

DHI Education Resource Guide

Flexible | Convenient | Customized



OCTOBER 2010 EDITION

Welcome to DHI's Education Resource Guide!

Within this guide you will discover a wealth of information that is designed to help you advance your career and become ever more indispensable to your company as you progress along the learning path of DHI's educational offerings.

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Overview

Within this guide you will find a wealth of information including explanations of DHI's Education and Certification programs, descriptions of each training course, and lists of required courses for each diploma or professional certification; you will also find additional valuable information. Please take a few minutes to read through this guide and understand how it will be of use to you as you plan your professional training.

Whether you are new to the commercial door and hardware industry, a seasoned professional consultant or somewhere in the middle, you will find we have courses that will help you develop and hone your skills. You have the ability to customize our educational program to suit your immediate needs as well as your long-term professional goals.

To help you plan your personal education program, please be sure to check the DHI Web site, www.dhi.org, for the latest updated information on our education calendar.

If you are pursuing professional certification, you will discover we have designed a path through our training classes. You can choose to complete the course of training in the prescribed order or in any order that meets your immediate needs. See the charts on pages 7 and 9 to help determine your educational path.

Each level of professional certification (AHC, CDC and EHC) has a list of formal prerequisites which must be satisfied to complete your eligibility requirements for the certification exams. You can accelerate through these prerequisites by passing the online Challenge Exams, which are offered through DHI's Web site. Challenge Exams give you immediate credit for your previous DHI training, manufacturer-based training or on-the-job experience you have acquired since you entered the industry; in addition, passing the Challenge Exams will help maximize your training dollars and save you time away from home and the office.

Classes are designed to accommodate a maximum number of students without compromising our quality standards. Class sizes vary depending upon the subject matter of the particular class. Be sure to register early to ensure you are able to attend the class(es) of your choice. For a complete schedule of upcoming DHI educational offerings, visit our Web site at www.dhi.org.

A new service that is designed specifically to address your questions and concerns regarding DHI's Education and Certification programs is available to you. Call DHI's Education Department staff at (703) 222-2010 or contact us by email at education@dhi.org with your questions.

We look forward to helping you meet your professional goals!



DHI Education is for Everyone!

Flexible | Convenient | Customized

DHI's education and credentialing program offers the flexibility and convenience that allows YOU to customize your education to best suit your individual needs.

Regardless of where you are in your career, DHI's education and credentialing program has a course for you.

Novice:

0-5 years in the industry

Whether your goal is to become a DHI consultant or perhaps become more proficient at project management, you can now customize the DHI courses to best meet your specific training needs. As your professional goals change, you will have the ability to continue your education without repeating subjects already mastered.

To get started with the basics of the architectural openings industry, DHI developed an excellent (and mandatory) self-study course – *Fundamentals of Architectural Doors and Hardware*.

Professional:

5-10 years in the industry

As a DHI consultant, at any level of experience, take advantage of new courses designed to keep you current with trends and issues in today's construction industry. Through DHI-approved courses/activities, earn Continuing Education Program (CEP) points to maintain your registration in the program.

Experts:

10+ years in the industry

Even seasoned veterans need to stay current with trends and developments throughout the industry. In addition to the education and credentialing program, DHI offers a number of opportunities for those who want to further their education.

At this stage of your career, you should consider giving back to the industry. You can contribute articles for the *Doors & Hardware* magazine, teach an education session or become an instructor at Chapter and National classes.

DHI's Annual Conference and Exposition is a must-attend for the more advanced students. As part of DHI's annual conference and exposition, The Foundation hosts the Forum for the Future - regarded as the industry's foremost think-tank for the direction of the architectural openings industry. This event is a summit meeting of industry leaders where corporate heads share their best business practices and perspectives on the industry's future.

Regardless of where you are in your career, DHI's hallmark publication, *Doors & Hardware*, is a valuable resource of industry knowledge. The articles come from a variety of industry professionals and experts who volunteer their experience, expertise and knowledge.

Education Options

Whether you are beginning your career in the commercial door and hardware industry or you are a seasoned veteran looking to enhance your knowledge and skills, DHI has training designed to fit your needs.

Five ways to continue your education.



National Education

Learn from experienced instructors with first-hand industry knowledge. Bring your questions to the experts. Network with your peers. Go back to your office with the essentials, and tailor them to your workplace.



Chapter Education

The DHI Chapter Education system allows Chapters to purchase the instructor and student materials for many of DHI's training courses. The instructor manuals have dedicated notes that will guide qualified instructors through the presentation. Included with the training materials is the official end-of-class exam that students must pass in order to receive credit toward a diploma or qualify for one of the professional certification exams. The exams are to be returned to DHI for scoring and processing. Students passing a Chapter-delivered

class will receive full credit for the class just as students who attend DHI's National class sessions. This program makes DHI's education easily accessible to local members by reducing travel and time away from the office.

Guidelines for planning and hosting DHI classes through the Chapter Education system are available under the **Chapters** section of the DHI Web site at www.dhi.org.

Call DHI's Education Department staff at (703) 222-2010 or contact us by email at education@dhi.org with your questions.

Education Options (continued)



In-house Training

Education for you and your colleagues in the convenience of your office.

The In-house Training program allows DHI corporate members to purchase the instructor and student materials for DHI courses and, using qualified instructors from within their companies, offer DHI's education to their employees. Included with these training materials is the official end-of-class exam that students must pass in order to receive credit toward a diploma or to qualify for one of the professional certification exams. The exams are to be returned to DHI for scoring and processing.

Students passing an In-house delivered class will receive full credit for the class just as students who attend DHI's national class sessions. This program is designed to facilitate employees' education without leaving work!

Guidelines for planning and hosting DHI classes through the In-house Training program are available under the **Education/ In-house Training** section of the DHI website at www.dhi.org.

Call DHI's Education Department staff at (703) 222-2010 or contact us by email at education@dhi.org with your questions.



Online Education

Take advantage of DHI's growing number of online education options. Train when and where you have time and customize your course selection to fit your own pace. Please go to edu.dhi.org to enter DHI's new online education site.



Challenge Exams

Get credit for your previous on-the-job training and skills learned from other industry-sponsored education. These exams are a convenient way to continue your education right from the comfort of your home or office.

NOTE: By taking a Challenge Exam, you are indicating to DHI that you have gained enough knowledge of the subject matter - through study and experience - to pass the test without taking our face-to-face course. An individual will not be able to pass a Challenge Exam by solely studying the reference materials provided by DHI for the course. DHI highly recommends taking the applicable classroom course to gain a thorough knowledge of the subject matter.

If a student fails a Challenge Exam, he/she will incur a retake fee that will be equivalent to the cost of the Challenge Exam at the time the retake is requested.



Selecting Instructors for Chapter and In-house Training Programs

Instructors teaching Chapter and In-house Training programs are not required to be AHCs, CDCs or EHCs. However, they must have expertise in the subject matter of the classes they teach. Each instructor manual for DHI's classes includes a lesson plan and "speakers notes" that are intended to guide instructors as they present the classes. Instructors will need to draw on their personal and professional experiences as they present the classes.

There is a reserve of untapped knowledge and expertise within each DHI Chapter. Volunteer instructors who are AHCs, CDCs and/or EHCs earn valuable CEP points for leading classes.

DHI's Education and Credentialing Program *Benefits at a Glance*

- Enhance your company's position by taking advantage of the technological advances that affect the architectural openings industry.
- Maximize your training opportunities with customized education programs that meet the specific needs of each individual in any position within your organization.
- Reach your full potential through credentials and overall industry knowledge.
- Accelerate your career path by earning credit for knowledge gained through past technical training and practical experience.
- Gain industry recognition for professional achievements.

Diploma-Level Certificates

DHI offers four diploma-level certificates:

- Fundamentals of Construction Documents
- Fundamentals of Estimating
- Fundamentals of Detailing
- Fundamentals of Project Management

Each diploma-level certificate has a list of required courses. The students seeking a diploma must complete each of the required courses for each diploma.

DHI recommends that students, who are new to the industry and those with minimal field experience, follow the suggested education path when registering for classes. For others, the order in which a candidate takes classes can vary depending upon the candidate's experience in the field and the skill level achieved.

