europe/India	Asia	Price (\$)*	Duration
Coming Soon	<u>Register</u>	<u>Register</u>	100.00	30 min.

#### Module 3: Developing a Processing Method

Part Number: 750000797

In this module you will learn how to select data for review, review data in the review window, customize display of the chromatogram and table in the review window, develop a processing method using the wizard, understand, and optimize integration parameters, use the component table, review the default amounts, and add a processing method to the method set.

Americas	Europe/India	Asia	Price (\$)*	Duration	
Coming Soon	<u>Register</u>	Register	100.00	30 min.	

#### Module 4: Alter Sample and Other Functions

Part Number: 750000798

In this module you will learn how to add or modify sample information, batch process samples, and review results and calibration curves.

#### This module can also be purchased individually:

Americas	Europe/India	Asia	<b>Price (\$)*</b>	Duration	
Coming Soon	Register	Register	50.00	15 min.	

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## Empower 3 SW: Fundamentals of the QuickStart Interface

The QuickStart Interface is a single-window access point for data collection, processing, and reporting. Use a wizard to set up methods and run assays without confusion. You can navigate the entire Empower environment from one screen, including instrument control, a real-time view of plotted data, and a work area to look at raw data.

This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002024

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Coming Soon	Register	Register	7	2 hrs. 45 min.	500.00

#### **Modules Continued**

#### Module 5: Use and Modify Report Methods

Part Number: 750000799

In this module you will learn how to review individual report methods, create and use a default individual report method, create a summary report method(s), and add a report method to a method set.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
Coming Soon	Register	Register	50.00	15 min.	

#### Module 6: Manage Projects, Systems, and Accounts

Part Number: 750000800

In this module you will learn how to create a project, copy data, backup and restore a project, change project/system, manage user account(s), and access configuration manager.

This module can also be purchased individually:						
Americas	Europe/India	Asia	Price (\$)*	Duration		
Coming Soon	Register	Register	100.00	30 min.		

#### Module 7: Find Information

Part Number: 750000801

In this module you will learn how to use view filters, sort data in columns, and use the view as function.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
Coming Soon	<u>Register</u>	<u>Register</u>	50.00	15 min.	

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## **Empower 3 SW: Workflow**

This track contains a series of 6 modules that cover the workflow of Empower 3 Software. It covers the following 6 topics: Login, Method Setup, Sample Acquisition, Data Review, Edit Features, and Reports.

This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002001

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	6	2 hrs. 25 min.	500.00

#### Modules

Module 1: Empower 3 SW: Login

Part Number: 750000665

This module will show how a user can independently and correctly login to Empower with a given username and password. It also demonstrates how the user will access the run samples feature of Empower.

This module ca	an also be purchase			
Americas	Europe/India	Asia	Price (\$)*	Duration
<u>Register</u>	Register	<u>Register</u>	50.00	5 min.

Module 2: Empower 3 SW: Run Samples - Loading, Editing, and Creating Sample Set Methods for Data Acquisition

Part Number: 750000666

This module will show how a user can independently and correctly load, edit and create sample set methods given a set of sample parameters.

This module ca				
Americas	Europe/India	Asia	Price (\$)*	Duration
<u>Register</u>	<u>Register</u>	<u>Register</u>	200.00	1 hr.

Module 3: Empower 3 SW: Run Samples - Acquiring Data using a Sample Set Method

Part Number: 750000667

This module will show how a user can independently and correctly start a sample set method, alter a running sample set method, and queue multiple sample set methods.

This module ca				
Americas	Europe/India	Asia	<b>Price (\$)*</b>	Duration
<u>Register</u>	<u>Register</u>	Register	100.00	20 min.

#### Module 4: Empower 3 SW: Data Review - Modifying a Processing Method

Part Number: 750000668

This module will show how a user can independently (without guidance) review a pre-defined sample set method, modify an associated processing method with predefined parameters, review the sample set with the modified processing method, and save the modified processing method.

This module can also be purchased individually:						
	mericas	Europe/India	Asia	Price (\$)*	Duration	
<u>H</u>	Register	<u>Register</u>	<u>Register</u>	100.00	20 min.	

#### Module 5: Empower 3 SW: Alter Sample and Batch Processing

Part Number: 750000669

This module will show how a user can independently (without guidance) alter a sample set with pre-defined parameters, access the component editor to verify pre-defined parameters, and batch process a sample set.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
Register	<u>Register</u>	Register	100.00	20 min.	

Module 6: Empower 3 SW: Reviewing Data after Processing,
Preview/Publisher - Reports and Electronic Signatures

Part Number: 750000670

This module will show how a user can independently (without guidance) review the integration, results, and calibration curves of a pre-defined result set. It also demonstrates how the user will be able to view the same result set with a pre-defined report method and sign-off on the result set electronically.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
Register	Register	Register	100.00	20 min.	

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## ChromaLynx

This track contains a series of modules that demonstrate how to setup and use the ChromaLynx application manager. It covers the following areas: overview, method setup, data processing/review for both non-targeted and targeted analysis and libraries.

This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002018

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	4	2 hrs. 25 min.	400.00

#### Modules

#### Module 1: ChromaLynx - Non-Targeted Analysis

Part Number: 750000702

ChromaLynx XS facilitates the identification of compounds in complex mixtures by utilizing automated chromatographic peak detection, mass spectral deconvolution, library searching, accurate mass measurements, and rigorous sample comparison algorithms. Module 1 focuses on non-targeted analysis and the Compare Qfunctionality. Processing methods are developed along with navigational guidance through the ChromaLynx XS browser for maximum visualization of the processed data.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	<u>Register</u>	<u>Register</u>	200.00	1 hr. 5 min.	

#### Module 2: ChromaLynx - Targeted Screening

Part Number: 750000703

This module focuses on targeted analysis including fragment ion confirmation. Processing methods are developed along with navigational guidance through the ChromaLynx XS browser.

This module can also be purchased individually:					
Americas	Europe/India	Asia	<b>Price (\$)*</b>	Duration	
Register	Register	Register	200.00	30 min.	

#### Module 3: ChromaLynx Libraries

Part Number: 750000704

This module demonstrates how to create a MassLynx library and convert it to a NIST library for use with ChromaLynx.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	<u>Register</u>	<u>Register</u>	50.00	5 min.	

#### Module 4: Positive: Targeted Screening with Quantitation of Detected Compounds

Part Number: 750000811

The Positive workflow provides a targeted screening approach to analyzing complex samples, providing both qualitative and quantitative data. Positive uses mass accuracy, retention time, and fragment ions to search complex mixtures for specific compounds using ChromaLynx and allows for quantitation of identified components in TargetLynx. Positive can be used for Quan/Qual analysis using a Tof or QTof instrument. It allows you to search for a targeted list of compounds and then quantify them. This workflow can be used so long as the Tof instrument is set up with both ChromaLynx and TargetLynx.

This module can also be purchased individually:						
Americas	Europe/India	Asia	Price (\$)*	<b>Duration</b>		
Register	Register	<u>Register</u>	200.00	45 min.		

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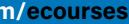
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## Fundamentals of UNIFI (v1.6/1.7)

The Fundamentals of UNIFI track is the foundation for learning UNIFI and covers core UNIFI features and navigation of key UNIFI workflows. The track will cover the following topics: Introduction to UNIFI, Generating Results, Building Methods and Managing UNIFI.

This track can be purchased in its entirety and the application modules are sold separately from the track.

Track Part Number: 750002011

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	0	8 hrs. 44 min.	1500.00

## **Application Modules**

Module 1: Identifying Metabolites using UNIFI (version 1.6/1.7)

Part Number: 750000726

The Identifying Metabolites using UNIFI module covers the features of the Metabolite Identification Application Solution and covers how to create analysis methods, modify processing parameters, and navigate the review workflow.

This module can also be purchased individually:					
Americas	Europe/India	Asia	<b>Price (\$)*</b>	Duration	
<u>Register</u>	<u>Register</u>	<u>Register</u>	250.00	1 hr. 16 min.	

#### Module 2: Screening for Pesticides using UNIFI (version 1.6/1.7)

Part Number: 750000727

The Screening for Pesticides using UNIFI module covers the features of the Pesticide Screening Application Solution and covers how to create analysis methods, modify processing parameters, and navigate the review workflow.

This module can also be purchased individually:						
Americas Register	Europe/India Register	Asia Register	Price (\$)* 250.00	<b>Duration</b> 1 hr. 18 min.		
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## Module 3: Introduction to Forensic Toxicology Screening Using UNIFI (version 1.6/1.7)

Part Number: 750000903

The Forensic Toxicology Screening Using UNIFI module covers the features of the Forensic Toxicology Screening Application Solution and covers how to create analysis methods, modify processing parameters, and navigate the review workflow.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	<u>Register</u>	<u>Register</u>	250.00	1 hr. 30 min.	

#### Module 4: Analyzing Biopharmaceuticals using UNIFI (version 1.6/1.7)

Part Number: 750000728

The Analyzing Biopharmaceuticals using UNIFI module covers the features of the Biopharmaceutical Platform Solution including how to create analysis methods, modify processing parameters, and navigate the review workflow.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	<b>Duration</b>	
Register	Register	Register	250.00	1 hr. 55 min.	

#### Module 5: Performing Regulated Bioanalysis using UNIFI (version 1.6/1.7)

Part Number: 750000729

The Performing Regulated Bioanalysis using UNIFI module covers the features of the Regulated Bioanalysis Platform Solution and covers how to create analysis

methods, modify processing parameters, and navigate the review workflow.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	<b>Duration</b>	
Register	Register	Register	250.00	1 hr. 15 min.	

## Module 6: Introduction to Natural Products Screening Using UNIFI (version 1.6/1.7)

Part Number: 750000904

The Natural Product Screening Using UNIFI module covers the features of the Natural Product Application Solution and covers how to create analysis methods, modify processing parameters, and navigate the review workflow.

This module can also be purchased individually:					
Americas Register	Europe/India Register	<b>Asia</b> Register	Price (\$)* 250.00	<b>Duration</b> 1 hr. 30 min.	

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## MarkerLynx

This track contains a series of modules that demonstrate how to setup and use the MarkerLynx Application Manager. It covers the following areas: Overview, Method Setup, Data Processing, and Review.

This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002017

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	2	1 hr. 5 min.	250.00

#### Modules

Module 1: MarkerLynx - Overview and Method Setup

Part Number: 750000700

The first of two modules designed to familiarize the user with the workflow needed to process a complex data set and identify unique marker compounds. Topics include best practices for data acquisition, sample list set-up, and MarkerLynx XS method development. Emphasis will be placed on understanding the parameters used to create the MarkerLynx XS processing method and developing a template method that can be used for small molecule analysis.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	<u>Register</u>	<u>Register</u>	100.00	25 min.	

## Module 2: MarkerLynx - Data Processing, Database Searches, and Reporting

Part Number: 750000701

The second of two modules designed to familiarize the user with the workflow needed to process a complex data set and identify unique marker compounds. Topics covered include data processing and statistical analysis, database searching, incorporation of MSE fragmentation data, and reporting. This module focuses on the workflow used to recognize unique marker compounds in a binary comparison of two diverse sample groups, and the identification of those compounds using elemental composition, database searching, and high collision energy fragmentation data.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
Register	Register	Register	200.00	40 min.	

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## MassLynx

This track contains a series of modules that demonstrate how to use MassLynx Software. It covers the following topics: Architecture, Data Acquisition, and various features of Data Processing and Review (in the chromatogram and spectral view), and Strip Functions.

#### This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002020

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	6	2 hr. 30 min.	400.00

#### Modules

Module 1: MassLynx: Architecture

Part Number: 750000709

This module will show the basic structure of MassLynx and how to navigate the main page to locate instrument controls and useful tools.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	Register	<u>Register</u>	100.00	20 min.	

#### Module 2: MassLynx - Data Acquisition

Part Number: 750000710

This module will show you how to create a simple sample list for data acquisition. Other topics related to data acquisition, such as autosampler configuration and shutdown methods, are also shown.

This module can also be purchased individually:					
Americas	Europe/India	Asia	<b>Price (\$)*</b>	Duration	
<u>Register</u>	<u>Register</u>	<u>Register</u>	100.00	20 min.	

## Module 3: MassLynx: Data Processing and Review - Chromatogram Window

Part Number: 750000711

The chromatogram window is the primary MassLynx tool used to interact with a chromatogram. This module will show you the more common user performed tasks in the chromatogram window. Topics range from basic display options to chromatogram integration.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	<b>Duration</b>	
Register	Register	Register	200.00	40 min.	

#### Module 4: MassLynx: Data Processing and Review - Spectrum

Part Number: 750000712

The spectrum window is the primary MassLynx tool used to interact with mass spectra. This module will show you the more common user performed tasks in the spectrum window. Additionally, some MassLynx spectrum tools are shown.

This module can also be purchased individually:					
Americas	Europe/India	<b>Asia</b>	Price (\$)*	Duration	
Register	Register	Register	100.00	20 min.	

#### Module 5: MassLynx: Data Processing - Strip Functions

Part Number: 750000713

The MassLynx strip functions provide a way of removing noise and unwanted information in a raw data file. This module explains the four different methods that are contained in the strip function. Subtract, CODA, Enhance, and Cluster.

This module can also be purchased individually:						
Americas	Europe/India	Asia	Price (\$)*	<b>Duration</b>		
Register	Register	Register	50.00	10 min.		

