

DHI

Education

Your Career, Our Commitment

DHI 2017

SPRING TECHNICAL SCHOOL

Course Registration Forms

April 2 – 9, 2017

NATIONAL CONFERENCE CENTER | LANSDOWNE, VA

DHI 2017

SPRING TECHNICAL SCHOOL

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Important Pricing information

DHI strives to make its education available to its member's at the most affordable costs. Course prices are established based upon DHI's cost to develop the curriculum and student materials, to provide qualified instructors to conduct the course, and the value and technical sophistication of the content. We do provide volume discount incentives for students to maximize the cost of travel to the school and take advantage of attending the most number of classes at each school, as well as volume discounts to encourage multiple students attending from the same company.

- **Course Learning Unit Discount (LU)**

Course Learning Unit (LU) Discount – for 40 or more LU's per school apply a 5% discount to the course tuition.
Course Learning Unit (LU) Discount – for 64 or more LU's per school apply a 10% discount to the course tuition.

- **Company Discount (CD)**

Company Discount – for 3 or more students from the same company per school apply a 5% discount to the course tuition.

- **Facilities Fee (FF)**

This fee covers the cost of food and beverage for meals and breaks and other ancillary costs of the facility DHI contracts to conduct the classes, and will vary from school to school depending on the property selected. It is a pass through cost of conducting the school and is in addition to the courses fees. Therefore it is a mandatory daily fee paid by each student regardless of whether they stay at the property. The Facilities Fee is not subject to the Course or Company discount.

For the Spring 2017 Technical School in Lansdowne, VA, the mandatory Facilities Fee will be \$65 per day for those staying onsite at the National Conference Center (includes all meals and 2 breaks). For students staying offsite, the mandatory FF is \$50 per day (includes lunch and 2 breaks).

COURSE REGISTRATION FORMS

DHI 2017 SPRING TECHNICAL SCHOOL

April 2 – 9 | 8 am – 5:30 pm

National Conference Center, Lansdowne, VA

TAKE ADVANTAGE OF DISCOUNTS!

See below for details. Experience face-to-face learning from the finest line-up of nationally recognized, highly credentialed instructors!

For Housing, [click here.](#)

For Course Registrations, [click here.](#)

COURSE NUMBERS, TITLES AND LEARNING UNITS (LU)	DURATION	DATES	MEMBER	NON-MEMBER	COLUMN A: COURSE TUITION	COLUMN B: ONSITE FACILITIES FEE	COLUMN C: OFFSITE FACILITIES FEE	COLUMN D: TOTAL A + B OR C
COR103 Understanding and Using Construction Documents (8 LU)	1 day	April 4	\$340	\$440		\$65	\$50	
COR117 Applications of Doors, Frames and Hardware (32 LU)	4 days	April 5 – 8	\$1360	\$1660		\$260	\$200	
COR125 Takeoff and Estimating (16 LU)	2 days	April 2 – 3	\$660	\$860		\$130	\$100	
COR133 Electrified Architectural Hardware (40 LU)	5 days	April 2 – 6	\$1875	\$2435		\$325	\$250	
COR140 Using Codes & Standards (24 LU)	3 days	April 2 – 4	\$1125	\$1460		\$195	\$150	
COR147 Introduction to Specification Writing (24 LU)	3 days	April 5 – 7	\$1125	\$1460		\$195	\$150	
COR153 Installation Coordination and Project Management (16 LU)	2 days	April 2 – 3	\$750	\$975		\$130	\$100	
COR160 Material Purchasing Concepts (8 LU)	1 day	April 4	\$330	\$430		\$65	\$50	
AHC200 Masterkeying (8 LU)	1 day	April 8	\$375	\$490		\$65	\$50	
AHC205 Detailing Hardware (24 LU)	3 days	April 7 – 9	\$1125	\$1460		\$195	\$150	
AHC207 Advanced Hardware Detailing (40 LU)	5 days	April 2 – 6	\$1650	\$2025		\$325	\$250	
AHC215 Writing Hardware Specifications (40 LU)	5 days	April 2 – 6	\$1650	\$2025		\$325	\$250	
AHC220 AHC Exam Prep (24 LU)	3 days	April 7 – 9	\$1245	\$1615		\$195	\$150	
CDC300 Using Door and Frame Standards (8 LU)	1 day	April 2	\$340	\$440		\$65	\$50	
CDC305 Detailing Doors and Frames (16 LU)	2 days	April 3 – 4	\$750	\$975		\$130	\$100	
CDC310 Writing Door and Frame Specifications (24 LU)	3 days	April 5 – 7	\$1185	\$1540		\$195	\$150	
CDC315 CDC Exam Prep (16LU)	2 days	April 8 – 9	\$830	\$1055		\$195	\$150	
EHC400 Electrified Hardware Applications and Documentation (24 LU)	3 days	April 7 – 9	\$1185	\$1540		\$195	\$150	
EHC405 Access Control and Electrified Hardware Systems (24 LU)	3 days	April 2 – 4	\$1185	\$1540		\$195	\$150	
EHC410 Installing and Troubleshooting Electrified Hardware Systems and Access Control Devices (24 LU)	3 days	April 5 – 7	\$1185	\$1540		\$195	\$150	
EHC420 EHC Exam Prep (24 LU)	2 days	April 8 – 9	\$830	\$1200		\$130	\$100	
DAI600 Fire and Egress Door Assembly Inspection (24 LU)	3 days	April 5 – 7	\$1950	\$2450		\$195	\$150	
TOTAL								