<h2 style="text-align: center;">CHART OF REQUIRED COURSES FOR DIPLOMAS</h2>		DIPLOMAS			
		Fundamentals of Construction Documents	Fundamentals of Estimating	Fundamentals of Detailing	Fundamentals of Project Management
REQUIRED COURSES	COURSE No.				
<i>*Please see page 11 for the corresponding prerequisite course(s).</i>					
Fundamentals of Architectural Doors and Hardware Self-Study Course	SSC100	X	X	X	X
Understanding and Using Construction Documents	COR103*+	X	X	X	X
Architectural Hardware and Applications	COR113+		X	X	X
Door and Frame Applications	COR120		X	X	X
Takeoff and Estimating	COR125*		X	X	X
Electrified Architectural Hardware	COR133+		X	X	X
Using Codes and Standards	COR140		X	X	X
Using Door and Frame Standards	CDC300		X	X	X
Detailing Doors and Frames	CDC305*			X	X
Detailing Hardware	AHC205*			X	X
Advanced Detailing Hardware	AHC207*			X	X
Masterkeying	AHC200				X
Installation Coordination and Project Management	COR153*+				X
Material Purchasing Concepts	COR160				X

+ Please see the "Frequently Asked Questions" section for information regarding DHI's updated courses.

DHI Certification Program

All DHI certified consultants must thoroughly understand the following:

- Local building code(s), related industry standards and their requirements for door openings (e.g., fire-rated, means of egress and accessible openings)
- Construction documentation process
 - Roles and responsibilities of contractors, architects, owners and suppliers
- Organization and purpose of the project manual
 - CSI MasterFormat (1995 and 2004 editions)
 - AIA Master Spec
- Architectural drawings and details
- Specifications, addenda, bid forms and other construction documents
- Estimating, material purchasing and project management
- Guiding installation in the field
- Principles of specification writing
- Best business practices and ethics
- Their role as a consultant to the architect, engineer, owner or end-user

DHI offers four professional credentials:

Architectural Hardware Consultant (AHC)

Architectural Hardware Consultants (AHCs) must demonstrate expertise in:

- Hardware products and their applications
- Building uses and door-opening functions
- Keying systems and nomenclature
 - Organize and hold keying conferences
- Writing specifications for architectural hardware products
 - Coordinate hardware specifications with related sections
- Detailing architectural hardware products
- Creating finish hardware schedules and submittals
- Reviewing hardware submittals for approval

Certified Door Consultant (CDC)

Certified Door Consultants (CDCs) must demonstrate expertise in:

- Door and frame products and their applications
- Building uses and door-opening functions
- Creating door and frame shop drawings
- Writing door and frame specifications
- Reviewing door and frame submittals for approval

Electrified Hardware Consultant (EHC)

Electrified Hardware Consultants (EHCs) must demonstrate expertise in:

- Mechanical and electrified hardware products and their applications
- Building uses and door-opening functions
- Principles of electricity and terminology
- Access control devices and their application on door openings
- Integration of door openings with access control systems
- Drawing and reviewing elevation, riser and point-to-point wiring diagrams
- Creating detailed hardware sets with operational descriptions for openings with electrified hardware

Architectural Openings Consultant (AOC)

Architectural Openings Consultants are individuals who have attained AHC, CDC and EHC professional certifications. AOCs have mastered all facets of the commercial door and hardware industry and exemplify the highest standards of expertise and professionalism.

Each certification has a list of required courses. The applicant for certification must complete each of the required courses before taking the respective certification exam(s).

Students are also required to complete two electives in addition to the Core and discipline-specific classes. Students pursuing AHC certification may choose any of the CDC or EHC specific classes as their electives.

Students pursuing their CDC certification can choose any of the AHC or EHC specific classes as their electives.

Likewise, students pursuing the EHC certification can choose any of the AHC or CDC specific classes as their electives.

Once the qualification criteria are completed, the candidate may apply and sit for the certification examination. Each passed Certification exam is worth 100 CEP points.

CHART OF REQUIRED COURSES FOR CERTIFICATION

CERTIFICATIONS

REQUIRED COURSES

*Please see page 11 for the corresponding prerequisite course(s).

COURSE No.

Architectural Hardware Consultant (AHC)

Certified Door Consultant (CDC)

Electrified Hardware Consultant (EHC)

Fundamentals of Architectural Doors and Hardware Self-Study Course	SSC100	X	X	X
Understanding and Using Construction Documents	COR103*+	X	X	X
Architectural Hardware and Applications	COR113+	X	X	X
Door and Frame Applications	COR120	X	X	X
Takeoff and Estimating	COR125*	X	X	X
Electrified Architectural Hardware	COR133+	X	X	X
Using Codes and Standards	COR140	X	X	X
Principles of Specification Writing	COR145	X	X	X
Installation Coordination and Project Management	COR153*+	X	X	X
Material Purchasing Concepts	COR160	X	X	X
Professional Sales	COR165	X	X	X
Masterkeying	AHC200	X		X
Detailing Hardware	AHC205*	X		X
Advanced Detailing Hardware	AHC207*	X		X
Writing Hardware Specifications	AHC215*	X		X
Using Door and Frame Standards	CDC300		X	
Detailing Doors and Frames	CDC305*		X	
Writing Door and Frame Specifications	CDC310*		X	
Drawings for Electrified Hardware Systems	EHC400			X
Access Control and Electrified Hardware Systems	EHC405*			X
Installing and Troubleshooting Electrified Hardware Systems and Access Control Devices	EHC410*			X

ELECTIVE COURSES

Students are required to complete 2 elective courses, in addition to completing Core and certification specific courses. Certification courses count as electives (e.g., AHC students can choose CDC or EHC courses as electives).

Aftermarket Sales and Building Renovations	ELT500			
Effective Management of Employees	ELT505			
How to Develop and Retain Customers	ELT510			
Using BHMA Product Standards	ELT515			

OPTIONAL COURSES

Exam Prep courses are available to assess student's skills and abilities in preparation for taking the certification exams. Exam Prep courses are considered elective courses. **Before taking our Exam Prep Class, students must pass all courses required to sit for the certification exam.**

AHC Exam Prep	AHC220			
CDC Exam Prep	CDC315			
EHC Exam Prep	EHC420			

+ Please see the "Frequently Asked Questions" section for information regarding DHI's updated courses.

DHI Certification Exams and Continuing Education Program

Individuals who display the letters AHC, CDC, EHC and/or AOC after their names have passed rigorous and thorough written examinations which are designed to fully test their industry knowledge, skills and expertise. These individuals have earned the privilege to proudly use DHI's professional credentials.

AHC Exam

The Architectural Hardware Consultant (AHC) exam is currently given over two consecutive 8-hour days. Day 1 requires applicants to create a detailed hardware schedule for 15 different openings. Each hardware item must be thoroughly listed, using the manufacturers' part number(s) and nomenclature. Some of these openings require electrified hardware items to be scheduled correctly (including elevation wiring diagrams and operational descriptions). Day 2 is divided into two 4-hour periods. The first 4-hour period requires applicants to write a full three-part specification for the hardware products they detailed on Day 1 of the exam. The second 4-hour period requires applicants to successfully complete a series of written questions regarding codes and standards, hardware application, masterkeying, specification writing and electrified architectural hardware.

CDC Exam

The Certified Door Consultant (CDC) exam is currently given in one 8-hour day. The first 3-hour period requires applicants to create a door and frame schedule, draw door and frame elevations, and draw door and frame details illustrating wall to frame conditions, head and sill details, light and louver details and special door and frame construction (e.g., lead-lined, Dutch and double-acting doors). The second 3-hour period requires applicants to write a three-part specification for one of the following categories: Standard Steel Doors and Frames, Custom Steel Doors and Frames, Architectural Flush Wood Doors, Stile and Rail Wood Doors and Aluminum Doors and Frames. The final 2-hour period is reserved for a series of written questions regarding codes and standards, door and frame applications, and specification writing.

EHC Exam

Our Electrified Hardware Consultant (EHC) exam is currently given in one 8-hour day. The first 2-hour period requires applicants to answer a series of written questions regarding codes and standards, electrified hardware product applications, basic electrical circuit knowledge and terminology and access control devices. The following 1-hour period requires applicants to review a point-to-point wiring diagram and modify it to suit the new operational description. The final 5-hour period requires the applicants to successfully complete three major exercises: draw a logic diagram, review and correct a point-to-point wiring diagram, and completely schedule hardware (mechanical and electrified) for a door opening and draw the elevation, riser and point-to-point wiring diagrams.