#### Module 6: MassLynx 4.1 Security

Part Number: 750000812

This module describes how MassLynx Security creates a regulated software environment and provides the tools for 21CFR11 compliance. It explains the creation of security policies which control actions allowed by individual users, and provides recommendations for safeguarding data and audit trails from acquisition through archiving.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	Register	Register	200.00	40 min.	

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## MetaboLynx

This track contains a series of modules that demonstrate how to setup and use the MetaboLynx Application Manager. It covers the following areas: Drug Metabolism Overview, Method Setup, Data Processing and Review, and Advanced Topics.

This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002019

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	4	3 hrs. 15 min.	500.00

#### Modules

#### Module 1: MetaboLynx - Drug Metabolism Overview

Part Number: 750000705

This module will familiarize the participant with the terminology and basic concepts of drug metabolism.

This module can also be purchased individually:						
Americas	Europe/India	Asia	Price (\$)*	Duration		
<u>Register</u>	<u>Register</u>	<u>Register</u>	100.00	25 min.		

#### Module 2: MetaboLynx - Method Setup

Part Number: 750000706

This module will demonstrate how to set up a sample list for MetaboLynx processing and also provides detailed training on how to set up a MetaboLynx processing method.

This module can also be purchased individually:						
Americas	Europe/India	Asia	Price (\$)*	Duration		
<u>Register</u>	<u>Register</u>	<u>Register</u>	200.00	1 hr.		

#### Module 3: MetaboLynx - Data Processing and Review

Part Number: 750000707

This module will demonstrate how to review data that has been processed by MetaboLynx XS. The module will also discuss information displayed in the main browser window, analysis of high energy MSE data using the fragmentation analysis options, saving datasets and printed report formatting.

This module can also be purchased individually:						
Americas	Europe/India	<b>Asia</b>	Price (\$)*	<b>Duration</b>		
Register	Register	Register	200.00	50 min.		

#### Module 4: MetaboLynx - Advanced Topics

Part Number: 750000708

This module will familiarize the participant with MassFragment,™ the Biotransformation Localization Tool, export of data to Excel, and automated MS/MS data acquisition and processing.

This module can also be purchased individually:						
Americas	Europe/India	Asia	Price (\$)*	Duration		
Register	<u>Register</u>	Register	200.00	1 hr.		

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(v1.6/1.7)

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## **NEW** NuGenesis SDMS User

This track contains a series of modules that cover the Vision Browser, Vision Browser search capabilities, print to SDMS, Vision Preview, restore files and inspector data viewer.

This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002042

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	5	1 hr. 41 min.	400.00

#### Modules

**NEW Module 1: NuGenesis SDMS User- Vision Browser Overview** 

Part Number: 750000956

This module is an introduction to Vision Browser in the NuGenesis SDMS software. It covers the following topics: terminology, log on to NuGenesis Vision Browser, access to Vision Project Browser and different functions of the Vision Project Browser.

This module can also be purchased individually:						
Americas	Europe/India	Asia	<b>Price (\$)*</b>	Duration		
Register	<u>Register</u>	Register	100.00	17 min.		

**NEW Module 2:** NuGenesis SDMS User- Vision Browser Search Function

Part Number: 750000957

This module covers how to search for data in a project using the NuGenesis SDMS software. It shows utilization of the filter function and sort function through the NuGenesis Vision Browser.

This module can also be purchased individually:						
Americas	Europe/India	<b>Asia</b>	Price (\$)*	Duration		
Register	Register	Register	100.00	20 min.		

**NEW Module 3: NuGenesis SDMS User - Print to SDMS** 

Part Number: 750000958

This module covers how to print data into the SDMS database using a virtual printer UNIFI which allows the user to add key data into tag fields. It will also demonstrate how to use a UNIFI print template to automatically extract tag field data from reports when printing into the NuGenesis SDMS database.

This module can also be purchased individually:						
Americas Register	Europe/India Register	Asia Register	Price (\$)* 100.00	Duration 20 min.		
ricgister	ricgister	ricgister	100.00	20 111111		

#### NEW Module 4: NuGenesis SDMS User - Vision Preview

Part Number: 750000959

This module is an overview of Vision Preview. It covers the following topics; open a print capture record, send data from Vision Preview, transfer text data, graphic data and table data to other software applications and use of eSignatures in SDMS Vision Preview.

	This module can also be purchased individually:						
Ī	Americas Register	Europe/India Register	Asia Register	Price (\$)* 100.00	Duration 24 min.		
	ricgister	ricgister	ricgister	100.00	27 111111		

NEW Module 5: NuGenesis SDMS User - Restore Files and Inspector Data Viewer

Part Number: 750000960

This module covers how to archive and restore files into NuGenesis SDMS software.

This module can also be purchased individually:						
Americas	Europe/India	Asia	<b>Price (\$)*</b>	Duration		
<u>Register</u>	<u>Register</u>	<u>Register</u>	100.00	20 min.		

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## TargetLynx

This track contains a series of modules that demonstrate how to setup and use the TargetLynx Application Manager. It covers the following areas:

Overview, Method Setup, Data Processing and Review, and Advanced Topics.

This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002016

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	6	3 hrs.	400.00

#### Modules

Module 1: TargetLynx: Overview

Part Number: 750000696

This module covers an overview of TargetLynx, what it is used for and how to access the application manager. The module also discusses how to set up the sample list and acquire data for use with TargetLynx.

This module can also be purchased individually:						
Americas	Europe/India	Asia	Price (\$)*	Duration		
<u>Register</u>	<u>Register</u>	<u>Register</u>	50.00	10 min.		

#### Module 2: TargetLynx: Method Setup

Part Number: 750000697

This module demonstrates how to develop integration parameters for acquired data and then how to use these parameters to create a basic TargetLynx method from the acquired data.

	This module can also be purchased individually:					
Ī	Americas	Europe/India	Asia	Price (\$)*	Duration	
	<u>Register</u>	<u>Register</u>	<u>Register</u>	100.00	30 min.	

#### Module 3: TargetLynx: Data Processing and Review

Part Number: 750000698

This module gives users an overview of how to process samples with a TargetLynx processing method and then how to view the results in the data browser. An overview of how to create a report and output the data is also included.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
Register	Register	Register	100.00	20 min.	

#### Module 4: TargetLynx: Advanced Topics

Part Number: 750000699

In this module we will discuss how to use TargetLynx for compound confirmation and QC monitoring. Topics include the use of ion ratios, PIC scans, sample flagging, QC monitor, and TrendPlot.

This module can also be purchased individually:						
Americas	Europe/India	Asia	Price (\$)*	Duration		
<u>Register</u>	<u>Register</u>	<u>Register</u>	200.00	45 min.		

## Module 5: Positive: Targeted Screening and Quantitation of Detected Compounds

Part Number: 750000811

The Positive Workflow provides a targeted screening approach to analyzing complex samples, providing both qualitative and quantitative data. Positive uses mass accuracy, retention time and fragment ions to search complex mixtures for specific compounds using ChromaLynx and allows for quantitation of identified components in TargetLynx.

This module can also be purchased individually:						
Americas Europe/India Asia Price (\$)* Duration						
Register	<u>Register</u>	Register	200.00	45 min.		

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waters.com/ecourses

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## TargetLynx

This track contains a series of modules that demonstrate how to setup and use the TargetLynx Application Manager. It covers the following areas:

Overview, Method Setup, Data Processing and Review, and Advanced Topics.

This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002016

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
<u>Register</u>	Register	Register	6	3 hrs.	400.00

#### **Modules Continued**

Module 6: Quanpedia: Setup and Operation

Part Number: 750000810

This module discusses the management of the Quanpedia database and its use in the creation of MS acquisition and processing methods. It includes instruction on importing compound data into the Quanpedia library.

This module can also be purchased individually:						
Americas	Europe/India	Asia	Price (\$)*	Duration		
Register	Register	Register	100.00	30 min.		

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## **NEW** Proteomics Data Processing Using PLGS

This track contains a series of models for proteomics data processing using ProteinLynx Global Server (PLGS). It covers the following areas: administration tasks within PLGS and basic data processing for MSe and DDA data.

This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002033

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	4	2 hr. 16 min.	400.00

#### Modules

NEW Module 1: ProteinLynx Global Server (PLGS) Administration Part 1

Part Number: 750000908

This module covers the first part of Protein Lynx Global Server (PLGS) administration features. Topics include comparison of PLGS versions, a general overview of the software, preference set up and automation options.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	Register	Register	100.00	40 min.	

NEW Module 2: ProteinLynx Global Server (PLGS) Administration Part 2

Part Number: 750000974

This module covers the second part of ProteinLynx Global Server (PLGS) administration. Topics include protein sequence databases, digest reagents, modifier reagents, merging data and help files.

Americas Europe/India Asia Price (\$)* Duration Register Register 200.00 46 min.	This module can also be purchased individually:						
		•		,			

NEW Module 3: ProteinLynx Global Server (PLGS) Data Processing for Ms<sup>e</sup> Data

Part Number: 750000909

This module demonstrates how to process MSe data using ProteinLynx Global Server (PLGS). Topics include MSe theory, processing parameter and workflow parameter setup, data processing and basic data analysis for a database search.

7	This module can also be purchased individually:					
	Americas	Europe/India	Asia	Price (\$)*	Duration	
	Register	Register	Register	100.00	19 min.	

NEW Module 4: ProteinLynx Global Server (PLGS) Data Processing for DDA Data

Part Number: 750000910

This module demonstrates how to process data dependent analysis (DDA) data using ProteinLynx Global Server (PLGS). Topics include processing parameter and workflow parameter setup, data processing, and basic data analysis for a database search.

This module can also be purchased individually:						
Americas	Europe/India	Asia	Price (\$)*	Duration		
Register	Register	Register	100,00	31 min.		

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## Transitioning from Empower 2 FR5 to Empower 3 FR2

This track contains a series of topics that cover the new features of Empower 3 FR2 as a customer upgrades from Empower 2 FR5. These topics cover new features in the following areas: User Interface, Project Window, Run Samples Window, Alter Sample and Component Editor Window, Review Window and Processing Method, Impurity Tab, Results Audit Viewer and Miscellaneous Topics.

#### \*Topics cannot be purchased separately.

#### Track Part Number: 750002026

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	-	1 hr. 5 min.	350.00

### **Topics**

#### User Interface

This topic covers the new look of the Empower Pro Interface, a new Show Me button in the Quickstart Interface and an expanded view of the projects when opening the browse project window.

#### **Project Window**

This topic covers creating process only sample sets, saving an individual's preferences for one or many windows, setting Apex integration default touchdown percent, and new buttons to view as previous/next when reviewing data.

#### **Run Sample Window**

This topic covers the changes made to the run sample window such as allowing other users to alter runs, running interactive system suitability without processing data, new options for the monitor button and new functions within the sample set method.

#### Alter Sample and Component Editor Window

This topic covers new tabs and more descriptive information in the component editor, and viewing component editor when channels are locked.

#### Run Window and Processing Method, Part 1

This topic covers new tools in the Review Window, enhancements to the Processing Method Wizard, Relative Retention Time reference peaks for unnamed and named peaks, enhancements to the USP signal to noise calculation and enhancements to the integration events.

#### Run Window and Processing Method, Part 2

This topic covers the Acceptance Criteria Limits in the limits tab of the processing method and combining signals from multiple channels using the switch to in derived channels.

#### Impurity Tab in the Processing Method

This topic covers the ability to calculate impurities using impurity response and setting the ICH thresholds for reporting, identifying, and qualifying. Also includes specifying parameters to calculate, group and set limits for impurity peaks.

#### Result Audit Viewer

This topic covers how to review the history of how a result was generated and brings all audit trail information into one window.

#### Miscellaneous Topics

This topic covers a variety of information including enhancements made to the report publisher, and help menu, GC, activation time out feature and e-cord data for the ACQUITY UPLC column.

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## Transitioning from Empower 2 FR5 to Empower 3 FR2 for System Administrators

This eLearning Track includes the new administrative features of Empower 3 FR2 since Empower 2 FR5. This track provides the administrator with a list of the differences between the two versions of software.

#### \*Topics cannot be purchased separately.

Track Part Number: 750002027

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	-	48 min.	150.00

#### **Topics**

#### Introduction & Support for Empower FR2

This topic covers how to contact technical services, enhancements made for operating system upgrades, system options, upgrades of Oracle & LDAP enhancements and changes made to LAC/E boxes & SQT.

#### Waters Licensing Wizard

This topic covers how to deactivate and reactivate a license using the Waters Licensing Wizard.

#### Configure Manager Miscellaneous Enhancements

This topic covers the many different enhancements made to the configure manager, such as enhancements made to the project tree, cloning of a child project, project properties, user group properties and creating libraries from the Configuration Manager.

#### **Configure Manager System Policies**

This topic covers the new look of the Empower pro interface, data processing tab, applications time out feature and unique Oracle identification numbers.

#### **Empower Analytics**

This topic covers the new Empower Analytics Dashboard in the Configuration Manager. It has five prebuilt dashboard types, system summary, system usage, project usage analysis, user analysis, method analysis. This assists with accessing system usage information, manage resources, identify training needs, and identify error messages that affect your workflows, identify non-robust processing methods and identify opportunities to shorten run times with UPLC technology.

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## **NEW** ACQUITY QDa

This track contains a series of modules for the ACQUITY QDa system. It covers the following areas: theory, general use, best practices, optimization of the isocratic solvent manager and data processing using Empower 3 FR2.

