COURSE CATALOG

Charles River Global Education Services

An extensive and comprehensive curriculum designed to meet your needs and enhance productivity by developing solid, useful skills

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OVERVIEW

Charles River Development's Educational Services group provides high quality training to help you work more effectively with the Charles River Investment Management Solution (Charles River IMS). We offer an extensive and comprehensive curriculum designed to meet your needs and enhance productivity by developing solid, useful skills.

"I was very pleased with the clarity, pace and delivery of this training…exercises are very useful. Thank you!"

Our curriculum covers the following broad areas of Charles River Investment Management Solution:

- Compliance
- Portfolio Management
- Trading
- Wealth
- Charles River Anywhere
- Derivatives
- System Administration

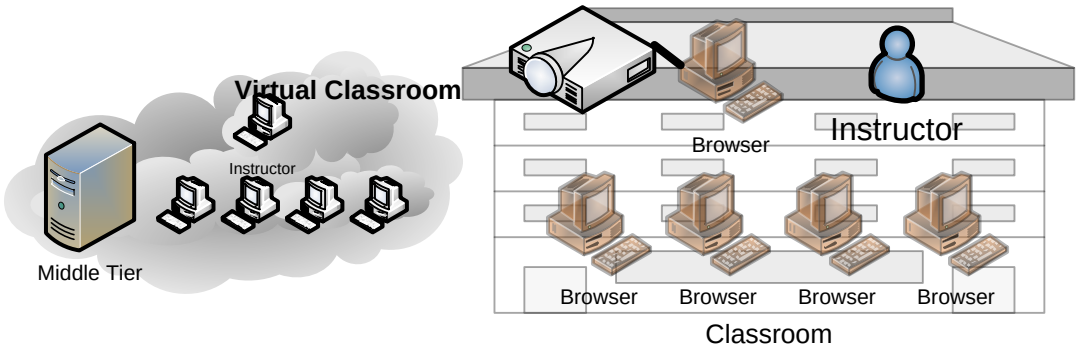
"The course is well laid out and the instruction is great – very good overview of the product"

All courses provide extensive hands-on experience, and most allow participants to obtain Level 1 Certification in the topic. Your training investment allows you to develop a highly skilled workforce, while reducing technical support calls, increasing efficiencies, and achieving high ROI from your Charles River IMS investment.

The courses can be delivered at your site or at any of our learning centers. All courses are instructor-led, providing participants with both subject-matter discussion and hands-on experience with the products. Participants will have their own workstations.

INTRODUCING THE CHARLES RIVER VIRTUAL CLASSROOM

Charles River offers all courses with the option of using our new cloud-based virtual classroom. As long as you have workstations with internet access, we can bring our fully configured classroom to your location saving you the headache of configuring a training environment. You have all it takes for us to deliver training at your site.



We offer a number of remote training options using our new virtual classroom:

- Have your students attend one of our regularly scheduled classes from your location via the internet.
- We can remotely train in your classroom. In addition to avoiding setup and travel costs for both your students and the instructor, with this option we can offer custom delivery of training that fits your schedule. For example, many clients schedule courses in half-day units allowing them to schedule a two-day course over four afternoons.
- We can train your students from multiple locations without them traveling to either your site or ours.
- We can incorporate our training environment into one-on-one training in your production environment.

CERTIFICATION

Level 1 Certification is available to clients in the following core components of Charles River:

- Compliance; Parts 1 and 2
- Blotter (Charles River Trader)
- Charles River Anywhere
- Manager Workbench
- Privileging and Workflow Design (System Administration 1)
- Batch Processing, Workflow Rules, Db Administration (System Administration 2)
- Installing and Configuring Charles River IMS
- Trading and Monitoring Derivatives
- Client Boot Camp and Client Boot Camp for Wealth Management

WHY CERTIFY?

For the employer –

- Improve employee productivity and increase your ability to leverage the application
- Improve your team's ability to deliver successfully and satisfy end-users
- Provide a reliable validation of employee knowledge and training

For the employee –

- Gain practical skills you can use on the job
- Demonstrate in-depth skills
- Tangible recognition of your knowledge
- Become a more valuable member of your team

LEARNING PATHS

These sample learning paths are based on either the role of the participant, i.e. the compliance officer, the system administrator, etc.; or the size of the implementation, i.e. is it a hosted environment or a small implementation with 20 or fewer users? These are suggestions for the types of training you may wish to consider based on your specific need.