Continuing Education Program (CEP)

A registered consultant is obligated to earn a total of 100 CEP points in a three year period. At least 80 CEP points must come from technically oriented activities during each cycle. (One way to obtain these points is by attending a class – you can earn up to three points per each hour of class training time.) Consultants registered in the CEP are permitted to use the trademarked (™) CEP seal, which is personalized with the consultant's name, DHI ID number and expiration date.

To find answers to frequently asked questions regarding DHI's Continuing Education Program, please go to www.dhi.org or email certification@dhi.org for further inquiry.

Certification Program Fee

The professional certification program fee was instituted by the DHI Board of Governors (BOG) in July 2006. Its purpose is to directly support DHI's advocacy, education and certification programs and activities. Individuals who have earned DHI's AHC, CDC, EHC and/or AOC credentials are required to pay the annual fee in order to participate in the certification program.

The certification program is DHI's most valuable membership benefit for consultants who are active individual members of DHI and is included in their annual membership dues (at no additional cost). Consultants who are not active individual DHI members are required to pay the annual certification program fee, in order to retain the usage of DHI's professional credentials.

DHI's credentials will be revoked from non-member consultants who have not paid the annual certification program fee. Once their credentials have been revoked, these individuals will have a 12-month period (from the date of revocation) to pass the current version of the respective certification exam(s) in order to reinstate their professional credentials. Under this policy, each section of the exam(s) must be passed during the initial attempt at retaking the certification exam(s). No partial exam retakes will be permitted. Individuals failing to pass the initial exam(s) (in full) under this policy, or who have allowed the 12-month period to expire, must meet all educational requirements* in order to re-qualify to take the applicable certification exam(s).

*Please see page 9 for the chart of required courses for certification.

Course Offerings and Prerequisites

The curriculum under DHI's Education and Certification Program is divided into five categories: Core courses, courses for each of the three specialized disciplines (AHC, CDC and EHC) and electives. Course descriptions and prerequisites are provided on the following pages.

DHI recommends that students who are new to the industry or who have minimal field experience follow the suggested educational path when registering for classes. For others, the order in which a candidate takes classes can vary depending upon the candidate's experience in the field and skill level achieved. The order suggested by DHI is a logical progression of course work, and DHI believes this progression will provide the student the greatest potential for success. The suggested pathways for each diploma and certification are listed in the tables on pages 7 and 9 of this document.

There are certain courses, however, that must be taken in a proper sequence, to fulfill prerequisite requirements, regardless of experience level. These courses are:

FIRST COURSE	SECOND COURSE
SSC100 - <i>Fundamentals of Architectural Doors and Hardware Self-Study Course</i>	COR103 - Understanding and Using Construction Documents
COR103 - Understanding and Using Construction Documents COR120 - Door and Frame Applications	COR125 - Takeoff and Estimating
COR103 - Understanding and Using Construction Documents	COR153 - Installation Coordination and Project Management
COR113 - Architectural Hardware and Applications COR140 - Using Codes and Standards	AHC205 - Detailing Hardware
COR133 - Electrified Architectural Hardware AHC205 - Detailing Hardware	AHC207 - Advanced Detailing Hardware
COR145 - Principles of Specification Writing AHC207 - Advanced Detailing Hardware	AHC215 - Writing Hardware Specification
COR120 - Door and Frame Applications COR140 - Using Codes and Standards	CDC305 - Detailing Doors and Frames
CDC300 - Using Door and Frame Standards COR145 - Principles of Specification Writing	CDC310 - Writing Door and Frame Specifications
COR133 - Electrified Architectural Hardware	EHC400 - Drawings for Electrified Hardware Systems
EHC 400 - Drawings for Electrified Hardware Systems	EHC 405 - Access Control and Electrified Hardware Systems
EHC 405 - Access Control and Electrified Hardware Systems	EHC 410 - Installing and Troubleshooting Electrified Hardware Systems and Access Control Devices

DHI's Educational Options:



NA = National
CH = Chapter
IH = In-house
OE = Online Education
CE = Challenge Exam

SSC100 **OE, CE** **Fundamentals of Architectural Doors and Hardware Self-Study Course** (30 CEP Points)

Purpose: This course is designed to be an introduction to the world of Architectural Doors and Builders Hardware to those who have less than two years of experience in the industry or who have limited exposure to the broad range of products used in this industry.

This course is also an excellent refresher for industry veterans who want to refamiliarize themselves with the areas they do not focus on on a daily basis.

Module 1: Fundamentals of Architectural Hardware

Lesson 1: Materials and Finishes

Describes the common metals, materials, and finishes used in builders hardware.

Lesson 2: Hand the Door

Teaches students how to use industry-standard symbols for communicating the direction door leaves swing when they write hardware sets, door schedules, and factory orders.

Lesson 3: Hang the Door

Introduces students to the builders hardware items used to carry the weight of the door leaves and the hardware items attached to them.

Lesson 4: Secure the Door - Locks and Latches

Focuses on the different types of builders hardware locks and latches used to secure door openings.

Lesson 5: Secure the Door - Exit Devices

Explains the differences between panic hardware and fire exit hardware devices and teaches students when and how exit devices are used to meet the life safety requirements of building, fire and life safety codes.

Lesson 6: Secure the Door - Door Bolts

Describes the different types of door bolts used to secure the inactive leaves of pairs of doors.

Lesson 7: Secure the Door - Cylinders and Keying

Explains the different types of cylinders used in builders hardware and provides students with a working understanding of pin tumbler cylinders as well as how masterkeying is designed to provide convenience to the building's occupants.

Lesson 8: Control the Door

Describes surface mounted and concealed door closers that are used to control the opening and closing speeds of door leaves.

Lesson 9: Protect the Door

Teaches students the various products (e.g., protection plates, door pulls, edge guards) that are used to protect door openings from being dented and scratched.

Module 2: The Architectural Door

Lesson 1: Architectural Wood Doors

Students learn the terminology, components, and materials used to manufacture flush and stile and rail architectural wood doors.

Lesson 2: Hollow Metal Doors and Frames

Introduces students to the terminology, components, and materials used to manufacture hollow metal doors and frames.

Module 3: Fundamentals in Practice

Lesson 1: Electrified Architectural Hardware

Provides students with a base-level understanding of the principles of basic electricity and how it is used to modify the functions of builders hardware items to enhance accessibility and maintain security in today's buildings.

Continued on Next Page

Course Offerings | CORE Curriculum

Required references and technical catalogs for DHI classes

We advise students to ship their reference materials directly to the hotel, to be held in their name, in sufficient time for arrival before the start of class. Students are responsible for making arrangements for return shipments following the end of class. DHI is not responsible for errant or late shipments or for returning lost and/or misplaced student materials.

Students attending **COR140 - Using Codes and Standards** are required to bring hard copies of:

1. NFPA 80, Standard for Fire Doors and Other Opening Protectives (2007 edition)
2. NFPA 101, Life Safety Code (2006 edition)
3. ICC/ANSI A117.1, Accessible and Usable Buildings and Facilities (2003 edition)
4. International Building Code (2006 edition)

Students attending **COR145 - Principles of Specification Writing** are required to bring complete (hard copy) product catalogs* for the following:

1. Hinges, pivots, continuous hinges and concealed in the floor door closers
2. Door bolts, coordinators, overhead stops and holders, and removable mullions
3. Bored and mortise locks and latches
4. Auxiliary locks
5. Panic and fire exit hardware devices
6. Surface mounted and overhead concealed door closers
7. Low energy door operators
8. Door pulls, push bars and protection plates
9. Gasketing and thresholds
10. Door stops and miscellaneous hardware
11. Electrified hardware products (e.g., power supplies, card readers, key pads, motion detectors, power transfer devices, et. al.)
12. NFPA 80, Standard for Fire Doors and Other Opening Protectives (2007 edition)
13. NFPA 101, Life Safety Code (2006 edition)
14. ICC/ANSI A117.1, Accessible and Usable Buildings and Facilities (2003 edition)

* Please contact your manufacturer(s) for the product catalogs you will be using. You may also consult DHI's Buyers Guide for manufacturer contact information.

Continued from Previous Page

Lesson 2: Codes and Standards

Introduces students to the many codes and standards that affect architectural door openings, with a focus on NFPA 80, NFPA 101, and ICC A117.1.

Lesson 3: Blueprint Reading, Specifications and Scheduling

Teaches students how to read blueprints and specifications and introduces students to hardware schedules.