This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002029

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	3	2 hr. 5 min.	300.00

#### Modules

**NEW Module 1:** ACQUITY QDa General Theory and Basic Use

Part Number: 750000862

This module covers QDa use in Empower 3 software. Basic electrospray and mass spectrometry theory are covered, giving the user a good basis to create robust, reliable methods. In addition, adding the QDa to an instrument method and an introduction to the Mass Analysis Window are covered. Routine maintenance, including changing the aperture and capillary are covered.

This module can also be purchased individually:						
Americas	Europe/India	<b>Asia</b>	Price (\$)*	<b>Duration</b>		
Register	Register	Register	200.00	1 hr. 15 min.		

#### **NEW Module 2:** ACQUITY QDa Processing MS Data with Empower

Part Number: 750000863

Overview of Empower 3 FR2 processing of MS data generated from the ACQUITY QDa as well as other tandem quadrupole mass spectrometers using Empower.

This module can also be purchased individually:						
Americas	Europe/India	Asia	Price (\$)*	Duration		
<u>Register</u>	<u>Register</u>	<u>Register</u>	100.00	30 min.		

#### **NEW Module 3:** ACQUITY Isocratic Solvent Manager

Part Number: 750000864

The Analyzing Biopharmaceuticals Using UNIFI module covers the features of the Biopharmaceutical Platform Solution including how to create analysis methods, modify processing parameters, and navigate the review workflow.

This module can also be purchased individually:					
Americas Register	Europe/India Register	<b>Asia</b> Register	Price (\$)* 100.00	Duration 20 min.	
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(v1.6/1.7)

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MassLynx

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MS Instrumentation

Peptide Mapping (UPLC-QTof MS)

Quantitation (UPLC-Quadrupole MS)





## Alliance HPLC Operation and Performance Maintenance Track (Video Format)

This eLearning track covers the operation, maintenance and troubleshooting of Waters 2695 Separations Module. Emphasis is on solvent and sample management technology. This track includes videos of lectures followed by practical sessions that reinforce the lecture material. After completion of this video, attendees should be able to identify and diagnose instrumentation issues and execute performance maintenance protocols to keep the Alliance 2695 Separations Module running at the highest level of performance.

#### \*Topics cannot be purchased separately.

#### Track Part Number: 750002014

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	-	1 hr. 46 min.	1000.00

#### **Topics**

#### System Overview

In this topic we will show a system overview of the 2695 Separations Module. We will show instrument options which are available, power and signal connections, fluid inlet, connections to the analytical column and waste outlet lines. Also, we will show how to use start-up diagnostics and view the menu and status pages on the 2695 interface.

#### Theory of Operation

In this topic we will demonstrate the Alliance 2695 theory of operation. We will look at the two main systems inside the instrument: the solvent management system, and sample management system.

#### Configuration

This topic will demonstrate how a user can learn the proper use of the configuration manager to control the 2695 Alliance Separations Module.

#### **Direct Functions**

In this topic we will show how a user can use the four functions on the status page: Dry Prime, System Prep, Wet Prime, and Purge Injector. We will also cover the instrument equilibration, how to condition a column, and injecting samples.

#### Rebuilding the Injector

This topic will show how a user can remove, rebuild and replace the Alliance 2695 Injector. This includes how to access the injector, safe removal of sensors and electrical connections, how to remove the seal pack, new seal installation, needle replacement, and proper needle alignment.

#### Diagnostics

In this topic we will show how a user can perform the functions found on the Diagnostics page. These functions are the following: Prime Seal Wash, Compression Check, Prime Needle Wash, and Adjust Seals. These functions are utility functions.

#### Diagnostics and Tests, Part 1

This topic will show how a user can perform a number of other tests found on the Other Diagnostics tests page. These tests are the following: Motors and Valves, Sensors, Static Leak Test, Valve leak test and Pump Head Removal and Replacement.

#### Diagnostics and Tests, Part 2

This topic will show the user how to perform a number of other diagnostic tests such as the following: input and output device switching, operating the keypad, instrument display, the carousel, and other built-in functions.

#### Diagnostics and Tests, Part 3

This topic will show the user how to rebuild the high pressure valve (GPV), create a GPV test method and examine firmware checksum. This module will also cover hardware maintenance including pump head rebuilding, removing and replacing plungers, replacing the syringe, syringe drive assemblies, replacing the battery, and cleaning the sample compartment.

#### Develop Methods

This topic covers the following areas: standalone operation, learning how data is stored for the Alliance and where the data gets sent (to a different computer or an integrator).

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## Clinical LC-MS Applications

This track is focused for customers running clinical applications. It covers the fundamentals of LC-MS and MassLynx software. Also includes information regarding the LC and MS system/operation, TargetLynx modules for acquisition and processing of data and considerations that are specific to Clinical applications.

This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002030

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	12	5 hrs. 41 min.	1000.00

#### Modules

#### Module 1: Solvent Considerations for UPLC

Part Number: 750000657

This module discusses solvent considerations for Ultra Performance Liquid Chromatography. It contains recommendations for best performance in UPLC systems and LC-MS systems. It discusses why solvent quality is so important and considerations for "good" quality solvents and water used during analysis.

This module can also be purchased individually:						
Americas	Europe/India	Asia	Price (\$)*	Duration		
<u>Register</u>	<u>Register</u>	<u>Register</u>	50.00	16 min.		

#### Module 2: Binary vs. Quaternary Gradient Systems

Part Number: 750000658

This module discusses two types of solvent delivery systems; binary versus quaternary gradient systems. The module reviews the similarities and differences between the two systems, and how to optimize for UPLC gradient chromatography. The topics covered include: Hardware Components, Gradient Formation, Specification Differences, System Volume and re-equilibration considerations.

This module can also be purchased individually:						
Americas	Europe/India	Asia	Price (\$)*	Duration		
<u>Register</u>	<u>Register</u>	<u>Register</u>	100.00	20 min.		

#### Module 3: LC-MS Contamination Issues

Part Number: 750000659

This course will discuss how to minimize contamination in LC-MS. It defines what contamination is, where it comes from, with examples, how it can affect your chromatography and spectra, and how to minimize it.

This module ca	This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	<b>Duration</b>		
Register	Register	Register	100.00	30 min.		

#### Module 4: Fundamentals of LC-MS

Part Number: 750000690

This module will explain the Fundamental Concepts that will build a foundation for your understanding of the more complex, instrument-specific information that you will see in other modules.

This module covers the following topics:

- Mass Accuracy Covers the concepts of mass measurement using a mass spectrometer.
- Ionization Covers the three most common forms of ionization used in Liquid Chromatography: ESI, APCI, APPI. Basic mechanism of operation and how it impacts LC method development is discussed.
- Mass Resolution Mass spectrometers can have different levels of measurement precision, which impacts the level of information that is available for a given analysis.
- Types of Mass Spectrometers The common types of mass spectrometers are shown.

This module can also be purchased individually:						
Americas	Europe/India	Asia	Price (\$)*	<b>Duration</b>		
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Track Part Number: 750002030

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	12	5 hrs. 41 min.	1000.00

#### **Modules Continued**

#### Module 5: Basic MassLynx Functions

Part Number: 750000691

This course is designed to give new users a fundamental understanding of the software architecture, basic functions and the tools present in MassLynx v4.1.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	Register	<u>Register</u>	100.00	35 min.	

#### Module 6: IntelliStart: Quadrupole Based MS Systems

Part Number: 750000692

This eLearning module introduces the user to the powerful, automated capabilities of Intellistart for quadrupole LC-MS systems. These include Resolution Setup, m/z Calibration, Sample Tune, and the LC-MS System Check. In addition, the influence of quadrupole resolving power on ion transmission and method robustness are discussed, along with the ability of Intellistart to create MS acquisition methods.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	<u>Register</u>	<u>Register</u>	200.00	40 min.	

#### Module 7: TargetLynx Overview

Part Number: 750000696

This module covers an overview of TargetLynx, what it is used for and how to access the Application Manager. The module also discusses how to set up the sample list and acquire data for use with TargetLynx.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	<u>Register</u>	<u>Register</u>	50.00	10 min.	

#### Module 8: TargetLynx Method Setup

Part Number: 750000697

This module demonstrates how to develop integration parameters for acquired data and then how to use these parameters to create a basic TargetLynx method from the acquired data.

This module ca	This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration		
Register	Register	Register	100.00	30 min.		

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Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	12	5 hrs. 41 min.	1000.00

#### **Modules Continued**

#### Module 9: TargetLynx Data Processing and Review

Part Number: 750000698

This module gives users an overview of how to process samples with a TargetLynx processing method and then how to view the results in the data browser. An overview of how to create a report and output the data is also given.

Т	This module can also be purchased individually:						
	Americas	Europe/India	Asia	Price (\$)*	Duration		
	<u>Register</u>	<u>Register</u>	<u>Register</u>	100.00	20 min.		

#### Module 10: TargetLynx Advanced Topics

Part Number: 750000699

In this module we will discuss how to use TargetLynx for compound confirmation and QC monitoring. Topics include the use of ion ratios, PIC scans, sample flagging, QC monitor and TrendPlot.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	<u>Register</u>	<u>Register</u>	200.00	45 min.	

#### Module 11: Clinical Instrument Considerations

Part Number: 750000866

Many clinical customers have similar questions regarding instrument conditions and preventative maintenance. This module will address these issues and remedial action to be successful.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	<u>Register</u>	<u>Register</u>	100.00	30 min.	

#### Module 12: Clinical Experimental Considerations

Part Number: 750000867

This module will address clinical application specific questions regarding experimental design and sample preparation. This module will give clinical customers the tools necessary to be successful and optimize instrument usage.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	Register	Register	100.00	30 min.	

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This track contains a series of modules that covers information necessary to perform complex mixture analysis on a UPLC-QTof MS System. These modules will discuss the Fundamentals of LC-MS, MassLynx Fundamentals, IntelliStart,™ Elemental Composition, and ChromaLynx Application Manager. It also contains additional information regarding Solvent Considerations for LC-MS, LC-MS Contamination Issues and Gradient Systems.

This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002008

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	12	6 hrs. 7 min.	1000.00

#### Modules

#### Module 1: Fundamentals of LC-MS

Part Number: 750000690

This module will explain the fundamental concepts that will build a foundation for your understanding of the more complex, instrument-specific information that you will see in other modules.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	<b>Duration</b>	
Register	Register	Register	100.00	35 min.	

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This module discusses solvent considerations for UltraPerformance LC\*. It contains recommendations for best performance in UPLC Systems and LC-MS systems. It discusses why solvent quality is so important and considerations for "good" quality solvents and water used during analysis.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	Register	<u>Register</u>	50.00	16 min.	

#### Module 4: Binary vs. Quaternary Gradient Systems

Part Number: 750000658

This module discusses two types of solvent delivery systems; binary versus quaternary gradient systems. The module reviews the similarities and differences between the two systems and how to optimize for UPLC gradient chromatography. The topics covered include: hardware components, gradient formation, specification differences, system volume, and reequilibration considerations.

This module ca				
Americas	Europe/India	Asia	Price (\$)*	Duration
<u>Register</u>	<u>Register</u>	<u>Register</u>	100.00	20 min.

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This course will discuss how to minimize contamination in LC-MS. It defines what contamination is, where it comes from (with examples) how it can affect your chromatography and spectra, and how to minimize it.

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<u>Register</u>	Register	Register	100.00	30 min.		

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## Complex Mixture Analysis (UPLC-QTof MS)

This track contains a series of modules that covers information necessary to perform complex mixture analysis on a UPLC-QTof MS System. These modules will discuss the Fundamentals of LC-MS, MassLynx Fundamentals, IntelliStart, Elemental Composition, and ChromaLynx Application Manager. It also contains additional information regarding Solvent Considerations for LC-MS, LC-MS Contamination Issues and Gradient Systems.

This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002008

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	12	6 hrs. 7 min.	1000.00

#### **Modules Continued**

Module 6: IntelliStart: QTof-based MS Systems

Part Number: 750000693

This module introduces the user to the powerful, automated capabilities of IntelliStart for time-of-flight LC-MS systems. These include optimizing the detector voltage, calibrating the m/z axis, and setting up the LockSpray™ conditions. In addition, the module covers IntelliStart operations which monitor mass measurement accuracy and optimal LC-MS system performance.

This module can also be purchased individually:						
Americas	Europe/India	Asia	<b>Price (\$)*</b>	Duration		
<u>Register</u>	<u>Register</u>	<u>Register</u>	200.00	50 min.		

#### **Module 7: Elemental Composition**

Part Number: 750000695

This module describes how to use elemental composition to obtain the chemical formula of unknowns using accurate mass data.

This module can also be purchased individually:					
Americas Europe/India Asia Price (\$)* De					
<u>Register</u>	Register	Register	100.00	25 min.	

#### Module 8: ChromaLynx: Non-targeted Analysis

Part Number: 750000702

ChromaLynx™ XS facilitates the identification of compounds in complex mixtures by utilizing automated chromatographic peak detection, mass spectral

econvolution, library searching, accurate mass measurements, and rigorous sample comparison algorithms. This module focuses on non-targeted analysis and the compare functionality. Processing methods are developed along with navigational guidance through the ChromaLynx XS browser for maximum visualization of the processed data.