ROLE-BASED

Project Team - Hosted or Not Hosted

- **Recommended**
  - Client Boot Camp (4 Days)
  - Privileging and Workflow Design (3 days)
  - Training for area of concentration (Compliance, Blotter, New Manager Workbench)
- **Elective**

Compliance

- **Recommended**
  - Client Boot Camp (4 Days)
  - Charles River Compliance Part 1 (3 Days)
  - Charles River Compliance Part 2 (2 Days)
- **Elective**

Trading Support

- **Recommended**
  - Manager Workbench for the Charles River IMS (2 Days)
  - Using & Configuring the Blotter (3 Days)
  - Trading and Monitoring Derivatives for the Charles River IMS (2 Days)
- **Elective**

Technical Support

- **Recommended**
  - Client Boot Camp (4 Days)
  - Privileging and Workflow Design (3 days)
    Batch Processing, Workflow Rules, Db Administration (2 days))
  - Installing and Configuring Charles River IMS (4 days)

IMPLEMENTATION-BASED

Hosted

- Client Boot Camp (4 Days)
- Charles River Compliance Part 1 (3 days)
- Privileging and Workflow Design (3 days)

Small Implementation (<15 Users)

- Client Boot Camp (4 Days)
- Charles River Compliance Part 1 (3 days)
- Privileging and Workflow Design (3 days)

Medium Implementation (15 - 30 Users)

- Manager Workbench for the Charles River IMS (2 Days)
- Using and Configuring the Blotter (3 Days)
- Charles River Compliance Part 1 (3 Days)
- Privileging and Workflow Design (3 days)

Large Implementation (>30 Users)

- Client Boot Camp (4 Days) OR
- Manager Workbench for the Charles River IMS (2 Days)
- Using and Configuring the Blotter (3 Days) AND
- Charles River Compliance Part 1 (3 Days)
- Charles River Compliance Part 2 (2 Days)
- Privileging and Workflow Design (3 days)
- Batch Processing, Workflow Rules, Db Administration (2 days)

CHARLES RIVER COURSE CURRICULUM – GENERAL COURSES

INTRODUCTION TO THE CHARLES RIVER INVESTMENT MANAGEMENT SOLUTION

DURATION

1 Day

Students will learn basic navigation through the Charles River IMS; entering transactions using New Manager Workbench and the Blotter as well as basic concepts of Compliance test writing and managing alerts & warnings. Basic system components including System Administration, the Workflow Monitor, and nightly processing are also discussed.

WHO SHOULD ATTEND: Technical Support, Operations and Project Team members

PREREQUISITES: None

CLIENT BOOT CAMP (AN ACCELERATED OVERVIEW OF THE CHARLES RIVER IMS)

DURATION

4 Days

LEVEL 1 CERTIFICATION AVAILABLE

This course provides accelerated training in the major components of the Charles River Investment Management Solution, introducing you to core aspects of the system using an interactive case-study approach.

The course introduces basic concepts, and then builds on these to introduce basic transaction skills followed by increasingly more complex transactions. In addition to the basic core components of New Manager Workbench, Blotter and Compliance, this course includes an introduction to FIX and Charles River Anywhere. At the end of the course, you will have the opportunity to certify in Charles River IMS basics.

WHO SHOULD ATTEND: This class is intended for anyone who needs intensive training in the Charles River IMS and who does not have time for more traditional training.

PREREQUISITES: None

WEALTH MANAGEMENT

CLIENT BOOT CAMP FOR WEALTH MANAGEMENT

DURATION

4 Days

LEVEL 1 CERTIFICATION AVAILABLE

This course provides accelerated training in the major components of the Charles River Investment Management Solution, introducing you to core aspects of the system using an interactive case-study approach.

The course introduces basic concepts, and then builds on these to introduce basic transaction skills followed by increasingly more complex transactions. In addition to the basic core components of New Manager Workbench and Blotter, this course will also introduce you to Wealth Management functions in Charles River IMS including Central Workbench, model management and Charles River Anywhere. At the end of the course, you will have the opportunity to certify in Charles River IMS wealth basics.

WHO SHOULD ATTEND: This class is intended for anyone who needs intensive training in the Charles River IMS and who does not have time for more traditional training.