Lesson 4: Jobsite Service

Explains how preparing hardware submittals, marking and packaging doors, frames, and hardware items sets the stage for good jobsite service during the course of the project.

COR103 **NA, CH, IH, CE** Understanding and Using Construction Documents

(8 Hours) (24 CEP points)

Understanding how construction projects are organized and designed requires a thorough knowledge of the construction documents that administrate, illustrate, detail and describe them. (Estimators, detailers and

project managers need to understand the purpose and use of specifications and drawings as they perform their duties. Knowing where to find specific information in the specifications, and on the drawings, and understanding how that information applies to our trade can make the difference between a profitable or unprofitable job.) This program provides estimators, detailers and project managers with the essential knowledge needed to sort through these documents to find the information they need.

You will learn how to:

- Read architectural drawings
- Use an architectural scale
- Determine the scope of work
- Use addenda
- Request change orders
- Find specific information in specifications and drawings
- Determine what materials are required on a project
- Identify conflicts between specifications and drawings
- Coordinate your work with related trades

Prerequisite: SSC100 - *Fundamentals of Architectural Doors and Hardware* Self-Study Course

Course Offerings | CORE Curriculum

COR113 NA, CH, IH, CE

Architectural Hardware and Applications

(24 Hours) (72 CEP points)

To be successful in our industry you need to have a well-rounded, general knowledge of the multitude of items used every day. Many hardware items can be employed in more than one application and knowing which application is correct for a particular opening will make you indispensable to your customers and clients. Assortments of samples are utilized in this course to help you identify and describe many of the hardware items in use today. This course will also give you an understanding of proper applications and use of architectural hardware items that will be an important step in your development as a professional in the architectural openings industry.

You will learn how to:

- Size special-purpose hinges (e.g., wide throw)
- Use raised-barrel hinges
- Use swing-clear hinges
- Select proper strike plates
- Size push/pull bars
- Resolve closer/overhead stop/holder conflicts
- Size thresholds and saddles

NOTE: Students are required to bring a calculator.

COR120 NA, CH, IH, CE

Door and Frame Applications

(16 Hours) (48 CEP points)

Today's construction projects use some of the most advanced materials and products ever made. Fire-rated and means of egress door openings have specific requirements they must meet to be able to function correctly. This course teaches you about the doors and frames (e.g., hollow metal, wood and aluminum) in use today.

You will learn how to:

- Read door and frame details
- Determine wall/partition construction
- Select frame types and anchors
- Explain different types of door and frame construction
- Use door accessories (e.g., lite kits, louvers)

NOTE: Students are required to bring a calculator.

COR125 NA, CH, IH, CE

Takeoff and Estimating

(16 Hours) (48 CEP points)

Profitability of a company often hinges on the accuracy and efficiency of the bids that estimators turn out. Overprice and your bid will not be considered, under price and you will have more work than you need - and you will consistently lose money with each project. This course introduces you to material takeoff techniques and estimating skills that will help you become a more accurate and efficient estimator.

You will learn how to:

- Perform material takeoffs
- Prepare Requests for Information (RFI)
- Prepare Requests for Substitutions
- Calculate overhead costs
- Apply mark-ups
- Prepare estimates

NOTE: Students are required to bring a calculator.

Prerequisites:

COR103 - Understanding and Using Construction Documents
COR120 - Door and Frame Applications

COR133 NA, CE

Electrified Architectural Hardware

(40 Hours) (120 CEP points)

Electrified hardware items are used on virtually all new building projects. You need to understand how these products are properly used and what their capabilities are if you are going to advance in this industry. This course provides you with the principles of low-voltage electricity through hands-on class exercises. In addition, this course is focused on teaching you how separate electrified architectural hardware components are used to create single-opening systems. Learn how to design low-voltage circuits and hook up these components through the hands-on labs.

You will learn how to:

- You will learn how to:
- Coordinate voltage and amperage requirements
- Draw elevation, logic, and point-to-point wiring diagrams
- Write operational descriptions
- Troubleshoot circuits

NOTE: Students are required to bring a calculator. Also, students will receive a digital multimeter as well as a copy of *Wiring Diagrams*, by John Schum as part of their class materials.

Course Offerings | CORE Curriculum

COR140 NA, CH, IH, CE

Using Codes and Standards

(24 Hours) (72 CEP points)

Knowledge of the many industry-related codes and standards differentiates our industry from numerous other distributor-chain driven industries. Staying current and up-to-date on the ever-changing codes and standards requires both a professional and personal commitment. This course covers NFPA 80, Standard For Fire Doors and Other Opening Protectives (2007 edition), NFPA 101, Life Safety Code (2006), ICC/ANSI A117.1, Usable and Accessible Building and Facilities (2003 edition), and International Building Code (2006 edition).

You will learn:

- The differences between codes and standards
- How to look up information
- How to interpret codes and standards
- Requirements for fire-rated openings
- Requirements for means of egress openings

Required Class Materials: Please see page 13

COR145 NA, CH, IH, CE

Principles of Specification Writing

(8 Hours) (24 CEP points)

Whether you are pursuing the designation of Architectural Hardware Consultant (AHC), Certified Door Consultant (CDC) or Electrified Hardware Consultant (EHC), you need to master the basic principles of writing architectural specifications. Specification writing skills are an essential element of becoming a professional in today's construction industry. Architects and engineers will expect you to have mastered these skills when you work with them.

You will learn how to:

- Follow CSI section format
- Use proper specification terminology and language
- Properly reference Division 1 sections
- Write clear, concise, correct and complete specifications
- Identify methods of specification writing (e.g., descriptive, performance, proprietary, reference)

Required Class Materials: Please see page 13

COR153 NA, CH, IH, CE

Installation Coordination and Project Management

(16 Hours) (48 CEP points)

Project management requires effectively working with contractors, installers, owners, and architects. Coordination of the installation of doors, frames, and architectural hardware is an essential element of a project manager's responsibilities. Pre-installation meetings with the installers increase their productivity, reduce installation errors, and ensure the door assemblies will operate reliably for many years. Project managers must also be able to read and interpret contract documents, oversee projects with fast-track schedules, and maintain profitability - all of which requires disciplined attention to detail. This course teaches you how to coordinate installations and provides you with techniques to help you succeed as a project manager.

You will learn how to:

- You will learn how to:
- Reduce call backs and backcharges
- Present proper installation techniques
- Describe common installation problems
- Improve customer relationships and satisfaction
- Increase profitability on your projects
- Avoid common project management problems
- Improve customer relationships and satisfaction

NOTE: Students are required to bring a calculator.

Students also receive a copy of the DHI Handbook, *Installation Guide for Doors and Hardware*, as part of their class materials.

Prerequisite: COR103 - Understanding and Using Construction Documents

Course Offerings | CORE Curriculum

COR160 NA, CH, IH, CE

Material Purchasing Concepts

(8 Hours) (24 CEP points)

Once the shop drawings are approved and you move into the order processing stage of a project, you need to accurately and efficiently communicate the project's requirements with each of the manufacturers. Purchase orders have to be reviewed for accuracy, acknowledgements verified and materials inspected upon receipt. In addition, everything must arrive on time and for the right price! This course teaches you how to communicate and coordinate your material purchases with the project and manufacturing schedules.

You will learn how to:

- Format purchase orders
- Confirm factory discounts
- Review acknowledgements
- Minimize freight charges
- Coordinate project and manufacturing schedules

NOTE: Students are required to bring a calculator.

COR165 NA, CH, IH, CE

Professional Sales

(8 Hours) (8 CEP points)

Professional sales skills are crucial when calling on owners, end-users, contractors and architects. How you present yourself and your company can be just as important as the information you are presenting. This course teaches you how to make professional sales calls to each of these groups.

You will learn how to:

- Initiate contact with prospective customers
- Develop customer relationships
- Identify customer needs
- Present solutions

Course Offerings | AHC Curriculum

Required references and technical catalogs for DHI classes

We advise students to ship their reference materials directly to the hotel, to be held in their name, in sufficient time for arrival before the start of class. Students are responsible for making arrangements for return shipments following the end of class. DHI is not responsible for errant or late shipments or for returning lost and/or misplaced student materials.

