DHI
EDUCATION RESOURCE GUIDE

FLEXIBLE • CONVENIENT • AFFORDABLE

DHI
Education
Your Career, Our Commitment

JULY 2021 EDITION

DHI's EDUCATION RESOURCE GUIDE

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DHI EDUCATION

Whether your goal is to become a DHI-certified consultant or simply to gain knowledge and skills that will benefit you in your current or prospective position, DHI has the educational offering to suit your needs. New to the industry, seasoned veteran, or life-long learner, you can select the subject that best meets your interest. As your professional goals change, you can take advantage of new courses designed to keep you current with trends and issues in today's commercial construction industry.

Those with DHI certifications requiring participation in the Continuing Education Program (CEP) can earn points in order to maintain their registration in the program. DHI strives to provide the best quality education in a variety of formats for those who specify, detail, supply, and service in the non-residential construction industry.

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DHI LEARNING OPPORTUNITIES

DHI CLASSROOM SERIES

Formerly known as Technical Schools, the DHI Classroom Series offers students increased opportunities to amass critical industry knowledge and skills in smaller, localized formats. Learn from experienced instructors with first-hand industry knowledge in traditional face-to-face classes. Bring your questions to the experts, network with your peers, and go back to your office with the essentials that can be tailored to your workplace.

CHAPTER EDUCATION

The DHI Chapter Local Delivery system allows chapters to purchase the instructor and student materials for many of DHI's training courses that are held in person, as well as micro-courses that are 2-4 hours long. The instructor manuals have dedicated notes that will guide qualified instructors through the presentation. Included with the training materials is the end-of-class exam that will be graded and recorded to recognize those students who successfully complete the class. Students passing a chapter-delivered class will receive full recognition for the class just like students who attend DHI's technical class sessions. This program makes DHI's education easily accessible to local members by reducing travel and time away from the office.

IN-HOUSE EDUCATION

Education for you and your colleagues is available in the convenience of your office. The In-House Training program allows DHI corporate members to purchase the instructor and student materials for many of DHI courses including the micro-courses and, using qualified instructors from within their company or the local area, offer DHI's education to their employees in a traditional face-to-face format. Included with the training materials is the end-of-class exam that will be graded and recorded to recognize those students who successfully complete the class. Students passing an in-house delivered class will receive full recognition for the class just like students who attend DHI's technical class sessions. This program is designed to facilitate employees' education without leaving work!

ONLINE SELF-PACED EDUCATION

Take advantage of DHI's growing number of online self-paced education courses. Many of DHI's knowledge-based classes are available in a "learn at your own pace" environment, with audio and visual elements to enhance your learning experience. Most include an end-of-class exam that is completed by the student and graded immediately online, recording the successful completion in the student's DHI record.

ONLINE INSTRUCTOR-LED EDUCATION

DHI technical education has never been more accessible or convenient with DHI's online, instructor-led courses. These virtual offerings allow expert instructors to deliver live class sessions via Zoom over a multiple-week period.

DHI EDUCATION PATH CHART

COURSE CODE	COURSE NAME	DHIA	DHT	DHC	DHSC	AHC	EHC	CFDAI
COR101	Fundamentals of Architectural Doors and Hardware - Online Self-Paced	■	■	■	■	■	■	■
COR102	Introduction to Building Codes - Online Self-Paced	■	■	■	■	■	■	■
COR103	Understanding and Using Construction Documents - Online Self-Paced		■	■	■	■	■	
COR117	Door, Frame, and Architectural Hardware Applications		■	■	■	■	■	■
COR123	Using Door, Frame and Hardware Standards		■	■	■	■	■	
COR125	Take-off and Estimating		■	■	■	■	■	
COR133	Electrified Architectural Hardware		■	■	■	■	■	
COR140	Using Codes and Standards		■	■	■	■	■	■
COR146	Introduction to Detailing Doors, Frames and Hardware		■	■	■	■	■	
COR147	Introduction to Specification Writing		■	■	■	■	■	
COR153	Installation Coordination and Project Management		■	■	■	■	■	
COR160	Material Purchasing Concepts		■	■	■	■	■	
COR163	Developing Masterkey Systems		■	■	■	■	■	
DHT120	DHT Exam Prep + Exam		■	■	■	■	■	
DHC205	Intermediate Detailing Doors, Frames and Hardware			■	■	■		
DHC210	Mastering the Key Meeting			■	■	■	■	
DHC307	Advanced Detailing Doors, Frames and Hardware			■		■		
DHSC310	Writing Door and Frame Specifications				■	■		
DHSC315	Writing Hardware Specifications				■	■		
AHC220	AHC Exam Prep					■		
EHC400	Electrified Hardware Applications and Documentation						■	
EHC433	Advanced Electrified Architectural Hardware						■	
EHC420	EHC Exam Prep						■	
DAI600	Fire and Egress Door Assembly Inspection + Exam							■

■ Bundled Course

COURSE DESCRIPTIONS

COR101
Fundamentals of Architectural Doors and Hardware

Online Self-Paced Course – 30 Hours
No CEP points available for this introductory course.

Purpose: This course is an introduction to the world of architectural doors and hardware products for those who are new to the industry or who have limited exposure to the broad range of products used in this industry.

Lesson 1: Hollow Metal Doors and Frames
This lesson introduces you to the terminology, components, and materials used to manufacture hollow metal doors and frames.

Lesson 2: Architectural Wood Doors
Students learn the terminology, components, and materials used to manufacture flush and stile and rail architectural wood doors.

Lesson 3: Materials and Finishes
This lesson describes the common metals, materials, and finishes used in the builders hardware industry.

Lesson 4: Hand the Door
This lesson teaches students how to properly hand doors, door frames, and hardware products using industry- standard terms and abbreviations.