PREREQUISITES: None

WEALTH MANAGEMENT FOR THE CHARLES RIVER IMS

DURATION

2 Days

LEVEL 1 CERTIFICATION AVAILABLE

During this course you will be introduced to the basics of Wealth Management in the Charles River IMS. Charles River's wealth management platform allows firms to support a variety of wealth products on a single platform ranging from basic advisory to the sophisticated needs of ultra-high net worth clients. An integral part of the Charles River Investment Management Solution, the offering combines wealth-specific capabilities with portfolio management components that meet wealth managers' growing need to for institutional-class capabilities. Topics include Central Workbench, building SMA and UMA models, and special Compliance considerations for Wealth Management.

You will have time to practice what you are learning through hands-on exercises and at the end of the course you will have the opportunity to certify in this topic by taking a one-hour exam.

WHO SHOULD ATTEND: This class is intended for Charles River Wealth users who will need to manage the Wealth functions within the Charles River IMS. Technical support users who are responsible for supporting Charles River Wealth may also benefit from this course.

PREREQUISITE: *Introduction to the Charles River IMS*

COMPLIANCE

CHARLES RIVER COMPLIANCE PART 1

DURATION

3 Days

LEVEL 1 CERTIFICATION AVAILABLE

Students will have extensive practice in writing the major types of compliance tests and validating test results. Students will also learn how to manage alerts and warnings including the principals of reopen and auto-close logic, how the four methods of running Charles River Compliance affect the database, how to assign privileges to close alerts and warnings and to maintain compliance tests. Topics also include the more complex test writing concepts of dynamic denominators, list-based tests, ratings tests, and benchmark tests.

WHO SHOULD ATTEND: This class is intended for Charles River Compliance users who will need to write tests, as well as research and close compliance alerts. Technical support users who are responsible for supporting Charles River Compliance may also benefit from this course.

PREREQUISITES: *Introduction to the Charles River IMS*

CHARLES RIVER COMPLIANCE PART 2

DURATION

2 Days

LEVEL 1 CERTIFICATION AVAILABLE

Students will learn additional topics in Charles River Compliance including using user-defined fields and security classifications in compliance tests, combination tests, cash tests, unit trust look-through /INBASKET, substantial shareholder disclosure testing and reporting, and using the Compliance Calculation Builder and Workflow Monitor. Derivative topics will include security attribute lists, and new compliance parameters to support writing compliance tests. There are extensive hands-on exercises in writing the compliance tests in the Charles River IMS.

WHO SHOULD ATTEND: Experienced Charles River Compliance users who require additional test-writing skills. Technical support users who are responsible for supporting Charles River Compliance may also benefit from this course.

PREREQUISITES:

- *Introduction to the Charles River IMS*
- *Charles River Compliance Part 1*

COMPLIANCE FUNDAMENTALS

DURATION

1 Day

This one-day course provides a quick overview of Charles River Compliance. Topics include basic writing of compliance tests; running compliance; viewing and interpreting compliance reports; managing alerts, warnings and data exceptions.

WHO SHOULD ATTEND: Technical support users or project team members requiring a basic understanding of Compliance concepts in Charles River. It may also be useful for 'turn-over' training or for Compliance staff who do not have time for the full three-day course.

PREREQUISITES: None

TRADING AND PORTFOLIO MANAGEMENT

MANAGER WORKBENCH FOR THE CHARLES RIVER IMS

DURATION

2 Days

LEVEL 1 CERTIFICATION AVAILABLE

Students will learn basic and advanced Manager Workbench skills, including methods of order generation and targeting, creation of asset allocation and security selection models. They will learn to customize the workspace using profiles and views. Extensive hands-on exercises are used to strengthen the individual lessons. Advanced topics include modeling with replacement securities and carve outs, working with Cash Management tools.

WHO SHOULD ATTEND: Portfolio managers, traders or trading operations staff. Technical support, operations and project team members may also benefit.

PREREQUISITES:

- *Introduction to the Charles River IMS*

USING AND CONFIGURING THE BLOTTER (CHARLES RIVER TRADER)

DURATION

3 Days

LEVEL 1 CERTIFICATION AVAILABLE

Students will learn typical trading workflows with special attention to order entry and execution. They will learn about configuring views, layouts and profiles, layout designer, navigating and searching the Blotter and basic blotter functions such as order entry and allocation. Students will learn to work with FIX and the new Broker bar and will be introduced to advanced blotter actions including contingent orders, merging or splitting orders; targeting, FX trading, Swaps, and Crossing.

WHO SHOULD ATTEND: Anyone involved in using, configuring or supporting the Blotter.