Students attending:

AHC205 - Detailing Hardware
AHC220 - AHC Exam Prep

are required to bring complete (hard copy) product catalogs* for the following:

1. Hinges, pivots, continuous hinges and concealed in the floor door closers
2. Door bolts, coordinators, overhead stops and holders, and removable mullions
3. Bored and mortise locks and latches
4. Auxiliary locks
5. Panic and fire exit hardware devices
6. Surface mounted and overhead concealed door closers
7. Low energy door operators
8. Door pulls, push bars and protection plates

* Please contact your manufacturer(s) for the product catalogs you will be using. You may also consult DHI's Buyers Guide for manufacturer contact information.

Students attending:

AHC207 - Advanced Detailing Hardware
AHC215 - Writing Hardware Specifications

are required to use the following materials to complete the assignments:

9. Gasketing and thresholds
10. Door stops and miscellaneous hardware
11. Electrified hardware products (e.g., power supplies, card readers, key pads, motion detectors, power transfer devices, et. al.)
12. NFPA 80, Standard for Fire Doors and Other Opening Protectives (2007 edition)
13. NFPA 101, Life Safety Code (2006 edition)
14. ICC/ANSI A117.1, Accessible and Usable Buildings and Facilities (2003 edition)

AHC200 **NA, CH, IH, CE**

Masterkeying

(8 Hours) (24 CEP points)

A solid knowledge base of master key systems is essential to all estimators, detailers, project managers and consultants. This program covers all the bases: recognizing the different types and styles of cylinders and keys used in today's locks, understanding and using industry-standard key-set symbols and terminology, organizing keying meetings, and integrating mechanical cylinders and keying into access control and security systems.

You will learn how to:

- Explain capabilities and limitations of key systems
- Determine the correct keying level based on owner requirements
- Use high-security cylinders and keyways
- Organize and conduct a keying meeting
- Identify existing key systems and their expansion potential
- Communicate the owner's keying requirements to the factory

NOTE: Students will receive a copy of the DHI Handbook, *Keying Systems and Nomenclature*, as part of their class materials.

AHC205 **NA, CH, IH, CE**

Detailing Hardware

(24 Hours) (72 CEP points)

Perhaps the most necessary skill you can develop in our industry is learning how to properly create detailed hardware schedules. Coordinating the myriad of hardware products with the project's requirements can be a daunting task. This course introduces you to the sequence and format of the hardware schedule through a series of in-class exercises.

You will learn how to:

- Create proper headings for hardware sets
- List hardware items in the correct sequence and format
- Write detailed hardware sets
- Prepare hardware schedule submittals
- Coordinate with doors and frames

Prerequisites: COR113 - Architectural Hardware and Applications
COR140 - Using Codes and Standards

Required Class Materials: Please see above

Course Offerings | AHC Curriculum

AHC207 *OE, CE*

Advanced Detailing Hardware

(72 CEP points)

Building on the principles learned in AHC205 - Detailing Hardware, students are led through a series of challenging class exercises designed to develop their decision making skills by selecting and detailing hardware products that meet the intended functions of door openings. Students will learn the step-by-step sequence employed by Architectural Hardware Consultants (AHCs) as they evaluate door openings and select hardware products to create door assemblies in accordance with applicable codes and standards.

You will learn how to:

- Identify intended functions of door openings
- Select hardware products
- Create detailed hardware sets
- Include elevation diagrams for openings with electrified hardware
- Create a cover page, template list, abbreviations and symbols list, etc.

Prerequisites:

COR133 - Electrified Architectural Hardware
AHC205 - Detailing Hardware

Required Class Materials: Please see page 17

AHC215 *OE, CE*

Writing Hardware Specifications

(96 CEP points)

Architectural Hardware Consultants (AHCs) are required to master the skills and techniques of writing professional construction specifications. Architects rely on professional consultants for technical expertise and expect them to be proficient in writing specifications. This course teaches you how to write clear, concise, correct and complete hardware specifications using the Construction Specifications Institute's (CSI) MasterFormat™ as a guide.

You will learn how to:

- Organize your specifications
- Use correct specification language
- Create hardware specification sets
- Write complete hardware specifications
- Coordinate work in other sections
- Address product substitutions
- Coordinate specifications for electrified hardware and access control systems

Prerequisites: AHC207 - Advanced Detailing Hardware
COR145 - Principles of Specification Writing

Required Class Materials: Please see page 17

AHC220 *NA*

AHC Exam Prep

(24 Hours) (72 CEP points)

Students pursuing the Architectural Hardware Consultants (AHCs) designation will complete in-class exercises designed to replicate exam conditions and better prepare them for the AHC exam. You will leave this class with a firm understanding of how to prepare for the formal AHC certification exam.

You will be required to:

- Complete timed scheduling and specification exercises
- Complete timed written exam questions

Prerequisites: All courses required to sit for the exam

Required Class Materials: Please see page 17

Course Offerings | CDC Curriculum

Required references and technical catalogs for DHI classes

We advise students to ship their reference materials directly to the hotel, to be held in their name, in sufficient time for arrival before the start of class. Students are responsible for making arrangements for return shipments following the end of class. DHI is not responsible for errant or late shipments or for returning lost and/or misplaced student materials.

Students attending:

CDC 300 - Using Door and Frame Standards

are required to bring complete (hard copy) sets of the following standards:

1. Steel Door Institute's SDI Fact File
2. Hollow Metal Manufacturers Association's (HMMA) Hollow Metal Manual
3. Window and Door Manufacturers Association's (WDMA) IS-1A Architectural Flush Wood Doors and IS 6A Architectural Stile and Rail Wood Doors
4. Architectural Woodwork Institute's (AWI) Quality Standards (8th edition)
5. Builders Hardware Manufacturers Association's (BHMA) A115 standards for preparations in steel doors and frames, and wood doors.

Students attending:

CDC310 - Writing Door and Frame Specifications CDC315 - CDC Exam Prep

are required to bring the following hard copies of:

1. Standard and custom hollow metal doors and frames*
2. Architectural flush and stile and rail wood doors*
3. Aluminum doors and frames*
4. NFPA 80, Standard for Fire Doors and Other Opening Protectives (2007 edition)
5. NFPA 101, Life Safety Code (2006 edition)
6. ICC/ANSI A117.1, Accessible and Usable Buildings and Facilities (2003 edition)

* Please contact your manufacturer(s) for the product catalogs you will be using. You may also consult DHI's Buyers Guide for manufacturer contact information.

CDC300 NA, CH, IH, CE **Using Door and Frame Standards** (8 Hours) (24 CEP points)

Knowledge of the many door and frame standards is essential to properly detail these products in shop drawings. These standards contain a wealth of information and can be used to establish levels of quality for all types of buildings.

This class covers the following industry standards:

- Steel Door Institute's (SDI) A250 Series of Product Standards
- Hollow Metal Manufacturers Association (HMMA) 800 Series of Product Standards
- Window and Door Manufacturers Association (WDMA) I.S. 1-A & I.S. 6-A
- Architectural Woodwork Institute (AWI) Quality Standards, 8th Edition, Ver. 2.0, 2005
- Builders Hardware Manufacturers Association (BHMA) A115 & A115W Series of Product Standards

Required Class Materials: Please see above

CDC305 NA, CH, IH, CE **Detailing Doors and Frames** (16 Hours) (48 CEP points)

Creating shop drawings is an arduous and tedious task. Proficiency in creating shop drawings only comes through practice and attention to detail. This course introduces students to the techniques and skills necessary to become an expert detailer.

You will learn how to:

- Create door and frame shop drawings
- Prepare door and frame submittals
- Illustrate door opening details
- Coordinate hardware templating requirements

Prerequisite: COR120 - Door and Frame Applications
COR140 - Using Codes and Standards

Course Offerings | CDC Curriculum

CDC310 *NA, CH, IH, CE*

Writing Door and Frame Specifications

(24 Hours) (72 CEP points)

Door and frame specifications require as much attention to detail as other specification sections. Fire-rated openings (both neutral and positive pressure tested) require particular attention to construction, labeling requirements, reinforcements, hardware preparations, glazing and frame anchors. These specifications must be carefully coordinated with other specifications to ensure the proper materials are provided. This course teaches you how to write clear, concise, correct and complete door and frame specifications using the Construction Specifications Institute's MasterFormat™ as a guide.