This module can also be purchased individually:					
Americas	Europe/India	Asia	<b>Price (\$)*</b>	Duration	
<u>Register</u>	Register	Register	200.00	1 hr. 5 min.	

#### Module 9: Positive: Targeted Screening with Quantitation of Detected Compounds

Part Number: 750000811

The Positive Workflow provides a targeted screening approach to analyzing complex samples, providing both qualitative and quantitative data. Positive uses mass accuracy, retention time and fragment ions to search complex mixtures for specific compounds using ChromaLynx and allows for quantitation of identified components in TargetLynx.

This module can also be purchased individually:						
Americas Register	Europe/India Register	<b>Asia</b> <u>Register</u>	Price (\$)* 200.00	<b>Duration</b> 45 min.		

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This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002008

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	12	6 hrs. 7 min.	1000.00

# **Modules Continued**

Module 10: MSe Viewer

Part Number: 750000794

This module describes how MSe Viewer can be used to determine which fragment ions are generated by which parent ions. MSe Viewer uses Apex 2D and Apex 3D to align parent ions with fragment ions from an LC-MSe analysis.

### This module can also be purchased individually:

Americas	Europe/India	Asia	Price (\$)*	Duration
<u>Register</u>	<u>Register</u>	<u>Register</u>	100.00	11 min.

### Module 11: ChromaLynx Targeted Screening

Part Number: 750000703

This module focuses on targeted analysis including fragment ion confirmation. Processing methods are developed along with navigational guidance through the ChromaLynx XS browser.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	Register	<u>Register</u>	200.00	30 min.	

### Module 12: ChromaLynx Libraries

Part Number: 750000704

This module demonstrates how to create a MassLynx library and convert it to a NIST library for use with ChromaLynx.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
Register	Register	<u>Register</u>	50.00	5 min.	

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# educational services

# Complex Mixture Analysis (UPLC-Quadrupole MS)

This track contains a series of modules that covers information necessary to perform complex mixture analysis on a UPLC-Quadrupole MS System. These modules will discuss the Fundamentals of LC-MS, MassLynx Fundamentals, IntelliStart, and ChromaLynx Application Manager. It also contains additional information regarding Solvent Considerations for LC-MS, LC-MS Contamination Issues and Gradient Systems.

This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002007

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	10	5 hrs. 21 min.	900.00

# Modules

#### Module 1: Fundamentals of LC-MS

Part Number: 750000690

This module will explain the fundamental concepts that will build a foundation for your understanding of the more complex, instrument-specific information that you will see in other modules.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
Register	Register	<u>Register</u>	100.00	35 min.	

#### Module 2: Basic MassLynx Functions

Part Number: 750000691

This course is designed to give new users a fundamental understanding of the software architecture, basic functions, and tools present in MassLynx v4.1.

This module can also be purchased individually:				
Americas	Europe/India	Asia	Price (\$)*	Duration
<u>Register</u>	<u>Register</u>	<u>Register</u>	100.00	35 min.

### Module 3: Solvent Considerations for UPLC

Part Number: 750000657

This module discusses solvent considerations for UltraPerformance LC\*. It contains recommendations for best performance in UPLC Systems and LC-MS systems. It discusses why solvent quality is so important and considerations for "good" quality solvents and water used during analysis.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	Register	<u>Register</u>	50.00	16 min.	

### Module 4: Binary vs. Quaternary Gradient Systems

Part Number: 750000658

This module discusses two types of solvent delivery systems; binary versus quaternary gradient systems. The module reviews the similarities and differences between the two systems, and how to optimize for UPLC gradient chromatography. The topics covered include: hardware components, gradient formation, specification differences, system volume, and reequilibration considerations.

This module can also be purchased individually:				
Americas	Europe/India	Asia	Price (\$)*	<b>Duration</b>
Register	Register	Register	100.00	20 min.

### Module 5: LC-MS Contamination Issues

Part Number: 750000659

This course will discuss how to minimize contamination in LC-MS. It defines what contamination is, where it comes from (with examples) how it can affect your chromatography and spectra, and how to minimize it.

This module can also be purchased individually:					
Americas	Europe/India	Asia	<b>Price (\$)*</b>	Duration	
Register	<u>Register</u>	Register	100.00	30 min.	

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Quantitation (UPLC-Quadrupole MS)









# Complex Mixture Analysis (UPLC-Quadrupole MS)

This track contains a series of modules that covers information necessary to perform complex mixture analysis on a UPLC-Quadrupole MS System. These modules will discuss the Fundamentals of LC-MS, MassLynx Fundamentals, IntelliStart, and ChromaLynx Application Manager. It also contains additional information regarding Solvent Considerations for LC-MS, LC-MS Contamination Issues and Gradient Systems.

This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002007

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	10	5 hrs. 21 min.	900.00

# **Modules Continued**

# Module 6: IntelliStart: Quadrupole Based MS Systems

Part Number: 750000692

This module introduces the user to the powerful, automated capabilities of IntelliStart for quadrupole LC-MS systems. These include resolution setup, m/z calibration, sample tune, and the LC-MS system check. In addition, the influence of quadrupole resolving power on ion transmission and method robustness are discussed, along with the ability of IntelliStart to create MS acquisition methods.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
Register	Register	<u>Register</u>	200.00	40 min.	

#### Module 7: ChromaLynx: Non-targeted Analysis

Part Number: 750000702

ChromaLynx™ XS facilitates the identification of compounds in complex mixtures by utilizing automated chromatographic peak detection, mass spectral deconvolution, library searching, accurate mass measurements, and rigorous sample comparison algorithms. This module focuses on non-targeted analysis and the compare functionality. Processing methods are developed along with navigational guidance through the ChromaLynx XS browser for maximum visualization of the processed data.

This module can also be purchased individually:						
Americas	Europe/India	Asia	Price (\$)*	Duration		
<u>Register</u>	<u>Register</u>	<u>Register</u>	200.00	65 min.		

### Module 8: Positive: Targeted Screening with Quantitation of Detected Compounds

Part Number: 750000811

The Positive Workflow provides a targeted screening approach to analyzing complex samples, providing both qualitative and quantitative data. Positive uses mass accuracy, retention time and fragment ions to search complex mixtures for specific compounds using ChromaLynx and allows for quantitation of identified components in TargetLynx.

This module can also be purchased individually:						
Americas	Europe/India	Asia	Price (\$)*	Duration		
Register	Register	Register	200.00	45 min.		

### Module 9: ChromaLynx Targeted Screening

Part Number: 750000703

This module focuses on targeted analysis including fragment ion confirmation. Processing methods are developed along with navigational guidance through the ChromaLynx XS browser.

This module can also be purchased individually:						
Americas	Europe/India	Asia	Price (\$)*	Duration		
<u>Register</u>	<u>Register</u>	<u>Register</u>	200.00	30 min.		

#### Module 10: ChromaLynx Libraries

Part Number: 750000704

This module demonstrates how to create a MassLynx library and convert it to a NIST library for use with ChromaLynx.

This module can also be purchased individually:						
	Americas	Europe/India	Asia	Price (\$)*	Duration	
	<u>Register</u>	<u>Register</u>	<u>Register</u>	50.00	5 min.	

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# General Liquid Chromatography (LC)

This track contains a series of modules that cover general liquid chromatography (LC) topics and concepts. It covers the following areas: Solvent Considerations, Binary vs. Quaternary Gradient Systems, LC Contamination Issues, Optimizing Sample Injection, Optimizing UV Detection and Practical Tips for UV and PDA Detection.

This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002013

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	6	2 hrs. 36 min.	400.00

# Modules

#### Module 1: Solvent Considerations for UPLC

Part Number: 750000657

This module discusses solvent considerations for UltraPerformance LC. It contains recommendations for best performance in UPLC systems and LC-MS systems. It discusses why solvent quality is so important and considerations for "good" quality solvents and water used during analysis.

This module can also be purchased individually:						
_	Americas	Europe/India	<b>Asia</b>	Price (\$)*	Duration	
	Register	Register	Register	50.00	16 min.	

#### Module 2: Binary vs. Quaternary Gradient Systems

Part Number: 750000658

This module discusses two types of solvent delivery systems; binary versus quaternary gradient systems. The module reviews the similarities and differences between the two systems, and how to optimize for UPLC gradient chromatography. The topics covered include: hardware components, gradient formation, specification differences, system volume, and re-equilibration considerations.

This module can also be purchased individually:						
	Americas	Europe/India	Asia	Price (\$)*	Duration	
	<u>Register</u>	<u>Register</u>	<u>Register</u>	100.00	20 min.	

### Module 3: LC-MS Contamination Issues

Part Number: 750000659

This course will discuss how to minimize contamination in LC-MS. It defines what contamination is, where it comes from (with examples) how it can affect your chromatography and spectra, and how to minimize it.

This module can also be purchased individually:						
Americas	Europe/India	Asia	<b>Price (\$)*</b>	Duration		
Register	<u>Register</u>	Register	100.00	30 min.		

### Module 4: Achieving the Best LC Peak Shape

Part Number: 750000788

Good peak shape is crucial in liquid chromatography for the best sensitivity, peak resolution, and reproducibility of peak areas and retention times. Causes of non-ideal peak shapes and how to improve peak shape are discussed.

This module can also be purchased individually:						
	Americas	Europe/India	Asia	Price (\$)*	Duration	
	Register	<u>Register</u>	<u>Register</u>	100.00	25 min.	

# Module 5: UPLC Sample Injection Modes

Part Number: 750000787

This module will discuss two types of sample injection: fixed loop and flow through needle. The topics to be covered include the injection and wash cycles, the advantages of the different injection modes, how to optimize peak area reproducibility, and how to minimize carryover.

This module can also be purchased individually:						
	Americas Register	Europe/India Register	Asia Register	Price (\$)* 100.00	Duration 35 min.	
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### Module 6: Practical Tips for UV and PDA Detection

Part Number: 750000773

This module will discuss practical tips for optimizing Tunable UV (TUV) and Photodiode Array (PDA) detectors for maximum linearity and sensitivity, rugged and reproducible methods. There are recommendations for wavelength choices, mobile phases solvents and additives, and methods parameters. Included is troubleshooting of several TUV and PDA problems.

	-	This module can also be purchased individually:						
Hogister Hogister 10000 Co Hillin		Americas Register	Europe/India Register	Asia <u>Register</u>	Price (\$)* 100.00	<b>Duration</b> 30 min.		

\*PRICE IS BASED IN US DOLLARS, INVOICE WILL REFLECT THE EQUIVALENT COST IN YOUR LOCAL CURRENCY.





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MS Instrumentation

Peptide Mapping (UPLC-QTof MS)

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# **HPLC**

This track contains a series of modules that cover the basics of high performance liquid chromatography (HPLC). These modules will discuss the Theory, Operation, Maintenance, and Practical Tips of HPLC using both a Tunable Ultra Violet (TUV) and Photodiode Array (PDA) detector.

This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002002

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	9	5 hrs. 35 min.	750.00

# Modules

# Module 1: Theory of HPLC /TUV

Part Number: 750000678

This module covers the theory of UV/Visible light absorption and the optics of Waters 2487 and 2489 TUV detectors for HPLC. The theory section covers Beer's law, how lamp output, solvent background adsorption, and a compound's spectrum affect chromatography sensitivity and linearity. The optics section explains the major optical components of the HPLC TUV detectors and how they work. The module is self paced and contains knowledge self assessment sections.

This module can also be purchased individually:						
Americas	Europe/India	Asia	Price (\$)*	Duration		
Register	Register	<u>Register</u>	200.00	40 min.		

#### Module 2: Operation of HPLC/TUV

Part Number: 750000679

This module covers the operational parameters of Waters 2487 and 2489 TUV detectors for HPLC. The module shows how to set the appropriate data acquisition rate and filtering constant for a separation. There is an explanation and example of using the Median Baseline Filter (MBF) to correct for baseline drifting.

This module can also be purchased individually:					
Americas Register	Europe/India Register	Asia Register	Price (\$)* 100.00	Duration 20 min.	
<u>Hegister</u>	<u>riegistei</u>	<u>Hegister</u>	100.00	20 111111	

#### Module 3: Maintenance of HPLC/TUV

Part Number: 750000680

This module covers routine daily and yearly maintenance of Waters 2487 and 2489 TUV detectors for HPLC. This module shows how to properly change the lamp and provides recommended cleaning procedures for the flow cell.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	<b>Duration</b>	
Register	Register	Register	100.00	20 min.	

#### Module 4: Theory of HPLC/PDA

Part Number: 750000681

This module covers the theory of UV/Visible light absorption and the optics of Waters 996, 2996 and 2998 PDA detectors for HPLC. The theory section covers Beer's law, how lamp output, solvent background adsorption, and a compound's spectrum affect chromatography sensitivity and linearity. The optics section explains the major optical components of the HPLC PDA detectors and how they work.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	<u>Register</u>	Register	200.00	40 min.	

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This track contains a series of modules that cover the basics of high performance liquid chromatography (HPLC). These modules will discuss the Theory, Operation, Maintenance, and Practical Tips of HPLC using both a Tunable Ultra Violet (TUV) and Photodiode Array (PDA) detector.

#### This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002002

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	9	5 hrs. 35 min.	750.00

# **Modules Continued**

### Module 5: Operation of HPLC/PDA

Part Number: 750000682

This module covers the operational parameters of Waters 2998 PDA detector for HPLC. This module shows how to set the appropriate data acquisition rate and filtering constant for a separation. There is an explanation and example of using both the Median Baseline Filter (MBF) and the Reference Wavelength Compensation function to correct for baseline drift or wander.