DISCOUNTS:

Apply a 5% discount for 40 or more CUMULATIVE learning units (LU) of Course Tuition ONLY.

Apply a 10% discount for 64 or more CUMULATIVE learning units (LU) of Course Tuition ONLY.

For 3 or more students from the same company, contact the DHI Education Dept. for Company Discount (CD).

Mandatory Facilities fee (FF) per student, per day: Onsite = \$65; Offsite = \$50. Discounts are not applicable on this fee.

Please see the course descriptions to determine the recommended courses to be completed prior to registering for any course.

Class sizes are limited. Course offerings subject to change without notice.

CONTINUE TO NEXT PAGE TO COMPLETE COURSE REGISTRATION.

For course registration, please go to https://www.dhi.org/DHI/Events/Event_Display.aspx?EventKey=17VA.

For housing, go to <https://book.b4checkin.com/nationalcc/r1pv1/NegotiatedRates.asp?TID=30989&CompanyName=Door%20and%20Hardware%20Institute&Category=Group>.

COURSE REGISTRATION FORMS

DHI 2017 SPRING TECHNICAL SCHOOL

April 2 – 9 | 8 am – 5:30 pm | National Conference Center, Lansdowne, VA

Register online at www.dhi.org. **REGISTRATION COMPLETION TARGET DATE:** Technical School by March 10. **HOUSING DEADLINE:** February 27.

NAME		NAME FOR BADGE	
TITLE		MEMBERSHIP STATUS <input type="checkbox"/> DHI Member I.D. Number _____ <input type="checkbox"/> Non-Member	
COMPANY		ADDRESS	APT./SUITE NO.
CITY		STATE/PROVINCE	ZIP/POSTAL CODE
TELEPHONE	FAX	EMAIL REQUIRED (All registration confirmations AND exam results are sent via email.)	
PAYMENT INFORMATION			
PAYMENT METHOD <input type="checkbox"/> Check enclosed, payable in U.S. dollars to Door and Hardware Institute <input type="checkbox"/> Please charge my: <input type="checkbox"/> Visa <input type="checkbox"/> MasterCard <input type="checkbox"/> AMEX			
CARD NUMBER	EXPIRATION DATE	CVV/SECURITY CODE	TOTAL DUE \$ _____ <small>(Column C from Page 3)</small>
CARD HOLDER'S NAME (Print name as it reads on card)		SIGNATURE	
CREDIT CARD BILLING ADDRESS <input type="checkbox"/> Check if the credit card billing address is the same as address listed for student above. If different, please note credit card billing address below:			
ADDRESS			APT./SUITE NO.
CITY	STATE/PROVINCE	ZIP/POSTAL CODE	

PLEASE BE ADVISED:

- All courses begin at 8:00 am and end at 5:30 pm. Punctual and complete attendance is mandatory.
- See page 5 for more details and tuition policies.
- Tuition fees do not include hotel accommodations and facilities fee. For school registration packet, go to https://www.dhi.org/DHI/Events/Event_Display.aspx?EventKey=17VA.
For housing, go to <https://book.b4checkin.com/nationalcc/rlp1/NegotiatedRates.asp?TID=30989&CompanyName=Door%20and%20Hardware%20Institute&Category=Group>. Housing deadline is **February 27**.