You will learn how to:

- Organize your specifications
- Use correct specification language
- Coordinate work in other sections
- Address product substitutions

Prerequisite: COR145 - Principles of Specification Writing
CDC300 - Using Door and Frame Standards

Required Class Materials: Please see page 19

CDC315 *NA*

CDC Exam Prep

(16 Hours) (48 CEP points)

This course walks you through the exercises required to complete the Certified Door Consultant (CDC) certification exam, under exam-like conditions. You will leave this class with a firm understanding of how to prepare for the formal CDC certification exam.

You will be required to:

- Complete shop drawing and specification exercises
- Complete written exam questions

Prerequisites: All courses required to sit for the exam

Required Class Materials: Please see page 19

Course Offerings | EHC Curriculum

EHC400 *NA, CH, IH, CE*

Drawings for Electrified Hardware Systems

(24 Hours) (72 CEP points)

Perhaps the most tedious aspect of electrified hardware systems is creating the final point-to-point wiring diagrams for all of the separate components. This course will teach you how to use correct industry symbols and drawing techniques to help you communicate the project's requirements more effectively with the installer.

You will learn how to:

- Create point-to-point wiring diagrams
- Create logic diagrams
- Use relays to control circuits

Prerequisite: COR133 - Electrified Architectural Hardware

EHC405 *NA, CE*

Access Control and Electrified Hardware Systems

(24 Hours) (72 CEP points)

Building security is one of the most important concerns for today's projects. This class teaches you how to incorporate and integrate electrically controlled hardware items into an access controlled security system.

You will learn how to:

- Use controllers
- Interface with auxiliary systems (including CCTV)
- Communicate with electrical and alarm systems professionals
- Layout access control and electrified hardware systems

Prerequisite: EHC400 - Drawings for Electrified Hardware Systems

EHC410 *NA, CE*

Installing and Troubleshooting Electrified Hardware Systems and Access Control Devices

(24 Hours) (72 CEP points)

Proper installation of electrified hardware and access control devices is critical for the security of building occupants. Fire and life-safety requirements are frequently compromised when these products are incorrectly installed. This course teaches you how to direct the installation of electrified hardware and access control devices, as well as troubleshooting circuits and systems in the field.

You will learn how to:

- Use a multimeter to troubleshoot circuits
- Review wiring diagrams
- Read electrical blueprints
- Verify electrical connections
- Field test systems
- Coordinate with other trades

NOTE: Students are required to bring a digital multimeter (equal to WaveTek Model DM15XL).

Prerequisite: EHC405 - Access Control and Electrified Hardware Systems

Course Offerings | EHC Curriculum

EHC415 *OE, CE*

Writing Electrified Hardware Systems

Specifications

(8 Hours) (24 CEP points)

Electrified hardware systems specifications require coordination with mechanical hardware and doors and frames, as well as communication, fire alarm, life safety and access control security systems. This course teaches you how to coordinate your electrified hardware systems specifications throughout the architect's project manual, using the Construction Specifications Institute's (CSI) MasterFormat™ as a guide.

You will learn how to:

- Organize your specifications
- Integrate electrified hardware with mechanical hardware
- Coordinate specifications with related sections
- Coordinate electrified hardware systems with life-safety and fire-rating requirements

Prerequisite: COR145 - Principles of Specification Writing

EHC420 *NA*

EHC Exam Prep

(16 Hours) (48 CEP points)

This course is designed to walk you through the exercises required to complete the Electrified Hardware Consultant (EHC) certification exam, under exam-like conditions. You will leave this class with a firm understanding of how to prepare for the EHC exam.

You will be required to:

- Complete shop drawing exercises
- Complete written exam questions that cover topics such as access control systems, CCTV terminology, principles of low-voltage electricity, and specification writing

Prerequisites: All courses required to sit for the exam

Course Offerings | ELECTIVE Curriculum

ELT500 NA, CH, IH, CE

Aftermarket Sales and Building Renovations

(8 Hours) (8 CEP points)

Existing buildings require ongoing maintenance throughout their life cycles, which includes repairing, replacing or upgrading doors, frames and hardware items. Often, the building owner or property management company performs this maintenance rather than offering it for bid as a project. This course teaches you how to call building owners, end users and property management companies to service existing buildings.

You will learn how to:

- Develop aftermarket sales strategies
- Identify potential customers
- Perform building/project surveys
- Establish ongoing customer relationships

ELT505 NA, CH, IH, CE

Effective Management of Employees

(8 Hours) (8 CEP points)

Employees are a company's most valuable resource. Learning how to effectively manage employees will create a better work environment for your company. This course helps you improve employee morale and loyalty through more effective management techniques.

You will learn how to:

- Determine your leadership style
- Develop employee skills
- Effectively communicate with employees
- Develop a team environment

ELT510 NA, CH, IH, CE

How to Develop and Retain Customers

(8 Hours) (8 CEP points)

Developing long-term professional relationships with your customers is essential to sustaining your company's longevity. Understanding how your customers make purchasing decisions and determining what their expectations are for the order they placed are critical aspects of developing and retaining customers. This course presents ideas and techniques you can use to better develop your company's customer relations.

You will learn how to:

- Understand customer dynamics
- Identify and resolve problems
- Communicate with customers
- Follow up with customers

ELT515 CH, IH, CE

Using BHMA Product Standards

(4 Hours) (12 CEP points)

Whether you are an estimator, detailer or hardware specification writer, sooner or later you will need to learn how to use the industry product standards created by the Builders Hardware Manufacturers Association (BHMA). These standards contain a wealth of information, which can be used to establish specific levels of quality on projects. This course surveys the ANSI/BHMA A156 series of product standards for builders hardware and teaches their proper use.

You will learn how to:

- Find information in the BHMA product standards
- Decipher BHMA product codes
- Specify levels of quality
- Select manufacturer product models using BHMA standards

NOTE: Students are required to bring their own copies of the BHMA A156 series of product standards.

Course Offerings | Fire and Egress Door Assembly Inspection

DAI 600 NA

Fire and Egress Door Assembly Inspection

(32 Hours) (96 CEP points)

Fire and egress doors are an essential part of the safe means of egress for occupants of buildings. Ensuring these door assemblies are properly maintained and able to perform their vital function requires persons with knowledge and experience of these types of doors.

NFPA 80, Standard for Fire Doors and Other Opening Protectives (2007 edition), requires documented inspections of fire-rated door assemblies on an annual basis. NFPA 80 requires these inspections to be performed by persons who are knowledgeable of the types of door assemblies being inspected. Swinging doors with builders hardware are the most common type of fire door assembly. They are also among the most complex due to the myriad of materials and products that are used to create them. Their complexity is increased due to the security and life-safety functions, the accessibility, and the fire-safety protection they provide. Inspectors must thoroughly understand the dynamics of these assemblies in order to correctly evaluate them in the field.

In addition, the 2009 edition of NFPA 101, Life Safety Code™, includes inspection criteria that expand on NFPA 80's requirements for swinging fire doors and contains new requirements for inspecting egress door assemblies that are required to swing in the direction of egress travel.

Understanding the role and responsibilities of the inspectors is as equally important as understanding what is being inspected. Interacting with the building owner and the authority having jurisdiction (AHJ) is paramount to ensuring the respective parties clearly understand the inspection documentation and how to follow through with the necessary corrections in order to improve safety in their buildings and facilities.

This class will teach you how to perform and record these inspections as well as provide tips for interacting with the owners and AHJs. In addition, upon passing this class, you will be invited to enroll in the *Intertek Certified Fire and Egress Door Inspector* program.

Learning Outcome Statements:

Upon successful completion of this class, students will:

- Understand inspection requirements of the 2007 edition of NFPA 80
- Understand the inspector's role and responsibilities
- Be able to conduct safety inspections of swinging fire door assemblies with builders hardware
- Be able to create inspection records and summary inspection reports
- Be eligible to enroll in the *Intertek Certified Fire and Egress Door Inspector* Program



NOTE: In preparation for the *Intertek Certified Fire and Egress Door Inspector* program, ALL students are required to bring photo identification (e.g., a valid driver's license) and be prepared to have their photograph taken for their inspector credentials. Notification of successfully passing DAI 600 will be sent to each student, as well as Intertek, within 30 days of completion of the class.