This module can also be purchased individually:						
Americas	Europe/India	Asia	Price (\$)*	Duration		
Register	Register	Register	100.00	20 min.		

#### Module 6: Maintenance of HPLC/PDA

Part Number: 750000683

This module covers routine daily and yearly maintenance of Waters 996, 2996, and 2998 PDA detectors for HPLC. This module shows how to properly change the lamp and provides recommended cleaning procedures for the flow cell.

This module can also be purchased individually:					
Europe/India	Asia	Price (\$)*	Duration		
<u>Register</u>	<u>Register</u>	100.00	20 min.		
	Europe/India	Europe/India Asia	Europe/India Asia Price (\$)*		

### Module 7: Practical Tips for UV and PDA Detection

Part Number: 750000773

This module will discuss practical tips for optimizing TUV and PDA detectors for maximum linearity and sensitivity, rugged and reproducible methods. There are recommendations for wavelength choices, mobile phases solvents, and additives, and methods parameters. Included is troubleshooting of several TUV and PDA problems.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
Register	Register	Register	100.00	30 min.	

#### Module 8: Achieving the Best LC Peak Shape

Part Number: 750000788

Good peak shape is crucial in liquid chromatography for the best sensitivity, peak resolution, and reproducibility of peak areas and retention times. Causes of non-ideal peak shapes and how to improve peak shape are discussed.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
Register	<u>Register</u>	<u>Register</u>	100.00	25 min.	

#### Module 9: Alliance Tips & Techniques

Part Number: 750000861

This module describes best practices and techniques for optimizing the performance of the Alliance HPLC system.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
Register	Register	Register	200.00	2 hrs.	

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Quantitation (UPLC-Quadrupole MS)







# Intact Protein Analysis (UPLC-QTof MS)

This track contains a series of modules that covers information necessary to perform intact protein analysis on a UPLC-QTof MS system. These modules will discuss the following topics: Fundamentals of LC-MS, MassLynx Fundamentals, Instrument Setup/Data Acquisition, MaxEnt™1/Transform™ and the BioPharmaLynx™ Application Manager. It also contains additional information regarding Solvent Considerations for LC-MS and LC-MS Contamination Issues.

This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002009

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	11	5 hrs. 26 min.	600.00

# Modules

#### Module 1: Fundamentals of LC-MS

Part Number: 750000690

This module will explain the fundamental concepts that will build a foundation for your understanding of the more complex, instrument-specific information that you will see in other modules.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	<u>Register</u>	<u>Register</u>	100.00	35 min.	

#### Module 2: Basic MassLynx Functions

Part Number: 750000691

This module is designed to give new users a fundamental understanding of the software architecture, basic functions, and tools present in MassLynx v4.1.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	<u>Register</u>	<u>Register</u>	100.00	35 min.	

### Module 3: Solvent Considerations for UPLC

Part Number: 750000657

This module discusses solvent considerations for UltraPerformance LC. It contains recommendations for best performance in UPLC Systems and LC-MS systems. It discusses why solvent quality is so important and considerations for "good" quality solvents and water used during analysis.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	<u>Register</u>	<u>Register</u>	50.00	16 min.	

#### Module 4: LC-MS Contamination Issues

Part Number: 750000659

This module will discuss how to minimize contamination in LC-MS. It defines what contamination is, where it comes from (with examples) how it can affect your chromatography and spectra, and how to minimize it.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	<u>Register</u>	<u>Register</u>	100.00	30 min.	

#### Module 5: Intact Protein Analysis - Instrument Setup and Data Acquisition

Part Number: 750000714

This module describes topics regarding instrument setup of a quadrupole time of flight mass spectrometer for intact protein studies. In particular, it discusses considerations for instrument tuning, mass range for data collection, and assurance of accurate mass measurements. This module concludes with a demonstration of how to create an experimental method file for intact protein analysis.

This module can also be purchased individually:					
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Register	Register	Register	100.00	25 min.	

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MarkerLynx™

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Alliance HPLC Operation and Performance Maintenance Track (Video Format)

Clinical LC-MS Applications

Complex Mixture Analysis (UPLC-QTof MS)

Complex Mixture Analysis (UPLC-Quadrupole MS)

General Liquid Chromatography (LC)

HPLC

Intact Protein Analysis (UPLC-QTof MS)

**NEW** Introductory Familiarization for LC-MS Tof-Based Systems

**NEW** Introductory Familiarization for LC-MS Quadrupole-Based Systems

**NEW** Introductory Familiarization for ACQUITY UPLC Systems (Classic and I-Class)

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Metabonomics/Metabolomics (UPLC-QTof MS)

MS Instrumentation

(UPLC-QTof MS)

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Modules continue on next page >>







# Intact Protein Analysis (UPLC-QTof MS)

This track contains a series of modules that covers information necessary to perform intact protein analysis on a UPLC-QTof MS system. These modules will discuss the following topics: Fundamentals of LC-MS, MassLynx Fundamentals, Instrument Setup/Data Acquisition, MaxEnt 1/Transform and the BioPharmaLynx Application Manager. It also contains additional information regarding Solvent Considerations for LC-MS and LC-MS Contamination Issues.

This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002009

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	11	5 hrs. 26 min.	600.00

# **Modules Continued**

# Module 6: Intact Protein Analysis - MaxEnt 1 and Transform

Part Number: 750000715

This module discusses how to utilize MaxEnt 1 and Transform software to obtain the mass of intact proteins. It covers best practices for using this software tool to deconvolute the protein spectra.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	Register	<u>Register</u>	100.00	25 min.	

#### Module 7: BioPharmaLynx (Intact Protein) Method Setup and Processing

Part Number: 750000716

This module outlines how to create a method and process intact protein data within BiopharmaLynx. An example method is created for a monoclonal antibody (Trastuzumab) and analysis is created to process the data using this method.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	<u>Register</u>	<u>Register</u>	100.00	20 min.	

### Module 8: BioPharmaLynx (Intact Protein) Data Analysis

Part Number: 750000717

This module outlines how to analyze intact protein data within BiopharmaLynx. An example dataset is analyzed for a monoclonal antibody (Trastuzumab).

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	<u>Register</u>	<u>Register</u>	100.00	20 min.	

### Module 9: nanoACQUITY Tips and Tricks

Part Number: 750000791

This module discusses how to obtain good, reproducible data from the nanoACQUITY\* including solvents, plumbing, startup, and shutdown; and optimizing sample trapping, gradients, and sensitivity.

Т	This module can also be purchased individually:					
	Americas	Europe/India	Asia	Price (\$)*	Duration	
	Register	Register	Register	100.00	1 hr.	

#### Module 10: DynamX Data Processing

Part Number: 750000860

This module outlines the data processing for HDX data using PLGS and DynamX software packages.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	<b>Duration</b>	
Register	Register	Register	100.00	30 min.	

#### Module 11: DynamX 3.0 Data Processing

Part Number: 750000978

This module outlines how to process HDX data using ProteinLynx Global Server (PLGS) and DynamX (version 3.0) software package for peptide, intact protein, and ETD applications.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
Register	Register	Register	100.00	30 min.	

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(v1.6/1.7)

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# **NEW** Introductory Familiarization for LC-MS Tof-Based Systems

Basic familiarization for new users of LC-MS TOF based systems. This track covers simple tasks in MassLynx, tuning and calibration, LC and MS methods.

This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002034

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	4	1 hr.	150.00

# Modules

NEW Module 1: Basic MassLynx Familiarization for LC-MS
Tof-Based Systems

Part Number: 750000911

This module covers simple tasks in MassLynx, new project, and sample list creation. This also covers basic data manipulation in the chromatogram and spectrum windows for LC-MS Tof data.

This module can also be purchased individually:					
Americas	Europe/India	Asia	<b>Price (\$)*</b>	Duration	
<u>Register</u>	<u>Register</u>	<u>Register</u>	50.00	15 min.	

NEW Module 2: Basic Tuning and Calibration for LC-MS Tof-Based Systems

Part Number: 750000912

This module covers set up of the Xevo G2-XS Q-Tof mass spectrometer using IntelliStart; includes detector set up, calibration and lockspray set up.

This module can also be purchased individually:						
Americas	Europe/India	Asia	Price (\$)*	Duration		
<u>Register</u>	<u>Register</u>	<u>Register</u>	50.00	15 min.		

NEW Module 3: Basic LC Method Familiarization for LC-MS
Tof-Based Systems

Part Number: 750000913

This module covers basic set up of the ACQUITY system for use with a Xevo G2-XS Q-Tof mass spectrometer; includes the gradient table and sample manager parameters.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
Register	<u>Register</u>	Register	50.00	15 min.	

NEW Module 4: Basic MS Method Familiarization for LC-MS
Tof-Based Systems

Part Number: 750000914

This module covers basic set up of MS and MSe methods for use with a Xevo G2-XS Q-Tof mass spectrometer.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	<u>Register</u>	<u>Register</u>	50.00	15 min.	

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(v1.6/1.7)

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MS Instrumentation

Peptide Mapping (UPLC-QTof MS)

Quantitation (UPLC-Quadrupole MS)





# **NEW** Introductory Familiarization for LC-MS Quadrupole-Based Systems

Basic familiarization for new users of LC-MS Quadrupole-based systems. This track covers simple tasks in MassLynx, tuning and calibration, LC and MS methods.

This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002035

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	4	1 hr.	150.00

# Modules

NEW Module 1: Basic MassLynx Familiarization for LC-MS
Quadrupole-Based Systems

Part Number: 750000915

Basic MassLynx familiarization for new LC-MS tandem Quadrupole users. This module covers simple tasks in MassLynx, new project and sample list creation. This also covers basic data manipulation in the chromatogram and spectrum windows for LC-MS MRM data.

This module can also be purchased individually:						
Americas	Europe/India	Asia	Price (\$)*	Duration		
Register	Register	Register	50.00	15 min.		

NEW Module 2: Basic Tuning and Calibration for LC-MS
Quadrupole-Based Systems

Part Number: 750000916

Basic tuning and calibration familiarization for new LC-MS tandem quadrupole users. This module covers set up of the Xevo TQ-S mass spectrometer using IntelliStart; includes basic tuning, MRM method and calibration.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	<u>Register</u>	<u>Register</u>	50.00	15 min.	

NEW Module 3: Basic LC Method Familiarization for LC-MS Quadrupole-Based Systems

Part Number: 750000917

Basic LC method familiarization for new LC-MS tandem Quadrupole users. This module covers basic set up of the ACQUITY system for use with a Xevo TQ-S mass spectrometer.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	<u>Register</u>	<u>Register</u>	50.00	15 min.	

NEW Module 4: Basic MS Method Familiarization for LC-MS

Quadrupole-Based Systems

Part Number: 750000918

Basic MS method familiarization for new LC-MS tandem quadrupole users. This module covers basic set up of MRM Methods for use with a Xevo TQ-S mass spectrometer.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
Register	Register	Register	50.00	15 min.	

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Fundamentals of UNIFI (v1.6/1.7)

MarkerLynx™

MassLynx

TargetLynx™

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Quantitation (UPLC-Quadrupole MS)





# **NEW** Introductory Familiarization for ACQUITY UPLC Systems (Classic and I-Class)

This track introduces basic familiarization for new users of ACQUITY UPLC Systems (Classic and I-Class). It covers solvent considerations, tips and techniques, injection modes and how to achieve best peak shape.

This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002046

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	4	2 hr. 56 min.	250.00

# Modules

#### Module 1: Solvent Considerations for UPLC

Part Number: 750000657

This module discusses solvent considerations for Ultra Performance Liquid Chromatography. It contains recommendations for best performance in UPLC systems and LCMS systems. It discusses why solvent quality is so important and considerations for "good" quality solvents and water used during analysis.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	<u>Register</u>	<u>Register</u>	50.00	16 min.	

#### Module 2: ACQUITY Tips & Techniques

Part Number: 750000844

This module covers tips and techniques for the proper set up, preparation, running and shutting down of an ACQUITY system are discussed, along with the use of the ACQUITY Console for system evaluation. The process and tools for the migration of HPLC methods to UPLC methods is presented.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	<u>Register</u>	<u>Register</u>	100.00	1 hr. 40 min.	

### Module 3: UPLC Sample Injection Modes

Part Number: 750000787

This module will discuss two types of sample injection: Fixed Loop and Flow Through Needle. The topics to be covered include the injection and wash cycles, the advantages of the different injection modes, how to optimize peak area reproducibility and how to minimize carryover.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	<b>Duration</b>	
Register	Register	Register	100.00	35 min.	

#### Module 4: Achieving the Best LC Peak Shape

Part Number: 750000788

This module covers why good peak shape is crucial in liquid chromatography for the best sensitivity, peak resolution, and reproducibility of peak areas and retention times. Causes of non-ideal peak shapes and how to improve peak shape are discussed.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
Register	<u>Register</u>	Register	100.00	25 min.	

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MS Instrumentation

(UPLC-QTof MS)

Quantitation (UPLC-Quadrupole MS)





# **NEW** Introductory Familiarization for ACQUITY UPLC Systems (H-Class)

This track introduces basic familiarization for new users of ACQUITY UPLC Systems (H-Class). It covers solvent considerations, tips and techniques, injection modes and how to achieve best peak shape.