**PLEASE COMPLETE PAGES 3 & 4 OF THIS FORM
AND RETURN TO:**

Door and Hardware Institute
14150 Newbrook Drive, Suite 200
Chantilly, VA 20161
Phone: 703/222-2010 • Fax: 703/222-2410
or
Register online at www.dhi.org

Accounting use only.

I understand and acknowledge that during my attendance at DHI's Technical School ("School"), I may be photographed, videoed or otherwise recorded by the Door and Hardware Institute ("DHI") and/or those designated by DHI. As a condition of my attendance at the School, I agree to irrevocably grant to DHI, its assigns, licensees and successors the right to photograph, publish, record, broadcast, exhibit, digitize, display, copyright, license, transfer, reproduce, translate, modify, edit or otherwise use perpetually throughout the world, in all media now and hereafter known or devised, in whole or in part, my image, likeness, name, biographical information, actions, performance, voice, conversations, quotes and material spoken or otherwise provided by me (collectively, the "Material") during my attendance at the School. I also agree that DHI shall be the sole owner throughout the universe and in perpetuity of any and all rights in and to any and all works containing the Material, in whole or in part, for all purposes whatsoever and in any manner or media including, without limitation, printed works, videocassette, DVD, and computer online services. I shall have no rights or interest thereunder whatsoever.

DHI 2017 SPRING TECHNICAL SCHOOL

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National Conference Center, Lansdowne, VA

COURSE CURRICULUM

SUN, APR 2	MON, APR 3	TUE, APR 4	WED, APR 5	THU, APR 6	FRI, APR 7	SAT, APR 8	SUN, APR 9
COR125 Takeoff & Estimating		COR160 Mat Purch Concepts	COR117 (former COR113 & COR120) Applications of Doors, Frames and Hardware				
COR133 Electrified Architectural Hdw					AHC205 Detailing Hardware		
COR153 Installation Coord & Proj Mgmt		COR103 Understanding & Using Construction Documents	COR147 Introduction to Specification Writing			AHC200 Masterkeying	
AHC207 Advanced Detailing Hdw					EHC400 Electrified Hardware Applications & Documentation		
AHC215 Writing Hardware Specifications					AHC220 AHC Exam Prep		
CDC300 Using Dr & Fr Stds	CDC305 Detailing Doors & Frames		CDC310 Writing Door & Frame Specifications			CDC315 CDC Exam Prep	
EHC405 Access Control & Electrified Hdw Systems			EHC410 EAC & EH Installation & Troubleshooting			EHC420 Exam Prep	
COR140 Using Codes & Standards			DAI600 Fire and Egress Door Assembly Inspection				

Classes/schedule are subject to change.

TECHNICAL SCHOOL POLICIES & PROCEDURES

RECOMMENDED PRIOR COURSES

Refer to the **Education Resource Guide** for further details as to the recommended prior courses for classes, posted at www.dhi.org.

TUITION STRUCTURE

Member tuition applies to any DHI individual member or any employee of a corporate member. Tuition includes all student materials except for a few select reference guides as noted in the **Education Resource Guide** posted at www.dhi.org.

CLASS SIZE

Registrations are confirmed in the order they are received. Should a course sell out, registrants are placed on a waitlist in order of receipt of a completed application, with those applicants with full tuition payment waitlisted first, followed by those with an application only. If waitlisted registrants with paid tuition are not placed in their first choice of course, they may opt to transfer to another current course or a future course with full credit, or receive a full refund.

TUITION POLICIES

Registration

It is suggested that students complete all necessary prior courses before they register for the school.