Student Materials (provided by DHI):

Each student will receive an Inspection Guidelines Kit that includes:

- NFPA 80, Standard for Fire Doors and Other Opening Protectives (2007 edition)
- NFPA 101, Life Safety Code (2009 edition)
- *Owner's Guide: Swinging Fire Doors with Builders Hardware*
- *AHJ's Guide: Swinging Fire Doors with Builders Hardware*
- *Inspector's Guide: Swinging Fire Doors with Builders Hardware*
- *Quick Reference Guide for Inspecting Swinging Fire Doors with Builders Hardware*
- Sample inspection forms
- Sample contract template for inspection agreement
- An application for Errors and Omissions insurance for inspectors

Required Class Materials (provided by the student):

Students attending DAI 600 should bring the following reference materials:

- A117.1, Accessible and Usable Buildings and Facilities (2003 edition)

Prerequisites:

Individuals who are certified as Architectural Hardware Consultants (AHCs), Certified Door Consultants (CDCs), Electrified Hardware Consultants (EHCs) and/or Architectural Openings Consultants (AOCs) are eligible to enroll in DAI 600.

All other individuals must have successfully completed each of the following DHI classes prior to enrolling in the class:

- SSC100 - *Fundamentals of Architectural Doors and Hardware Self-Study Course*
- COR113 - Architectural Hardware and Applications
- COR140 - Using Codes and Standards

Study Guides:

Students who qualify for DAI 600 are permitted to purchase the COR113 and/or COR140 student manuals as "study guides" for DAI 600. These "study guides" may not be used during the end of class exam.

DAI 600 Exam Retake Policies

Minimum passing score on the exam is 80% (300 out of a possible 375 points).

Students who do not achieve a passing score on the class exam and who are certified consultants (AHCs, CDCs, EHCs or AOCs) are required to pass the three prerequisite courses before being eligible to apply for their retake of the DAI 600 class exam. (*Consultants who have already completed the aforementioned courses as part of the eligibility requirements for their AHC, CDC or EHC certification exams are not required to retake these courses and are permitted to retake the DAI 600 class exam after a six-week waiting period.*)

Consultants who need to complete the prerequisite courses have the option of completing them by

attending the classes in person or by passing the Challenge Exams. All students are required to pass the retake of the DAI 600 class exam within one year of the date of the original exam. Students who do not pass the exam within the one-year period are required to retake the class in its entirety.

Students retaking the DAI 600 class exam are required to pay an exam fee of \$500.00 (member) or \$750.00 (non-member) and register no later than seven days in advance of the start of the class session. Students retaking the exam are permitted to "audit" the class immediately preceding their exam retake.

Please contact DHI's Education Department at (703) 222-2010, if you have questions.

DHI's Former Education Structure

Many students attended DHI's former week-long classes (ADH-1, ADH-2, AH-3, AH-4, EH-1, EH-2, EH-3 and CDC Prep) between 1996 and 2004. In recognition of the investment in time, money and hard work, these students are permitted to take the Challenge Exams at no charge (as long as they do not need the student manual).

Students have the option of purchasing a hard copy of the student manual for use as a study guide.

Students who fail a Challenge Exam are permitted to re-apply (at the full registration fee) or take the respective class(es) to complete these courses.

This policy allows former students to demonstrate their retention of the knowledge and skills they learned in our former classes.

The following table lists the applicable Challenge Exams for each of our former classes:

Former DHI Classes	Current Challenge Exams
ADH-1	COR113 - Architectural Hardware and Applications COR120 - Door and Frame Applications AHC200 - Masterkeying
ADH-2	COR113 - Architectural Hardware and Applications COR120 - Door and Frame Applications COR140 - Using Codes and Standards AHC200 - Masterkeying AHC205 - Detailing Hardware
AH-3	COR140 - Using Codes and Standards COR145 - Principles of Specification Writing AHC200 - Masterkeying AHC215 - Writing Hardware Specifications
AH-4	COR133 - Electrified Architectural Hardware COR140 - Using Codes and Standards COR145 - Principles of Specification Writing AHC200 - Masterkeying AHC205 - Detailing Hardware AHC215 - Writing Hardware Specifications
EH-1	COR133 - Electrified Architectural Hardware COR140 - Using Codes and Standards
EH-2	EHC400 - Drawings for Electrified Hardware Systems
EH-3	EHC405 - Access Control and Electrified Hardware Systems EHC410 - Installing and Troubleshooting Access Control and Electrified Hardware Devices
CDC Prep	COR120 - Door and Frame Applications COR140 - Using Codes and Standards COR145 - Principles of Specification Writing CDC300 - Using Door and Frame Standards CDC305 - Detailing Doors and Frames CDC310 - Writing Door and Frame Specifications

STILL HAVE QUESTIONS?
Call DHI's Education Department staff at (703) 222-2010. We are happy to assess your needs and goals.

NOTE: The complimentary Challenge Exam policy does not include exams for classes that cover subject matter added to DHI's curriculum after 2004. Also, attending a higher level "former" class does not permit a student to use this complimentary credit for a lower level "former" class. (The above categories are mutually exclusive.)

Education Policies

Payment

Payment must be received with the registration form. Hotel packages are available. Incidentals are the responsibility of the student.

Tuition Policies

For the latest and most accurate information, please see the “Tuition Policies” section of the registration form for the upcoming National School.

Waitlist

Registrations are entered in the order they are received. Should a course sell out, registrants are placed on a waitlist upon receipt of a completed application and full tuition payment. If waitlisted registrants are not able to receive placement in their first class choice, they may opt to transfer to another course, another class session or seek a refund.

Required references and technical catalogs for DHI classes

We advise students to ship their reference materials directly to the hotel, to be held in their name, *in sufficient time for arrival before the start of class*. Students are responsible for making arrangements for return shipments following the end of class. DHI is not responsible for errant or late shipments or for returning lost and/or misplaced student materials.

Grading policies

All grading/scoring will be done at DHI headquarters by DHI staff. Should a student fail a face-to-face exam, he/she will have one opportunity to retake a class exam at no charge. Retake exams are administered through DHI’s online Challenge Exam system. If a student then fails his/her complimentary exam, subsequent exam attempts will incur the current Challenge Exam fee.

Retaking class exams

Where applicable, students who do not achieve a passing score on their end-of-class exam are permitted to take the online Challenge Exam for the respective class one time, at no additional cost.

NOTE: If a student fails a Challenge Exam, he/she will incur a retake fee that will be equivalent to the cost of the Challenge Exam at the time the retake is requested.

PLEASE see page 25 for the Fire and Egress Door Assembly Inspection class exam retake policies.

Online education transcript

Students can now track their progress through DHI’s classes by viewing and/or printing their transcripts through the DHI Web site. To view your transcript, click on the **Education** button, then click on the **View Transcript** option and follow the on-screen prompts to login. Your transcript lists your Challenge Exams and end of class exams. Please contact DHI’s Education Department at (703) 222-2010 if you have questions regarding your educational transcript.

DHI Membership and You

As your advocate and primary resource for information, certification and professional development in the architectural openings industry, DHI makes every effort to provide you with the tools and resources to successfully advance the safety and security of the built environment. From promoting the distribution channel so you can further your career to creating a network of professional consultants and peers, we develop member benefits with you in mind.

Not only can you save money with the new DHI Education and Credentialing Program through customized courses that meet your specific training needs, as a DHI member, you can save even more money by taking advantage of the following benefits:

Technical Education

Maintain your competitive edge by attending industry education courses. Becoming a member while enhancing your career can translate to a huge savings!

Professional Certification Program

As members of the Door and Hardware Institute, AHCs, CDCs, EHCs and AOCs benefit directly from DHI's programs and services. In addition to their professional credentials, DHI promotes certified consultants through: the annual consultant listing, your local webpage that features consultants, advertisements in *doors & hardware* magazine, promotion at AIA's and CSI's annual conventions, advertisements in publications for related industries (e.g., architects, contractors, building officials). Employers in the architectural openings industry recognize our consultants as experts in the industry and seek them out when filling positions. Architects regularly use DHI's Web site to locate consultants who can help them find solutions for their clients' projects.

Technical Literature

Members pay a discounted price on valuable industry resource materials, handbooks, industry standards reports, etc.

Consultants' Listing

This valuable online resource helps one find DHI-certified AHC, CDC, EHC, and AOC consultants. Get listed and get noticed!

Industry Publications

Membership with DHI provides you with a variety of printed industry materials to help you stay knowledgeable in your field. These publications include:

- *Doors & Hardware* magazine, the only monthly magazine dedicated to the architectural openings industry.
- *Plan Room*, a quarterly member newsletter providing information on upcoming events and new members, gives a more personal look at the activities of Chapters, National Committees and task forces.
- *DHI IndustryWatch*, a twice-monthly email newsletter that includes business updates, construction and design news, security issues, best practices and updates on government affairs and policies.
- *DHI Membership Directory*, produced annually, provides names and addresses of more than 5,000 members, including over 700 manufacturing firms.