PREREQUISITES:

- *Introduction to the Charles River IMS*

TRADING AND MONITORING DERIVATIVES IN THE CHARLES RIVER IMS

DURATION

2 Days

LEVEL 1 CERTIFICATION AVAILABLE

Students will be introduced to the trading of derivatives in Charles River through exercises providing hands-on experience with Charles River IMS. Topics include an introduction to derivative structures; basic configuration and workflows for swaps, trading interest rate swaps, total return swaps, swaptions and credit instruments; along with basic compliance monitoring of derivatives.

WHO SHOULD ATTEND: Portfolio managers, traders or trading operations staff as well as compliance team members requiring an understanding of the derivatives trading process. Technical support, operations and project team members may also benefit.

PREREQUISITES:

- *Using and Configuring the Blotter (Charles River Trader)*
- *Charles River Compliance Part 1*

TRADING AND PORTFOLIO MANAGEMENT

CHARLES RIVER ANYWHERE

DURATION

2 Days

LEVEL 1 CERTIFICATION AVAILABLE

Charles River Anywhere is a browser-based application that securely accesses certain features of Charles River. As market conditions constantly change and the need to respond immediately increases, Charles River Anywhere allows the real-time remote management and monitoring of portfolios, trading activity, compliance alerts and post-trade information. Charles River Anywhere provides support for business continuity and/or disaster recovery. This course introduces the concepts of Charles River Anywhere and Charles River Mobile, and then builds on these concepts to introduce transaction skills followed by increasingly more complex transactions.

WHO SHOULD ATTEND: This class is intended for anyone who is responsible for supporting Charles River Anywhere or who will be using Charles River Anywhere and/or Charles River Mobile for daily trading or compliance activities.

PREREQUISITES: None

ENHANCED END USER TRAINING FOR PORTFOLIO MANAGERS AND TRADERS

DURATION

Varies according to course customization

Standard courses may not fit the training requirements for some users. Many managers, traders and others do not have the flexibility to attend multi-day courses. In addition, users may be interested only in the application of Charles River functions to their specific workflows. For these users we recommend Enhanced End User Training, a flexible training program that consists of a combination of short classroom sessions, targeted online review lessons, and one-on-one training done using the customer's system and data. Classroom and online training are used to teach system fundamentals using specially developed examples and training data. One-on-one training allows users to apply what they have learned to their own environment.

WHO SHOULD ATTEND: Enhanced end user training is typically targeted to managers, traders, trading assistants and some operations staff where training time is scarce and customer specific task oriented training is the objective.

PREREQUISITES: None

SYSTEM ADMINISTRATION

PRIVILEGING AND WORKFLOW DESIGN (SYSTEM ADMINISTRATION FOR THE CHARLES RIVER IMS – PART 1)

DURATION

3 Days

LEVEL 1 CERTIFICATION AVAILABLE

In the first course of the two-part System Administration course, Students will learn administration of Charles River through discussions and exercises focusing on workflow design and common implementation issues. Topics include user group and user privileges, workflow design, system parameters, stored queries, Layout Designer, and Blotter setup.

WHO SHOULD ATTEND: System administrators, project managers, project team members, and technical support staff.

PREREQUISITES:

- *Introduction to the Charles River IMS*

BATCH PROCESSING, WORKFLOW RULES, DB ADMINISTRATION (SYSTEM ADMINISTRATION FOR THE CHARLES RIVER IMS – PART 2*)*

DURATION

2 Days

LEVEL 1 CERTIFICATION AVAILABLE

In the second course of the two-part System Administration course, students will learn administration of Charles River through discussions and exercises focusing on batch processing and common implementation issues. Topics include, imports and exports, workflow rules, reports, FIX, navigations, user defined fields and database administration.

WHO SHOULD ATTEND: System administrators, project managers, project team members, and technical support staff. This course is optional for Charles River hosted clients. We recommend that all non-hosted clients take both System Administration Level 1 & Level 2.

PREREQUISITES:

- *Introduction to the Charles River IMS*
- *Privileging and Workflow Design*

SYSTEM ADMINISTRATION

INSTALLING & CONFIGURING THE CHARLES RIVER IMS

DURATION

4 Days

LEVEL 1 CERTIFICATION AVAILABLE

This four-day course is the third course in the System Administration series and will give the participant the opportunity to learn how to install Charles River and configure the Middle Tier through discussion and hands-on practice. The course also includes a discussion of the installation and use of Charles River Anywhere. Participants are introduced to creating custom reports, the performance tool and the Excel Add-in. Participants are then offered the opportunity to certify at Level 1 in Installing and Configuring the Charles River IMS at the end of the fourth day

WHO SHOULD ATTEND: System administrators, project managers, project team members and technical support staff.