This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002047

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	4	2 hr. 46 min.	250.00

# Modules

#### Module 1: Solvent Considerations for UPLC

Part Number: 750000657

This module discusses solvent considerations for Ultra Performance Liquid Chromatography. It contains recommendations for best performance in UPLC systems and LCMS systems. It discusses why solvent quality is so important and considerations for "good" quality solvents and water used during analysis.

This module can also be purchased individually:					
Americas	Europe/India	Asia	<b>Price (\$)*</b>	Duration	
<u>Register</u>	<u>Register</u>	<u>Register</u>	50.00	16 min.	

#### Module 2: ACQUITY H-Class Tips & Techniques

Part Number: 750000845

This module covers tips and techniques for the proper set up, preparation, running and shutting down of an ACQUITY H-Class system are discussed, along with the use of the ACQUITY H-Class Console for system evaluation. The process and tools for the migration of HPLC methods to UPLC methods is presented.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	<u>Register</u>	<u>Register</u>	100.00	1 hr. 30 min.	

### Module 3: UPLC Sample Injection Modes

Part Number: 750000787

This module will discuss two types of sample injection: Fixed Loop and Flow Through Needle. The topics to be covered include the injection and wash cycles, the advantages of the different injection modes, how to optimize peak area reproducibility and how to minimize carryover.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
Register	Register	Register	100.00	35 min.	

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Part Number: 750000788

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Americas	Europe/India	Asia	<b>Price (\$)*</b>	Duration	
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MS Instrumentation

(UPLC-QTof MS)

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(UPLC-Quadrupole MS)







# LC-MS Principles and Concepts

This track contains a series of modules that cover LC-MS principles and concepts. It covers the following areas: Introduction to LC-MS, Ionization Modes, Mass Analyzers, LC Method Development, Quantitation using MS and Atmospheric Solids Analysis Probe (ASAP).

This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002012

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	6	2 hrs. 25 min.	650.00

# Modules

#### **Module 1:** LC-MS Introduction

Part Number: 750000660

This module introduces the basics of mass measurement and establishes the foundation for topics presented in other modules.

This module ca	This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration		
<u>Register</u>	<u>Register</u>	<u>Register</u>	100.00	15 min.		

#### Module 2: Ionization Modes

Part Number: 750000661

The three most common modes of ionization in LC-MS are presented in this module: electro spray, atmospheric pressure chemical ionization (APCI), and atmospheric pressure photo ionization (APPI).

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	<u>Register</u>	<u>Register</u>	200.00	25 min.	

### Module 3: Mass Analyzers

Part Number: 750000662

The most common mass analyzers present in current LC-MS instruments are presented in this module: single and tandem quadrupole, time-of-flight, and ion trap.

This module can also be purchased individually:					
Americas	Europe/India	Asia	<b>Price (\$)*</b>	Duration	
<u>Register</u>	Register	Register	200.00	25 min.	

### Module 4: LC Method Development

Part Number: 750000663

This module is designed to provide a fundamental understanding of LC method development techniques.

This module can also be purchased individually:					
Americas	Europe/India	<b>Asia</b>	Price (\$)*	<b>Duration</b>	
Register	Register	Register	200.00	30 min.	

### Module 5: Quantification using MS

Part Number: 750000664

This module is designed to provide a fundamental understanding of quantification in standard LC-MS methods.

This module ca	an also be purchas	ed individually:		
Americas	Europe/India	Asia	<b>Price (\$)*</b>	Duration
<u>Register</u>	<u>Register</u>	Register	100.00	10 min.

### Module 6: Atmospheric Solids Analysis Probe (ASAP)

Part Number: 750000772

This module highlights how to set up and run samples using the ASAP source in conjunction with Waters product line of mass spectrometers. Instructional videos are included with step-by-step instructions detailing how to switch the source from ESI to ASAP mode, how to set up and tune the instrument, and how to prepare and analyze solid and liquid samples with the ASAP option. The module features an introduction to the ASAP method as compared to other direct MS analysis techniques, and features a section on troubleshooting and helpful tips.

This module can also be purchased individually:				
Americas	Europe/India	Asia	Price (\$)*	Duration
Register	Register	Register	100.00	40 min.

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MS Instrumentation

Peptide Mapping (UPLC-QTof MS)

Quantitation (UPLC-Quadrupole MS)







# Metabolite Identification (UPLC-QTof MS)

This track contains a series of modules that covers information necessary to perform metabolite identification on a UPLC-QTof MS System. These modules will discuss the Fundamentals of LC-MS, MassLynx Fundamentals, IntelliStart, Elemental Composition, and MetaboLynx Application Manager. It also contains additional information regarding Solvent Considerations for LC-MS, LC-MS Contamination Issues, Gradient Systems, and an Overview of Drug Metabolism.

This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002005

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	11	6 hrs. 46 min.	1200.00

# Modules

#### Module 1: Fundamentals of LC-MS

Part Number: 750000690

This module explains the fundamental concepts that will build a foundation for your understanding of the more complex, instrument-specific information that you will see in other modules.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	<u>Register</u>	<u>Register</u>	100.00	35 min.	

#### Module 2: Basic MassLynx Functions

Part Number: 750000691

This course is designed to give new users a fundamental understanding of the software architecture, basic functions, and tools present in MassLynx v4.1.

This module ca	This module can also be purchased individually:						
Americas Europe/India Asia Price (\$)* Duration							
<u>Register</u>	<u>Register</u>	<u>Register</u>	100.00	35 min.			

### Module 3: Solvent Considerations for UPLC

Part Number: 750000657

This module discusses solvent considerations for UltraPerformance LC. It contains recommendations for best performance in UPLC Systems and LC-MS systems. It discusses why solvent quality is so important and considerations for "good" quality solvents and water used during analysis.

This module can also be purchased individually:					
Americas Register	Europe/India Register	<b>Asia</b> Register	Price (\$)* 50.00	Duration 16 min.	
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### Module 4: Binary vs. Quaternary Gradient Systems

Part Number: 750000658

This module discusses two types of solvent delivery systems; binary versus quaternary gradient systems. The module reviews the similarities and differences between the two systems, and how to optimize for UPLC gradient chromatography. The topics covered include: hardware components, gradient formation, specification differences, system volume, and reequilibration considerations.

Т	his module ca	n also be purchase	ed individually:		
	Americas	Europe/India	Asia	Price (\$)*	Duration
	<u>Register</u>	<u>Register</u>	<u>Register</u>	100.00	20 min.

#### Module 5: LC-MS Contamination Issues

Part Number: 750000659

This course will discuss how to minimize contamination in LC-MS. It defines what contamination is, where it comes from (with examples) how it can affect your chromatography and spectra, and how to minimize it.

This module can also be purchased individually:						
Americas	Europe/India	Asia	Price (\$)*	<b>Duration</b>		
Register	Register	Register	100.00	30 min.		

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HPLC

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Metabonomics/Metabolomics (UPLC-QTof MS)

MS Instrumentation

(UPLC-QTof MS)

Quantitation (UPLC-Quadrupole MS)









# Metabolite Identification (UPLC-QTof MS)

This track contains a series of modules that covers information necessary to perform metabolite identification on a UPLC-QTof MS System. These modules will discuss the Fundamentals of LC-MS, MassLynx Fundamentals, IntelliStart, Elemental Composition, and MetaboLynx Application Manager. It also contains additional information regarding Solvent Considerations for LC-MS, LC-MS Contamination Issues, Gradient Systems, and an Overview of Drug Metabolism.

This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002005

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	11	6 hrs. 46 min.	1200.00

# **Modules Continued**

# Module 6: IntelliStart - QTof-based MS Systems

Part Number: 750000693

This module introduces the user to the powerful, automated capabilities of IntelliStart for time-of-flight LC-MS systems. These include optimizing the detector voltage, calibrating the m/z axis, and setting up the lockspray conditions. In addition, the module covers IntelliStart operations which monitor mass measurement accuracy and optimal LC-MS system performance.

This module ca	This module can also be purchased individually:				
Americas	Europe/India	Asia	Price (\$)*	<b>Duration</b>	
Register	Register	Register	200.00	50 min.	

#### **Module 7: Elemental Composition**

Part Number: 750000695

This module describes how to use elemental composition to obtain the chemical formula of unknowns using accurate mass data.

AmericasEurope/IndiaAsiaPrice (\$)*DurationRegisterRegister100.0025 min.	٦	This module can also be purchased individually:						
			•					

### Module 8: MetaboLynx: Drug Metabolism Overview

Part Number: 750000705

This module will familiarize the participant with the terminology and basic concepts of drug metabolism.

This module can also be purchased individually:					
Americas	Europe/India	<b>Asia</b>	Price (\$)*	Duration	
Register	Register	Register	100.00	25 min.	

### Module 9: MetaboLynx: Method Setup

Part Number: 750000706

This module will demonstrate how to set up a sample list for MetaboLynx processing and also provides detailed training on how to set up a MetaboLynx processing method.

This module can also be purchased individually:						
Americas	Europe/India	Asia	Price (\$)*	Duration		
Register	<u>Register</u>	Register	200.00	1 hr.		

### Module 10: MetaboLynx: Data Processing and Review

Part Number: 750000707

This module will demonstrate how to review data that has been processed by MetaboLynx XS. It will discuss information displayed in the main browser window, analysis of high energy MSE data using the fragmentation analysis options, saving datasets, and printed report formatting.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration 50 min	
<u>Register</u>	<u>Register</u>	<u>Register</u>	200.00	50 min.	

### Module 11: MetaboLynx: Advanced Topics

Part Number: 750000708

This module will familiarize the participant with MassFragment, the Biotransformation Localization Tool, export of data to Excel, and automated MS/MS data acquisition and processing.

This module can also be purchased individually:						
Americas	Europe/India	Asia	Price (\$)*	Duration		
Register	Register	Register	200.00	1 hr.		

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(UPLC-QTof MS)

Quantitation (UPLC-Quadrupole MS)







# Metabonomics/Metabolomics (UPLC-QTof MS)

This track contains a series of modules that covers information necessary to perform metabonomics/metabolomics on a UPLC-QTof MS System. These modules will discuss the Fundamentals of LC-MS, MassLynx Fundamentals, IntelliStart, Elemental Composition, and MarkerLynx Application Manager. It also contains additional information regarding Solvent Considerations for LC-MS, LC-MS Contamination Issues, and Gradient Systems.

This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002006

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	9	4 hrs. 36 min.	850.00

# Modules

#### Module 1: Fundamentals of LC-MS

Part Number: 750000690

This module explains the fundamental concepts that will build a foundation for your understanding of the more complex, instrument-specific information that you will see in other modules.

This module can also be purchased individually:						
Americas	Europe/India	Asia	Price (\$)*	Duration		
<u>Register</u>	<u>Register</u>	<u>Register</u>	100.00	35 min.		

#### Module 2: Basic MassLynx Functions

Part Number: 750000691

This course is designed to give new users a fundamental understanding of the software architecture, basic functions, and tools present in MassLynx v4.1.

This module can also be purchased individually:						
Americas	Europe/India	Asia	Price (\$)*	Duration		
<u>Register</u>	<u>Register</u>	<u>Register</u>	100.00	35 min.		

### Module 3: Solvent Considerations for UPLC

Part Number: 750000657

This module discusses solvent considerations for UltraPerformance LC. It contains recommendations for best performance in UPLC Systems and LC-MS systems. It discusses why solvent quality is so important and considerations for "good" quality solvents and water used during analysis.

This module can also be purchased individually:						
Americas	Europe/India	Asia	Price (\$)*	Duration		
<u>Register</u>	Register	<u>Register</u>	50.00	16 min.		

### Module 4: Binary vs. Quaternary Gradient Systems

Part Number: 750000658

This module discusses two types of solvent delivery systems; binary versus quaternary gradient systems. The module reviews the similarities and differences between the two systems, and how to optimize for UPLC gradient chromatography. The topics covered include: hardware components, gradient formation, specification differences, system volum, and reequilibration considerations.

This module can also be purchased individually:						
Americas	Europe/India	Asia	Price (\$)*	Duration		
Register	Register	Register	100.00	20 min.		

#### Module 5: LC-MS Contamination Issues

Part Number: 750000659

This course discusses how to minimize contamination in LC-MS. It defines what contamination is, where it comes from (with examples) how it can affect your chromatography and spectra, and how to minimize it.

This module can also be purchased individually:						
Americas	Europe/India	Asia	Price (\$)*	Duration		
Register	Register	Register	100.00	30 min.		

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(UPLC-QTof MS)

Quantitation (UPLC-Quadrupole MS)

UPLC



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# Metabonomics/Metabolomics (UPLC-QTof MS)

This track contains a series of modules that covers information necessary to perform metabonomics/metabolomics on a UPLC-QTof MS System. These modules will discuss the Fundamentals of LC-MS, MassLynx Fundamentals, IntelliStart, Elemental Composition, and MarkerLynx Application Manager. It also contains additional information regarding Solvent Considerations for LC-MS, LC-MS Contamination Issues, and Gradient Systems.

This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002006

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	9	4 hrs. 36 min.	850.00

# **Modules Continued**

Module 6: IntelliStart: QTof-based MS Systems

Part Number: 750000693

This eLearning module introduces the user to the powerful, automated capabilities of IntelliStart for time-of-flight LC-MS systems. These include optimizing the detector voltage, calibrating the m/z axis, and setting up the lockspray conditions. In addition, the module covers IntelliStart operations which monitor mass measurement accuracy and optimal LC-MS system performance.