Join DHI to start taking advantage of the valuable benefits and cost-savings offered through membership. Join online at www.dhi.org!

If you have questions, please call Member Services at (703) 222-2010.

Frequently Asked Questions

Are all class materials supplied by DHI?

No. In order to complete the required exercises, several of our classes require students to bring the hard copies of a significant number of manufacturers' technical manuals and/or product catalogs, as well as fire and life-safety codes and standards and other important industry-specific reference documents.

A certain number of catalogs and reference documents are available in PDF and/or HTML. These electronic documents are permitted, but not recommended due to facility limitations that may affect electrical outlet availability and/or internet access.

Students are responsible for shipping their books to and from the class sites.

NOTE: Should a student choose to bring the electronic version of a required document, the student is doing so at his/her own risk. Also, he/she must provide the Instructors of the class with a copy of the electronic documents (via USB drive, etc.) so that the Instructors will have access to the documents for grading purposes.

Does the class tuition fee include hotel room and meal charges?

No. Class registration fees do not include hotel sleeping rooms. A continental breakfast and lunch are provided as part of the class tuition fee.

Can I leave a class early or start late?

No. Students attending our face-to-face classes are required to be in the classroom during designated class hours. Students who arrive late, leave early or are absent for a substantial portion of the class are not permitted to take the official end-of-class exam. However, since this equates to a failed end-of-class exam, students may take the respective (one time free) Challenge Exam.

Can I use a computer for my class exercises?

Not recommended. Computers and their electronic documents are permitted, but not recommended due to facility limitations that affect electrical outlet availability and/or Internet access. We suggest students bring hard copies of all required reference materials to ensure access to the information while in the classroom.

NOTE: Should a student choose to bring the electronic version of a required document, the student is doing so at his/her own risk. Also, he/she must provide the Instructors of the class with a copy of the electronic documents (via USB drive, etc.) so that the Instructors will have access to the documents for grading purposes.

Can I access my email when I am attending a DHI class?

No. Internet access (email, browser, instant-messaging, etc.) is strictly prohibited during in-class hours.

Do I have to pass the DHI classes?

Yes. DHI's training courses have an end-of-class exam that students are required to take as part of the class. In order for students to receive credit for attending a class, they must formally pass these end-of-class exams. Class exams are designed to be open book.

Why are there prerequisites?

Our number one goal for students is to help advance their careers in the industry by achieving their professional educational goals. Prerequisites make sure students do not miss critical information and knowledge needed before progressing to subsequent classes. Class prerequisites are listed with the class descriptions.

Prerequisites for our certification exams help to better prepare students for the AHC, CDC and EHC exams. In order to become eligible to take these exams, students must satisfy the respective list of Core, discipline-specific and Elective classes. Students may satisfy these classes by successfully completing them or by passing the online Challenge Exams.

How do I take the Challenge Exams?

Challenge Exams are available in online versions through the Internet. (Challenge Exams may be completed on paper for students with limited access to the Internet.) Each Challenge Exam is designed to test the student's industry knowledge and expertise gained through on-the-job experience.

Students may register for the Challenge Exams by going to the DHI Web site, www.dhi.org. Students will need to draw on their industry experience and training in order to successfully complete the Challenge Exams. The Challenge Exams are not proctored and are designed as open book exams. Individuals will receive DHI class credit for each successfully completed Challenge Exam.

NOTE: By taking a Challenge Exam, you are indicating to DHI that you have gained enough knowledge of the subject matter – through study and experience – to pass the test without taking our face-to-face course. An individual will not be able to pass a Challenge Exam by solely studying the reference materials provided by DHI for the course. DHI highly recommends taking the applicable classroom course to gain a thorough knowledge of the subject matter.

If a student fails a Challenge Exam, he/she will incur a retake fee that will be equivalent to the cost of the Challenge Exam at the time the retake is requested.

Frequently Asked Questions

What happens if I fail a Challenge Exam?

Individuals failing a Challenge Exam have the option of paying for and taking the Challenge Exam again. However, it is recommended that the student take the face-to-face class.

I attended the former DHI classes, why do I have to take the Challenge Exams?

Students of our former style of classes received a certificate of completion for each class they attended. Our former classes were not designed as “pass/fail,” and students received credit regardless of their performance. The Challenge Exams are used to ensure our former students have retained sufficient knowledge that will allow them to progress to the professional certification exam they are pursuing.

What is the passing score for DHI Exams?

Students must achieve a minimum score of 75% in order to successfully complete DHI's classes, Challenge Exams and certification exams (AHC, CDC and EHC). Students attending the Fire and Egress Door Assembly Inspection class (DAI 600) must achieve a passing score of 80%.

I have been in the industry for several years, can I just take a certification exam?

No. A critically important aspect of DHI's credentialing program is the credibility we have in the external construction industry. We need to be able to quantify the expertise and capabilities our certified consultants have achieved to architects, contractors, owners and fire marshals/building inspectors. Our certification prerequisites permit us to fully document this experience when we promote our consultants to the construction industry.

Many individuals in our industry have acquired a great deal of experience and knowledge, but they have not formally demonstrated their proficiency by passing an exam. Before they are permitted to take the certification exam, they must demonstrate that they have the requisite knowledge and expertise.

When are the AHC, CDC and EHC exams offered?

DHI's certification exams are offered on an on-demand basis. Eligible individuals may apply for an exam at any time.

Where are the AHC, CDC and EHC exams given?

Certification exams are timed exams, which are administered under formal, proctored supervision. Proctors are selected in the candidate's vicinity, when available.

Candidates may opt to take their exam at DHI's headquarters in Chantilly, Virginia.

What happens if I fail a part of a certification exam?

DHI's policies permit candidates who fail any segment of a certification exam to retake the failed segment(s) of the exam a maximum of two times within 12 months from the date of their original exam. Applicants who exhaust their retake attempts, or allow the 12-month exam period to expire, may immediately reapply for the certification exam provided, at the time of DHI's receipt of the new application, all exam eligibility requirements have been met.

I have noticed that some of your course numbers have changed. What do changes in DHI's education mean for my educational goals?

As deemed necessary, a number of DHI's classes were merged in order to provide students with the optimal set of curriculum.

For students who have taken both of the classes that were combined into one, your transcript will reflect the same “credit” as a student who has taken the merged course. For students who have taken one half of the merged classes, we advise that you contact DHI to discuss your options for obtaining the second half of these courses. Typically, the Challenge Exams for the separated classes will remain available to students during the remainder of the year in which the courses merged. Also, approved Chapters and companies may continue (for the remainder of the year) to host local education sessions offering the class(es) in split form. A student who misses the window of opportunity will be required to successfully complete either the Challenge Exam or face-to-face version of the merged class in order to receive full credit in their record.

It is important that students stay current regarding updates made to the courses and the list of requirements for earning a diploma or certification. DHI's Education Council reserves the right to make changes to courses, prerequisite requirements, and certification requirements as necessary.

As of the printing of this edition of the Education Resource Guide, COR100 and 105 have merged to become COR103; COR110 and 115 are now COR113; the merger of COR130 and 135 produced COR133; COR150 and 155 exist in the form of COR153.

Still have questions?

Call the DHI Education Connection at (703) 766-7027. One of our staff members will be happy to assess your needs and goals.

Congratulations on Finishing DHI's Education Resource Guide (ERG)!

Please note that while the ERG is the best source of DHI Education information, there is additional information on our Web site, [**www.dhi.org**](http://www.dhi.org)

For example, the following are available on our site:

- *Fundamentals of Architectural Doors and Hardware* Self-Study Course (SSC100) Order Form
- Challenge Exam Registration
- Consultant Certification - Exam Application
- Continuing Education Program - Application/Renewal Form

These tools will be critical in getting you started (the Self-Study Course), speeding up your educational process (Challenge Exams), earning your DHI Credentials (Certification Exams), as well as maintaining your Consultant status (Continuing Education Program).

Thank you for utilizing the ERG as well as the aforementioned valuable resources. We wish you the best during your educational journey!

Call DHI's Education Department staff at (703) 222-2010 or contact us by email at [education@dhi.org**](mailto:education@dhi.org) with your questions.**