PREREQUISITES:

- *Introduction to the Charles River IMS*
- *Privileging and Workflow Design*
- *Batch Processing, Workflow Rules, DB Administration*

ADDITIONAL TRAINING

INVESTMENT BOOK OF RECORD (IBOR) IN THE CHARLES RIVER IMS

DURATION

2 Days

LEVEL 1 CERTIFICATION AVAILABLE

Charles River IBOR maintains current and historical positions based on intraday trades as well as external transactions, cash flows, corporate actions, and security life cycle events. It provides Charles River IMS users ready access to intraday real-time and historical positions on the same platform and supports a self-sufficient beginning-of-day (BOD) workflow without requiring a daily feed from an accounting system. One can reconcile positions and tax lots as required with an external system to ensure their accuracy and consistency. Topics covered in this course include:

- Navigation in the IBOR workspace
- Enabling IBOR functions
- Using IBOR to
    - Review positions and tax lots
    - Review transactions, create new transactions
    - Work with Corporate Actions
    - Perform beginning of day and end of day functions
    - Review security events such as maturities, coupons, etc.

WHO SHOULD ATTEND; System administrators, project managers, project team members, and technical support staff as well as anyone responsible for supporting IBOR in Charles River.

PREREQUISITES: None, although a working knowledge of navigation and functions in Charles River will be beneficial.

PERFORMANCE MEASUREMENT AND ATTRIBUTION OVERVIEW

DURATION

1 Day

Charles River Performance Measurement and Attribution (PMA) supplies Global Investment Performance Standards (GIPS)-compliant performance measurement attribution, analysis, and reporting requirements for investment managers. Charles River PMA is a comprehensive system that addresses multiple asset class performance and attribution results in any currency and frequency.

During this session, participants will gain experience running and analyzing reports generated by the PMA function. Other topics will include:

- Making corrections to imported data
- Setting up account composites
- Configuring management fee schedules for accounts

ADDITIONAL TRAINING

- Running the PMA processor to update data
- Including PMA columns in New Manager Workbench

WHO SHOULD ATTEND; System administrators, project managers, project team members, and technical support staff as well as anyone responsible for supporting PMA in Charles River.

PREREQUISITES: None, although a working knowledge of navigation and functions in Charles River will be beneficial.

GENERAL INFORMATION

TO ENROLL

A complete schedule for all courses will be found on the Client Portal on the Charles River Web site (www.crd.com). You can enroll in any course at any location through the Web site. E-mail training@crd.com or contact the Charles River office in your area for additional information. See back cover for office contact information. Participants are encouraged to enroll thirty days in advance.

NOTES

- Course times are generally 9 AM – 5 PM
- Cost of courses delivered at Charles River Learning Centers are charged on a per student, per day basis and include all course materials and certification exams if applicable
- Continental breakfast and lunch are provided
- Access to the Internet will be available during breaks and wireless access is available in some locations
- Students must provide their own lodging, dinner and transportation
- Charles River can provide a list of local hotels and directions from local airports

CANCELLATION POLICY

Charles River Development reserves the right to cancel a class if fewer than three students enroll. Tuition is refundable in full if registration in a class is canceled by a student 14 days or more prior to a class. Cancellations within 14 days prior to a class will be billed in full; however, students are allowed to reschedule to the next available class.

CLIENT SITE TRAINING

Training is available for delivery at client sites. The client can either set up a training environment at his site or take advantage of the new Charles River Virtual Classroom. See page 1 for more information. If the client chooses to set up his own environment, then the client must have a training facility that includes a workstation for each student and that can support the MS SQL Server database used for exercises. On-site training costs include training materials for up to ten students. Instructor expenses and setup time are billed separately. Contact your Charles River relationship manager or the office nearest you for additional information. See the back cover for office contact information. Information is also available by e-mailing training@crd.com.

ADDITIONAL TRAINING SITES

In addition to our Charles River Learning Centers, we deliver training courses at various regional sites, for example New York City, Los Angeles, Montreal, Mexico City, Stockholm and Johannesburg. See the current training schedule on the Client Portal for course details, dates and locations. You can obtain additional information on our Web site, www.crd.com, or by e-mailing us at training@crd.com.