Cancellations and Administration Fee

For cancellations received up until 4 weeks prior to the start of the Technical School—March 5, either a 95% refund or a 100% credit for future courses is available.

For cancellations received within 4 weeks of the start of a Technical School—March 6, a 90% credit only will be applied to a future course.

Refunds

Once the Technical School begins on April 2 no refunds nor credit will be given for missed or non-completed courses. Special circumstances such as a significant medical issue, death in family, etc. may allow for a partial or full credit of tuition fees only, not including facility fees, to be issued for a future course. Proof of special circumstance may be required.

HOTEL ACCOMODATIONS

Students are responsible for making their own hotel reservations. Complete education housing information is available online at <https://book.b4checkin.com/nationalcc/rhpv1/NegotiatedRates.asp?TID=30989&CompanyName=Door%20and%20Hardware%20Institute&Category=Group>. **Housing Deadline February 27.**

PHOTOGRAPHY DISCLAIMER

I understand and acknowledge that during my attendance at the DHI Spring Technical School, I may be photographed, videoed or otherwise recorded by the Door and Hardware Institute (“DHI”) and/or those designated by DHI. As a condition of my attendance at the DHI Spring Technical School, I agree to irrevocably grant to DHI, its assigns, licensees and successors the right to photograph, publish, record, broadcast, exhibit, digitize, display, copyright, license, transfer, reproduce, translate, modify, edit or otherwise use perpetually throughout the world, in all media now and hereafter known or devised, in whole or in part, my image, likeness, name, biographical information, actions, performance, voice, conversations, quotes and material spoken or otherwise provided by me (collectively, the “Material”) during my attendance at the DHI Spring Technical School. I also agree that DHI shall be the sole owner throughout the universe and in perpetuity of any and all rights in and to any and all works containing the Material, in whole or in part, for all purposes whatsoever and in any manner or media including, without limitation, printed works, videocassette, DVD, and computer online services. I shall have no rights or interest thereunder whatsoever.

COR103 Understanding and Using Construction Documents

(1 day) (24 CEP points) (8 learning units)

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

COR117 Applications of Doors, Frames and Hardware

(4 days) (96 CEP points) (32 learning units)

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. 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. A sample assortment are shown in this course to help you identify many of the hardware items 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)
- Size special-purpose hinges (e.g., wide-throw)
- Learn the application of raised-barrel hinges and swing-clear hinges
- Select proper strike plates
- Size push/pull bars
- Resolve closer/overhead stop/holder conflicts
- Size thresholds and saddles

COR125 Takeoff and Estimating

(2 days) (48 CEP points) (16 learning units)

RECOMMENDED PRIOR COURSES:

COR103 – Understanding and Using Construction Documents

COR117 – Applications of Doors, Frames and Hardware

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; underprice, 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

COR133 Electrified Architectural Hardware

(5 days) (120 CEP points) (40 learning units)

RECOMMENDED PRIOR COURSES:

COR117 – Applications of Doors, Frames and Hardware

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 to hook up these components through the hands-on labs.

You will learn how to:

- Coordinate voltage and amperage requirements
- Draw elevation, logic, and point-to-point wiring diagrams
- Write operational descriptions
- Troubleshoot circuits

COR140 Using Codes and Standards

(3 days) (72 CEP points) (24 learning units)

RECOMMENDED PRIOR COURSES:

COR117 – Applications of Doors, Frames and Hardware

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 professional and personal commitment. This course covers NFPA 80, Standard for Fire Doors and Other Opening Protectives (2013 edition), NFPA 101, Life Safety Code (2012), ICC/ANSI A117.1, Usable and Accessible Buildings and Facilities (2009 edition), and International Building Code (2012 edition).

You will learn how to:

- Tell the difference between codes and standards
- Look up information
- Interpret codes and standards
- Determine requirements for fire-rated openings
- Determine requirements for means of egress openings

REQUIRED CLASS MATERIALS –

Consisting of product catalogs for the following:

1. **NFPA 80, Standard for Fire Doors and Other Opening Protectives (2013 edition)**
2. **NFPA101, Life Safety Code (2012 edition)**
3. **ICC/ANSI A117.1, Accessible and Usable Buildings and Facilities (2009 edition)**
4. **International Building Code (IBC 2012 edition)**

COR147 Introduction to Specification Writing

(3 days) (72 CEP points) (24 learning units)

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 consultant in today's construction industry. Architects and engineers will expect you to have mastered these skills when you work with them.