This module can also be purchased individually:						
Americas	Europe/India	Asia	Price (\$)*	Duration		
Register	Register	Register	200.00	50 min.		

#### **Module 7:** Elemental Composition

Part Number: 750000695

This module describes how to use elemental composition to obtain the chemical formula of unknowns using accurate mass data.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	<u>Register</u>	<u>Register</u>	100.00	25 min.	

### Module 8: MarkerLynx: Overview and Method Setup

Part Number: 750000700

First of two modules designed to familiarize the user with the workflow needed to process a complex data set and identify unique marker compounds. Topics covered include best practices for data acquisition, sample list set-up, and MarkerLynx XS method development. Emphasis will be placed on understanding the parameters used to create the MarkerLynx XS processing method and developing a template method that can be used for small molecule analysis.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
Register	Register	Register	100.00	25 min.	

# Module 9: MarkerLynx: Data Processing, Database Searches, and Reporting

Part Number: 750000701

Second of two modules designed to familiarize the user with the workflow needed to process a complex data set and identify unique marker compounds. Topics covered include data processing and statistical analysis, database searching, incorporation of MS<sup>e</sup> fragmentation data, and reporting. This module focuses on the workflow used to recognize unique marker compounds in a binary comparison of two diverse sample groups, and the identification of those compounds using elemental composition, database searching, and high collision energy fragmentation data.

This module can also be purchased individually:						
Americas Register	Europe/India Register	Asia Register	Price (\$)* 200.00	Duration 40 min.		
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(UPLC-QTof MS)

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# MS Instrumentation

This track contains a series of modules that cover topics involved with mass spectrometry (MS) instrumentation. It covers the following areas: IntelliStart for both Quadrupole and QTof based Systems, QuanOptimize,™ Elemental Composition, Atmospheric Solids Analysis Probe (ASAP), Ion Mobility Tuning on a SYNAPT G2-S, Atmospheric Pressure GC, DynamX Data Processing, ACQUITY QDa General Theory and Basic Use, and Tuning and Calibration of Quadrupole Legacy Instruments.

This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002015

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	10	6 hrs. 50 min.	500.00

# Modules

Module 1: IntelliStart: Quadrupole-based MS Systems

Part Number: 750000692

This module introduces the user to the powerful, automated capabilities of IntelliStart for quadrupole LC-MS systems. These include Resolution Setup, m/z Calibration, Sample Tune, and the LC-MS System Check. In addition, the influence of quadrupole resolving power on ion transmission and method robustness are discussed, along with the ability of IntelliStart to create MS acquisition methods.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
Register	Register	Register	200.00	40 min.	

#### Module 2: IntelliStart: QTof-based MS Systems

Part Number: 750000693

This module introduces the user to the powerful, automated capabilities of IntelliStart for time-of-flight LC-MS systems. These include optimizing the detector voltage, calibrating the m/z axis, and setting up the LockSpray conditions. In addition, the module covers IntelliStart operations which monitor mass measurement accuracy and optimal LC-MS system performance.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	Register	<u>Register</u>	200.00	50 min.	

### Module 3: QuanOptimize

Part Number: 750000694

This module provides the user with guidance and tools on how to automate method development through a detailed examination of the critical components of the QuanOptimize Application Manager. The topics covered in this module include the QuanOptimize Method Editor, Run QuanOptimize Wizar, and QuanOptimize Results Summary File. The training will conclude by setting up an example QuanOptimization Data Set.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
Register	Register	Register	200.00	45 min.	

#### **Module 4:** Elemental Composition

Part Number: 750000695

This module describes how to use elemental composition to obtain the chemical formula of unknowns using accurate mass data.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	<b>Duration</b>	
Register	Register	Register	100.00	25 min.	

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MS Instrumentation

(UPLC-QTof MS)

Quantitation (UPLC-Quadrupole MS)

# MS Instrumentation

This track contains a series of modules that cover topics involved with mass spectrometry (MS) instrumentation. It covers the following areas: IntelliStart for both Quadrupole and QTof based Systems, QuanOptimize,™ Elemental Composition, Atmospheric Solids Analysis Probe (ASAP), Ion Mobility Tuning on a SYNAPT G2-S, Atmospheric Pressure GC, DynamX Data Processing, ACQUITY QDa General Theory and Basic Use, and Tuning and Calibration of Quadrupole Legacy Instruments.

This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002015

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	10	6 hrs. 50 min.	500.00

# **Modules Continued**

# Module 5: ASAP: Atmospheric Solids Analysis Probe

Part Number: 750000772

This module highlights how to set up and run samples using the ASAP source in conjunction with Waters product line of mass spectrometers. Instructional videos are included with step-by-step instructions detailing how to switch the source from ESI to ASAP mode, how to set up and tune the instrument, and how to prepare and analyze solid and liquid samples with the ASAP option. The module features an introduction to the ASAP method as compared to other direct MS analysis techniques, and features a section on troubleshooting and helpful tips.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	Register	<u>Register</u>	100.00	40 min.	

# Module 6: Ion Mobility Tuning and Data Acquisition on the SYNAPT G2-S

Part Number: 750000793

This module will describe how ion mobility works on a SYNAPT G2 and SYNAPT G2-S. We will discuss the tune page settings that control the mobility separation, MS method parameters and the various types of experiments that can be performed.

This module can also be purchased individually:					
Europe/India	Asia	Price (\$)*	Duration		
<u>Register</u>	<u>Register</u>	100.00	20 min.		
	Europe/India	Europe/India Asia	Europe/India Asia Price (\$)*		

### Module 7: Atmospheric Pressure GC (APGC)

Part Number: 750000831

This eLearning module describes the theory and operation of APGC. Other topics include: changing the instrument from LC to APGC mode including videos showing the step by step process, MS mass calibration for use with APGC, creating data acquisition methods for use with APGC, and a discussion of dry source ionization vs. wet source ionization.

Tł	This module can also be purchased individually:					
	Americas	Europe/India	Asia	Price (\$)*	<b>Duration</b>	
	Register	Register	Register	200.00	45 min.	

#### Module 8: DynamX Data Processing

Part Number: 750000860

This module outlines the data processing for HDX data using PLGS and DynamX software packages.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	Register	Register	100.00	30 min.	

### Module 9: ACQUITY QDa General Theory and Basic Use

Part Number: 750000862

Basic mass spectrometry theory and use of the QDa in Empower 3 Software.

This module can also be purchased individually:						
Americas	Europe/India	Asia	Price (\$)*	Duration		
Register	Register	Register	200.00	1 hr. 15 min.		

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This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002015

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	10	6 hrs. 50 min.	500.00

# **Modules Continued**

Module 10: Tuning and Calibration of Waters Legacy Tandem Quadrupole Instruments

Part Number: 750000790

This course covers basic tuning and calibration of certain Waters Tandem quadrupole mass spectrometers: Quattro Ultima, Quattro micro, and Quattro Premier. Routine tune page functions are covered as well as the calibration procedure used for the quadrupole systems controlled by MassLynx Software.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	<u>Register</u>	<u>Register</u>	100.00	40 min.	

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# Peptide Mapping (UPLC-QTof MS)

This track contains a series of modules that covers information necessary to perform peptide mapping on a UPLC-QTof MS System. These modules will discuss the Fundamentals of LC-MS, MassLynx Fundamentals, Instrument Setup/Data Acquisition, MaxEnt 3/DeNovo Sequencing, and BioPharmaLynx Application Manager. It also contains additional information regarding Solvent Considerations for LC-MS and LC-MS Contamination Issues.

This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002010

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	10	5 hrs. 41 min.	650.00

# Modules

#### Module 1: Fundamentals of LC-MS

Part Number: 750000690

This module explains the fundamental concepts that will build a foundation for your understanding of the more complex, instrument-specific information that you will see in other modules.

This module can also be purchased individually:						
Americas	Europe/India	Asia	Price (\$)*	Duration		
<u>Register</u>	<u>Register</u>	<u>Register</u>	100.00	35 min.		

#### Module 2: Basic MassLynx Functions

Part Number: 750000691

This course is designed to give new users a fundamental understanding of the software architecture, basic functions, and tools present in MassLynx v4.1.

	This module can also be purchased individually:					
	Americas Register	Europe/India Register	Asia <u>Register</u>	Price (\$)* 100.00	<b>Duration</b> 35 min.	
_						

### Module 3: Solvent Considerations for UPLC

Part Number: 750000657

This module discusses solvent considerations for UltraPerformance Liquid Chromatography. It contains recommendations for best performance in UPLC Systems and LC-MS systems. It discusses why solvent quality is so important and considerations for "good" quality solvents and water used during analysis.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	<u>Register</u>	<u>Register</u>	50.00	16 min.	

#### Module 4: LC-MS Contamination Issues

Part Number: 750000659

This course will discuss how to minimize contamination in LC-MS. It defines what contamination is, where it comes from (with examples) how it can affect your chromatography and spectra, and how to minimize it.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
Register	Register	Register	100.00	30 min.	

# Module 5: Peptide Mapping Analysis - Instrument Setup and Data Acquisition

Part Number: 750000718

This module describes topics regarding instrument setup of a quadrupole timeof-flight mass spectrometer designed specifically for peptide analyses.

This module can also be purchased individually:						
Americas	Europe/India	Asia	Price (\$)*	Duration		
Register	<u>Register</u>	Register	200.00	45 min.		

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# Peptide Mapping (UPLC-QTof MS)

This track contains a series of modules that covers information necessary to perform peptide mapping on a UPLC-QTof MS System. These modules will discuss the Fundamentals of LC-MS, MassLynx Fundamentals, Instrument Setup/Data Acquisition, MaxEnt 3/DeNovo Sequencing, and BioPharmaLynx Application Manager. It also contains additional information regarding Solvent Considerations for LC-MS and LC-MS Contamination Issues.

This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002010

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	10	5 hrs. 41 min.	650.00

# **Modules Continued**

# Module 6: MaxEnt 3 and DeNovo Sequencing

Part Number: 750000719

This module will discuss how to utilize MaxEnt 3 and BioLynx™ software to denovo sequence peptides from mass spectrometry fragmentation spectra. We will also cover an introduction to MaxEnt 3, how to process the data in an automated and manual workflow, and how to denovo modified peptides. We also look at how to process data that has been acquired by data-directed analysis (DDA™) and MS E.

This module can also be purchased individually:						
Americas	Europe/India	Asia	Price (\$)*	Duration		
Register	Register	Register	100.00	30 min.		

# **Module 7:** BioPharmaLynx (Peptide Mapping) - Method Setup and Processing

Part Number: 750000720

This module outlines how to create a method and process peptide mapping data within BiopharmaLynx. An example method is created for a digested monoclonal antibody (Trastuzumab) and analysis is created to process the data using this method.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	<u>Register</u>	<u>Register</u>	100.00	20 min.	

### Module 8: BioPharmaLynx (Peptide Mapping) - Data Analysis

Part Number: 750000721

This module outlines how to analyze intact protein data within BiopharmaLynx. An example dataset is analyzed for a monoclonal antibody (Trastuzumab).

This	This module can also be purchased individually:					
An	nericas	Europe/India	Asia	Price (\$)*	Duration	
Re	<u>egister</u>	<u>Register</u>	Register	100.00	20 min.	

### Module 9: nanoACQUITY Tips and Tricks

Part Number: 750000791

This module discusses how to obtain good, reproducible data from the nanoACQUITY including solvents, plumbing, startup and shutdown; and optimizing sample trapping, gradients, and sensitivity.

This module can also be purchased individually:						
Americas	Europe/India	Asia	Price (\$)*	Duration		
Register	<u>Register</u>	Register	100.00	1 hr.		

### Module 10: Challenges of Peptide Analysis

Part Number: 750000792

Peptides are more difficult to analyze than small molecules (e.g. drugs) because of their large size, structure, and chemistry; and the complexity of the samples. Some of the analytical challenges and suggestions for better chromatography and improved sensitivity are discussed.

This module can also be purchased individually:						
Americas	Europe/India	Asia	Price (\$)*	Duration		
<u>Register</u>	<u>Register</u>	<u>Register</u>	100.00	50 min.		

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# Quantitation (UPLC-Quadrupole MS)

This track contains a series of modules that covers information necessary to perform quantitation on a UPLC-quadrupole-based MS System. These modules will discuss the Fundamentals of LC-MS, MassLynx Fundamentals, IntelliStart, QuanOptimize, and TargetLynx Application Manager. It also contains additional information regarding Solvent Considerations for LC-MS, LC-MS Contamination Issues, and Gradient Systems.

This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002004

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	11	5 hrs. 26 min.	1000.00

# Modules

#### Module 1: Fundamentals of LC-MS

Part Number: 750000690

This module explains the fundamental concepts that will build a foundation for your understanding of the more complex, instrument-specific information that you will see in other modules.

This module can also be purchased individually:						
Americas	Europe/India	Asia	Price (\$)*	Duration		
<u>Register</u>	<u>Register</u>	<u>Register</u>	100.00	35 min.		

#### Module 2: Basic MassLynx Functions

Part Number: 750000691

This module is designed to give new users a fundamental understanding of the software architecture, basic functions, and tools present in MassLynx v4.1.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	<u>Register</u>	<u>Register</u>	100.00	35 min.	