“Practice makes perfect,” as the saying goes, and this course teaches students how to practice writing door, frame, and hardware specifications. Nearly two days of practical exercises are included in this course.

You will learn how to:

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

REQUIRED CLASS MATERIALS – Consisting of electronic files with technical information for hinges, mortise locks, door closers, fire exit hardware, panic hardware, protection plates, electrified hardware, hollow metal doors and frames, and flush wood doors

COR153 Installation Coordination and Project Management

(2 days) (48 CEP points) (16 learning units)

RECOMMENDED PRIOR COURSES:

COR103 – Understanding and Using Construction Documents

COR117 – Applications of Doors, Frames and Hardware

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 that 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:

- Reduce callbacks 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

COR160 Material Purchasing Concepts

(1 day) (24 CEP points) (8 learning units)

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 need 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

AHC200 Masterkeying

(1 day) (24 CEP points) (8 learning units)

A solid knowledge base of master key systems is essential to all estimators, detailers, project managers, and consultants. This program covers all of 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

AHC205 Detailing Hardware

(3 days) (72 CEP points) (24 learning units)

RECOMMENDED PRIOR COURSES:

COR117 – Applications of Doors, Frames and Hardware
COR140 – Using Codes and Standards

Perhaps the most necessary skill you can develop in our industry is learning how to properly create detailed hardware schedules. Coordinating the myriad 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

REQUIRED CLASS MATERIALS –

Consisting of product catalogs or electronic files for the following:

1. **NFPA 80, Standard for Fire Doors and Other Opening Protectives (2013 edition)**
2. **NFPA101, Life Safety Code (2012 edition)**
3. **ICC/ANSI A117.1, Accessible and Usable Buildings and Facilities (2009 edition)**

Also catalogs or electronic files with technical information for:

1. **hinges, mortise locks, door closers, fire exit hardware, panic hardware, protection plates, electrified hardware, hollow metals doors and frames, and flush wood doors**
2. **pivots, continuous hinges, concealed in the floor closers, door bolts, coordinators, overhead stops and holders and removable mullions, bored and mortise locks& latches, surface-mounted & overhead concealed door closers, low-energy door operators, door pulls, push bars, protection plates, gasketing and thresholds, and door stops**
3. **electrified hardware (e.g. power supplies, card readers, key pads, motion detectors, power transfer devices)**

AHC207 Advanced Detailing Hardware

(5 days) (100 CEP points) (40 learning units)

RECOMMENDED PREREQUISITES:

COR117 – Applications of Doors, Frames and Hardware
COR133 – Electrified Architectural Hardware
AHC205 – Detailing Hardware

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.

NOTE: Students taking this course must have expert-level hardware application and code and standard knowledge.

Prior courses are strongly recommended.

REQUIRED CLASS MATERIALS –

Consisting of product catalogs or electronic files for the following:

1. **hinges, mortise locks, door closers, fire exit hardware, panic hardware, protection plates, electrified hardware, hollow metals doors and frames, and flush wood doors**
2. **pivots, continuous hinges, concealed in the floor closers, door bolts, coordinators, overhead stops and holders and removable mullions, bored and mortise locks& latches, surface-mounted & overhead concealed door closers, low-energy door operators, door pulls, push bars, protection plates, gasketing and thresholds, and door stops**
3. **electrified hardware (e.g. power supplies, card readers, key pads, motion detectors, power transfer devices)**
4. **Steel Door's Institute's SDI fact File (suggested electronic format)**
5. **Builders Hardware Manufacturers Association (BHMA) A115 Standard for preparations in steel doors and frames and wood doors**

AHC215 Writing Hardware Specifications

(5 days) (100 CEP points) (40 learning units)

RECOMMENDED PRIOR COURSES:

COR117 – Applications of Doors, Frames and Hardware

COR133 – Electrified Architectural Hardware

COR140 – Using Codes and Standards

COR140 – Using Codes and Standards

COR147 – Introduction to Specification Writing

AHC205 – Detailing Hardware

AHC207 – Advanced Detailing Hardware

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

REQUIRED CLASS MATERIALS –

Consisting of product catalogs or electronic files for the following:

1. hinges, mortise locks, door closers, fire exit hardware, panic hardware, protection plates, electrified hardware, hollow metals doors and frames, and flush wood doors
2. pivots, continuous hinges, concealed in the floor closers, door bolts, coordinators, overhead stops and holders and removable mullions, bored and mortise locks& latches, surface-mounted & overhead concealed door closers, low-energy door operators, door pulls, push bars, protection plates, gasketing and thresholds, and door stops
3. electrified hardware (e.g. power supplies, card readers, key pads, motion detectors, power transfer devices)
4. Steel Door's Institute's SDI fact File (suggested electronic format)
5. Builders Hardware Manufacturers Association (BHMA) A115 Standard for preparations in steel doors and frames and wood doors

AHC220 AHC Exam Prep

(3 days) (72 CEP points) (24 learning units)

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

REQUIRED CLASS MATERIALS –

1. **NFPA 80, Standard for Fire Doors and Other Opening Protectives (2013 edition)**
2. **NFPA101, Life Safety Code (2012 edition)**
3. **ICC/ANSI A117.1, Accessible and Usable Buildings and Facilities (2009 edition)**

Also catalogs or electronic files with technical information for:

1. hinges, mortise locks, door closers, fire exit hardware, panic hardware, protection plates, electrified hardware, hollow metals doors and frames, and flush wood doors
2. pivots, continuous hinges, concealed in the floor closers, door bolts, coordinators, overhead stops and holders and removable mullions, bored and mortise locks& latches, surface-mounted & overhead concealed door closers, low-energy door operators, door pulls, push bars, protection plates, gasketing and thresholds, and door stops
3. electrified hardware (e.g. power supplies, card readers, key pads, motion detectors, power transfer devices)

COURSE DESCRIPTIONS

CDC300 Using Door and Frame Standards

(1 day) (24 CEP points) (8 learning units)

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 –

Consisting of product catalogs for the following:

1. **Steel Door Institute's SDI Fact File (Suggested electronic format)**
2. **Hollow Metal Manufacturers Association's (HMMA) Hollow Metal Manual**
3. **Window and Door Manufacturers Association's (WDMA) IS-1A (2013) Architectural Flush Wood Doors and IS 6A (2013) Architectural Stile and Rail Wood Doors**
4. **Architectural Woodwork Institute's (AWI) Quality Standards (2nd edition) 2014**
5. **Builders Hardware Manufacturers Association's (BHMA) A115 standards for preparations in steel doors and frames and wood doors**

CDC305 Detailing Doors and Frames

(2 days) (48 CEP points) (16 learning units)

RECOMMENDED PRIOR COURSES:

COR117 – Applications of Doors, Frames and Hardware

COR140 – Using Codes and Standards

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, whereas creating shop drawings can be an arduous and tedious task.

You will learn how to:

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

CDC310 Writing Door and Frame Specifications

(3 days) (72 CEP points) (24 learning units)

RECOMMENDED PRIOR COURSES:

COR147 – Introduction to Specification Writing

CDC300 – Using Door and Frame Standards

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 that 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

REQUIRED CLASS MATERIALS –

1. **NFPA 80, Standard for Fire Doors and Other Opening Protectives (2013 edition)**
2. **NFPA101, Life Safety Code (2012 edition)**
3. **ICC/ANSI A117.1, Accessible and Usable Buildings and Facilities (2009 edition)**
4. **Catalogs or electronic files for: standard and custom hollow metal doors and frames, architectural flush and stile and rail wood doors, and aluminum doors and frames**

CDC315 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

REQUIRED CLASS MATERIALS –

1. **NFPA 80, Standard for Fire Doors and Other Opening Protectives (2013 edition)**
2. **NFPA101, Life Safety Code (2012 edition)**
3. **ICC/ANSI A117.1, Accessible and Usable Buildings and Facilities (2009 edition)**
4. **Catalogs or electronic files for: standard and custom hollow metal doors and frames, architectural flush and stile and rail wood doors, and aluminum doors and frames**

EHC400 Electrified Hardware Applications and Documentation

(3 days) (72 CEP points) (24 learning units)

RECOMMENDED PRIOR COURSES:

COR117 – Applications of Doors, Frames and Hardware

COR133 – Electrified Architectural Hardware

COR140 – Using Codes and Standards

AHC205 – Detailing Hardware

AHC207 – Advanced Detailing Hardware

One of the most important steps in detailing today's projects is creating the wiring drawings and diagrams and related documentation for door openings with electrified hardware. 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

EHC405 Access Control and Electrified Hardware Systems

(3 days) (72 CEP points) (24 learning units)

RECOMMENDED PRIOR COURSES:

COR117 – Applications of Doors, Frames and Hardware

COR133 – Electrified Architectural Hardware

COR140 – Using Codes and Standards

AHC205 – Detailing Hardware

AHC207 – Advanced Detailing Hardware

EHC400 – Electrified Hardware Applications and Documentation

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

EHC410 Installing and Troubleshooting Electrified Hardware Systems and Access Control Devices

(3 days) (72 CEP points) (24 learning units)

RECOMMENDED PRIOR COURSES:

COR117 – Applications of Doors, Frames and Hardware

COR133 – Electrified Architectural Hardware

COR140 – Using Codes and Standards

AHC205 – Detailing Hardware

AHC207 – Advanced Detailing Hardware

EHC405 – Access Control and Electrified Hardware Systems

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

REQUIRED CLASS MATERIALS – Consisting of product catalogs for electrified hardware (e.g. power supplies, card readers, key pads, motion detectors, power transfer devices)

EHC420 EHC Exam Prep

(2 days) (48 CEP points) (16 learning units)

This course is designed to take 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

REQUIRED CLASS MATERIALS:

- 1. NFPA 80, Standard for Fire Doors and Other Opening Protectives (2013 edition)**
- 2. NFPA101, Life Safety Code (2012 edition)**
- 3. ICC/ANSI A117.1, Accessible and Usable Buildings and Facilities (2009 edition)**
- 4. Product catalogs for electrified hardware (e.g. power supplies, card readers, key pads, motion detectors, power transfer devices)**

DAI600 Fire and Egress Door Assembly Inspection

(3 days) (72 CEP points) (24 learning units)

RECOMMENDED PRIOR COURSES:

COR117 – Applications of Doors, Frames and Hardware

COR140 – Using Codes and Standards

The DAI600 course is quite comprehensive; therefore, one must have the prerequisite knowledge contained in the courses listed above. If you have significant experience in commercial doors, frames, and door hardware, you may not need to take COR117 (former COR113 & COR120).

Because the DAI600 course is based heavily on codes, and the codes are updated every three years, we strongly suggest that COR140 be taken prior to DAI600. Otherwise, your ability to understand and retain information from DAI600 may be compromised.

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

NFPA 80, Standard for Fire Doors and Other Opening Protectives (2013 edition), requires documented inspections of fire-rated door assemblies on an annual basis. NFPA 80 requires these inspections to be performed by qualified 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 materials and products that are used to create them. Their complexity is increased because of 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 2012 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.

Understanding the role and responsibilities of the inspectors is just as important as understanding what is being inspected. Interacting with the building owner and the Authority Having Jurisdiction (AHJ) is paramount to ensuring that 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:

- Be able to list inspection requirements of the 2013 edition of NFPA 80
- Be able to explain 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

Each student will receive Inspection Guideline materials that include:

- Guide to Annual Inspections of Swinging Fire Doors
- Field Reference Digest for Inspecting Swinging Fire Doors
- Inspection mirrors
- Door gap gauges

REQUIRED CLASS MATERIALS –

1. NFPA 80, Standard for Fire Doors and Other Opening Protectives (2013 edition)

2. NFPA101, Life Safety Code (2012 edition)

3. ICC/ANSI A117.1, Accessible and Usable Buildings and Facilities (2009 edition)