### Module 3: Solvent Considerations for UPLC

Part Number: 750000657

This module discusses solvent considerations for Ultra Performance Liquid Chromatography. It contains recommendations for best performance in UPLC Systems and LC-MS systems. It discusses why solvent quality is so important and considerations for "good" quality solvents and water used during analysis.

This module can also be purchased individually:						
Americas	Europe/India	Asia	<b>Price (\$)*</b>	Duration		
<u>Register</u>	<u>Register</u>	Register	50.00	16 min.		

### Module 4: Binary vs. Quaternary Gradient Systems

Part Number: 750000658

This module discusses two types of solvent delivery systems; binary versus quaternary gradient systems. The module reviews the similarities and differences between the two systems, and how to optimize for UPLC gradient chromatography. The topics covered include: hardware components, gradient formation, specification differences, system volume, and re-equilibration considerations.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	<u>Register</u>	<u>Register</u>	100.00	20 min.	

### Module 5: LC-MS Contamination Issues

Part Number: 750000659

This module will discuss how to minimize contamination in LC-MS. It defines what contamination is, where it comes from (with examples) how it can affect your chromatography and spectra, and how to minimize it.

This module can also be purchased individually:						
Americas	Europe/India	Asia	Price (\$)*	Duration		
<u>Register</u>	Register	Register	100.00	30 min.		

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# Quantitation (UPLC-Quadrupole MS)

This track contains a series of modules that covers information necessary to perform quantitation on a UPLC-quadrupole-based MS System. These modules will discuss the Fundamentals of LC-MS, MassLynx Fundamentals, IntelliStart, QuanOptimize, and TargetLynx Application Manager. It also contains additional information regarding Solvent Considerations for LC-MS, LC-MS Contamination Issues, and Gradient Systems.

This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002004

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	11	5 hrs. 26 min.	1000.00

# **Modules Continued**

# Module 6: IntelliStart - Quadrupole-based MS Systems

Part Number: 750000692

This module introduces the user to the powerful, automated capabilities of IntelliStart for quadrupole LC-MS systems. These include resolution setup, m/z calibration, sample tune, and the LC-MS system check. In addition, the influence of quadrupole resolving power on ion transmission and method robustness are discussed, along with the ability of IntelliStart to create MS acquisition methods.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	Register	<u>Register</u>	200.00	40 min.	

#### Module 7: QuanOptimize

Part Number: 750000694

This module provides the user with guidance and tools on how to automate method development through a detailed examination of the critical components of the QuanOptimize Application Manager. The topics covered in this module include the QuanOptimize Method Editor, Run QuanOptimize Wizard, and QuanOptimize Results Summary File. The training will conclude by setting up an example QuanOptimization Data Set.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	<u>Register</u>	<u>Register</u>	200.00	45 min.	

### Module 8: TargetLynx - Overview

Part Number: 750000696

This module covers an overview of TargetLynx, what it is used for and how to access the application manager. The module also discusses how to set up the sample list and acquire data for use with TargetLynx.

This module ca				
Americas	Europe/India	Asia	Price (\$)*	Duration
Register	Register	Register	50.00	10 min.

#### Module 9: TargetLynx - Method Setup

Part Number: 750000697

This module demonstrates how to develop integration parameters for acquired data and then how to use these parameters to create a basic TargetLynx method from the acquired data.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
Register	Register	Register	100.00	30 min.	

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This track contains a series of modules that covers information necessary to perform quantitation on a UPLC-quadrupole-based MS System. These modules will discuss the Fundamentals of LC-MS, MassLynx Fundamentals, IntelliStart, QuanOptimize, and TargetLynx Application Manager. It also contains additional information regarding Solvent Considerations for LC-MS, LC-MS Contamination Issues, and Gradient Systems.

This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002004

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	11	5 hrs. 26 min.	1000.00

# **Modules Continued**

Module 10: TargetLynx - Data Processing and Review

Part Number: 750000698

This module gives users an overview of how to process samples with a TargetLynx processing method and then how to view the results in the data browser. An overview of how to create a report and output the data is also given.

This module can also be purchased individually:						
Americas	Europe/India	Asia	Price (\$)*	Duration		
<u>Register</u>	<u>Register</u>	<u>Register</u>	100.00	20 min.		

### Module 11: TargetLynx - Advanced Topics

Part Number: 75000699

This module discusses how to use TargetLynx for compound confirmation and QC monitoring. Topics include the use of ion ratios, PIC scans, sample flagging, QC monitor, and TrendPlot.

This mo	This module can also be purchased individually:						
	ricas	Europe/India	Asia	Price (\$)*	Duration		
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Quantitation (UPLC-Quadrupole MS)





# **UPLC**

This track contains a series of modules that cover the basics of UltraPerformance Liquid Chromatography (UPLC). These modules will discuss the following topics: Theory, Operation, and Maintenance of UPLC using both Tunable Ultra Violet (TUV) and Photodiode Array (PDA) detectors.

This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002003

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	16	11 hrs. 35 min.	1100.00

# Modules

# Module 1: Theory of UPLC/TUV

Part Number: 750000685

This module covers the theory of UV/Visible light absorption and the optics of Waters ACQUITY TUV detector for UPLC. The theory section covers Beer's law, how lamp output, solvent background adsorption, and a compound's spectrum affect chromatography sensitivity and linearity. The optics section explains the major optical components of the UPLC TUV detector and how they work.

This module can also be purchased individually:

Americas	Europe/India	Asia	Price (\$)*	Duration
<u>Register</u>	<u>Register</u>	<u>Register</u>	200.00	40 min.

### Module 2: Operation of UPLC/TUV

Part Number: 750000686

This module covers the operational parameters of Waters ACQUITY TUV detector for UPLC. This module shows how to set the appropriate data acquisition rate and filtering constant for a separation. There is an explanation and example

of using the Median Baseline Filter (MBF) to correct for baseline drifting.

	This mo	dule can a	ilso be pu	ırchased in	dividually:
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Americas	Europe/India	Asia	Price (\$)*	Duration
<u>Register</u>	Register	Register	100.00	20 min.

#### Module 3: Maintenance of UPLC/TUV

Part Number: 750000687

This module covers routine daily and yearly maintenance of Waters ACQUITY TUV detector for UPLC. This module shows how to properly change the lamp and provides recommended cleaning procedures for the flow cell.

This module ca	an also be purchase			
Americas	Europe/India	Asia	Price (\$)*	Duration
Register	Register	Register	100.00	20 min.

### Module 4: Theory of UPLC/PDA

Part Number: 750000688

This module will cover the theory of UV/Visible light absorption and the optics of Waters ACQUITY PDA detector for UPLC. The theory section covers Beer's law, how lamp output, solvent background adsorption, and a compound's spectrum all affect chromatography sensitivity and linearity. The optics section explains the major optical components of the UPLC PDA detector and how they work.

This module ca				
Americas	Europe/India	Asia Register	Price (\$)*	Duration 40 min.
Register	<u>Register</u>	<u>Register</u>	200.00	

#### Module 5: Operation of UPLC/PDA

Part Number: 750000689

This module covers the operational parameters of Waters ACQUITY PDA detector for UPLC. This module shows how to set the appropriate data acquisition rate and filtering constant for a separation. There is an explanation and example of using both the Median Baseline Filter (MBF) and the reference compensation function to correct for baseline drift or wander.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
Register	Register	Register	100.00	20 min.	

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UPLC

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#### This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002003

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	16	11 hrs. 35 min.	1100.00

# **Modules Continued**

#### Module 6: Maintenance of UPLC/PDA

Part Number: 750000684

In this module covers the routine daily and yearly maintenance of Waters ACQUITY\* PDA detector for UPLC. This module shows how to properly change the lamp and provides recommended cleaning procedures for the flow cell.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	<u>Register</u>	<u>Register</u>	100.00	20 min.	

#### Module 7: Practical Tips for UV and PDA Detection

Part Number: 750000773

This module will discuss practical tips for optimizing TUV and PDA detectors for maximum linearity and sensitivity, rugged and reproducible methods. There are recommendations for wavelength choices, mobile phases solvents and additives, and methods parameters. Included is troubleshooting of several TUV and PDA problems.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	<u>Register</u>	<u>Register</u>	100.00	30 min.	

### Module 8: Achieving the Best LC Peak Shape

Part Number: 750000788

Good peak shape is crucial in liquid chromatography for the best sensitivity, peak resolution, and reproducibility of peak areas and retention times. Causes of non-ideal peak shapes and how to improve peak shape are discussed.

This module can also be purchased individually:					
Americas	Europe/India	Asia	<b>Price (\$)*</b>	Duration	
<u>Register</u>	Register	Register	100.00	25 min.	

### Module 9: nanoACQUITY Tips and Tricks

Part Number: 750000791

This module discusses how to obtain good, reproducible data from the nanoACQUITY including solvents, plumbing, startup and shutdown; and optimizing sample trapping, gradients, and sensitivity.

This module can also be purchased individually:					
Americas Register	Europe/India Register	Asia Register	Price (\$)* 100.00	Duration 60 min.	
<u>negister</u>	<u>negister</u>	<u>negister</u>	100.00	60 mm.	

### Module 10: UPLC Sample Injection Modes

Part Number: 750000787

This module will discuss two types of sample injection: fixed loop and flow through needle. The topics to be covered include the injection and wash cycles, the advantages of the different injection modes, how to optimize peak area reproducibility, and how to minimize carryover.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
Register	<u>Register</u>	Register	100.00	35 min.	

### Module 11: Fundamentals of UPLC: Theory and Advantages

Part Number: 750000838

The Fundamentals of UPLC discusses the theory of how chromatographic advantages of greater speed, sensitivity, and peak resolution are obtained. Information about column chemistry (particle types, ligands, particle and pore sizes) and how it provides a basis for optimizing separations.

This module can also be purchased individually:						
Americas	Europe/India	Asia	Price (\$)*	Duration		
Register	Register	<u>Register</u>	200.00	70 min.		

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Empower 3 SW FR2: Advanced Topics - Processing

Empower 3 SW: Fundamentals of the QuickStart Interface

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**NEW** Proteomics Data Processing using PLGS

Transitioning from Empower 2 FR5 to Empower 3 SW FR2

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**NEW** ACQUITY QDa

Alliance HPLC Operation and Performance Maintenance Track (Video Format)

Clinical LC-MS Applications

Complex Mixture Analysis (UPLC-QTof MS)

Complex Mixture Analysis (UPLC-Quadrupole MS)

General Liquid Chromatography (LC)

HPLC

Intact Protein Analysis (UPLC-QTof MS)

**NEW** Introductory Familiarization for LC-MS Tof-Based Systems

**NEW** Introductory Familiarization for LC-MS Quadrupole-Based Systems

NEW Introductory Familiarization for ACQUITY UPLC Systems (Classic and I-Class)

**NEW** Introductory Familiarization for ACQUITY UPLC Systems (H-Class)

LC-MS Principles and Concepts

Metabolite Identificatio (UPLC-QTof MS)

Metabonomics/Metabolomics (UPLC-QTof MS)

MS Instrumentation

Peptide Mapping (UPLC-QTof MS)

Quantitation (UPLC-Quadrupole MS)

# **UPLC**

This track contains a series of modules that cover the basics of UltraPerformance Liquid Chromatography (UPLC). These modules will discuss the following topics: Theory, Operation, and Maintenance of UPLC using both Tunable Ultra Violet (TUV) and Photodiode Array (PDA) detectors.

This track can be purchased in its entirety or as individual modules listed below.

Track Part Number: 750002003

Americas	Europe/India	Asia	# Modules	Duration	Price (\$)*
Register	Register	Register	16	11 hrs. 35 min.	1100.00

# **Modules Continued**

# Module 12: ACQUITY Tips and Techniques

Part Number: 750000844

Tips and Techniques for the proper set up, preparation, running and shutting down of an ACQUITY System are discussed, along with the use of the ACQUITY Console for system evaluation. The process and tools for the migration of HPLC methods to UPLC methods is presented.

This module can also be purchased individually:						
Americas	Europe/India	Asia	Price (\$)*	Duration		
<u>Register</u>	<u>Register</u>	<u>Register</u>	100.00	100 min.		

#### Module 13: ACQUITY H-Class - Tips and Techniques

Part Number: 750000845

Tips and Techniques for the proper set up, preparation, running and shutting down of an ACQUITY H-Class system are discussed, along with the use of the ACQUITY H-Class Console for system evaluation. The process and tools for the migration of HPLC methods to UPLC methods is presented.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	<u>Register</u>	<u>Register</u>	100.00	90 min.	

### Module 14: Introduction to Supercritical Fluid (SFC) Techniques

Part Number: 750000858

This module provides a comprehensive explanation of supercritical fluid properties and their advantages in purification and chromatographic applications.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
<u>Register</u>	<u>Register</u>	<u>Register</u>	100.00	20 min.	

### Module 15: UPC<sup>2</sup> Method Development

Part Number: 750000859

This module provides the user a basic understanding of parameters used in convergence chromatography method development as well as a detailed approach to developing a separation.

This module can also be purchased individually:					
Americas	Europe/India	Asia	Price (\$)*	Duration	
Register	<u>Register</u>	Register	100.00	30 min.	

### Module 16: ACQUITY QDa General Theory and Basic Use

Part Number: 750000862

Basic mass spectrometry theory and use of the QDa in Empower 3 Software.

•	This module can also be purchased individually:					
	Americas Register	Europe/India Register	Asia Register	Price (\$)* 200.00	Duration 75 min.	
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