Lesson 5: Hang the Door
This lesson introduces students to the builders hardware items that are used to carry the weight of the door leaves and the hardware items attached to them.

Lesson 6: Secure the Door – Door Bolts
This lesson describes the different types of door bolts used to secure the inactive leaves of pairs of doors.

Lesson 7: Secure the Door – Locks and Latches
This lesson focuses on the different types of builders hardware locks and latches used to secure door openings.

Lesson 8: Secure the Door – Panic Hardware and Fire Exit Hardware
This lesson 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 9: Secure the Door – Cylinders and Keying
This lesson 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 10: Control the Door
This lesson describes surface mounted and concealed door closers that are used to control the opening and closing speeds of door leaves.

Lesson 11: Protect the Door
This lesson 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.

Lesson 12: Electrified Architectural Hardware
This lesson 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.

COR102
Introduction to Building Codes

Online Self-Paced Course – 8 Hours
No CEP points available for this introductory course.

Purpose: This course is an introduction to building codes and the role architectural doors and hardware play in them. It is intended for those who are new to the industry or who have limited exposure to the codes used in the commercial hardware industry.

COR103
Understanding and Using Construction Documents

Online Self-Paced Course – 8 Hours – 8 CEPs

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 and an unprofitable job. This program provides estimators, detailers, and project managers with the essential knowledge 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

COURSE DESCRIPTIONS

COR117
Door, Frame, and Architectural Hardware Applications

Face to Face Course – 32 hours – 32 CEPs

RECOMMENDED PREREQUISITES:
COR101 – Fundamentals of Architectural Doors and Hardware
COR102 – Introduction To Building Codes

Today's construction projects use some of the most advanced materials and products ever made. Fire- rated and means of egress door openings have specify 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. An assortment of product samples are used 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

COR123
Using Door, Frame and Hardware Standards

Face to Face Course – 16 Hours – 16 CEPs

RECOMMENDED PREREQUISITES:
COR101 – Fundamentals of Architectural Doors and Hardware
COR102 – Introduction To Building Codes

One of the first courses in the DHT Curriculum

Develop an understanding and thorough knowledge of how industry standards affect door openings. Knowledge of the many door, frame and hardware standards is essential to properly specify, detail, furnish and install these products for projects. These standards contain a wealth of information and can be used to establish levels of quality and function for all types of buildings.

This class covers the following industry standards:
- Steel Door Institute's (SDI) Technical Documents and ANSI/SDI Standards and Test Methods
- Hollow Metal Manufacturers Association (HMMA) 800 Series of Technical Publication
- Window and Door Manufacturers Association (WDMA) I.S.-1A (2013) & I.S.-6A (2013)
- Architectural Woodwork Institute's (AWI) Architectural Woodwork Standards (2nd edition) 2014
- American Architectural Manufacturers Association's (AAMA) Aluminum Storefront and Entrance Manual SFM-1-14
- American National Standards Institute (ANSI)/Builders Hardware
- Manufacturers Association (BHMA) A156 Series of Product Standards

STUDENT TO PROVIDE ADDITIONAL REFERENCE MATERIALS. SEE CHART ON PAGE 12.

COR125
Takeoff and Estimating

Face to Face Course – 16 Hours – 16 CEPs

RECOMMENDED PREREQUISITES:
COR103 – Understanding and Using Construction Documents
COR117 – Door, Frame, and Architectural Hardware Applications
COR123 – Using Door, Frame and Hardware Standards

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

Face to Face Course – 40 Hours – 40 CEPs

RECOMMENDED PREREQUISITES:
COR117 – Door, Frame, and Architectural Hardware Applications

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

COURSE DESCRIPTIONS

- Write operational descriptions
- Troubleshoot circuits

COR140
Using Codes and Standards

Face to Face Course – 24 Hours – 24 CEPs
Instructor-Led, Online Course

RECOMMENDED PREREQUISITES:
COR117 – Door, Frame, and Architectural Hardware Applications

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 edition), ICC/ANSI A117.1, Usable and Accessible Buildings and Facilities (2009 edition), and International Building Code (2015 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

STUDENT TO PROVIDE ADDITIONAL REFERENCE MATERIALS. SEE CHART ON PAGE 12.

COR146
Introduction to Detailing Doors, Frames and Hardware

Face to Face Course – 24 Hours – 24 CEPs
Instructor-Led, Online Course

RECOMMENDED PREREQUISITES:
COR117 – Door, Frame, and Architectural Hardware Applications
COR123 – Using Door, Frame and Hardware Standards

This course is the first of three in a series of combined detailing courses. One of the most important skills you can develop in our industry is the ability to properly coordinate and schedule doors, frames and hardware that are to be provided on projects. In this course, you will begin to learn to detail doors, frames and hardware on projects with a beginner level of complexity of occupancy type through a series of in-class exercises. This is a great face-to-face first step for those interested in working towards their DHT credential.

You will begin to:
- Understands basic fire door and egress code principles
- Apply basic door, frame and hardware knowledge in building very
- simple openings

- Apply basic blue print reading and scaling skills
- Coordinate the application of hardware with doors and frames

DHI will provide students with catalogs on a USB drive for this class.

COR147
Introduction to Specification Writing

Face to Face Course – 24 Hours – 24 CEPs
Instructor-Led, Online Course

If you are pursuing the Architectural Hardware Consultant (AHC), Certified Door Consultant (CDC), Electrified Hardware Consultant (EHC), or Door + Hardware Specification Consultant (DHSC), 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 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)

STUDENT TO PROVIDE ADDITIONAL REFERENCE MATERIALS. SEE CHART ON PAGE 12.

COR153
Installation Coordination and Project Management

Face to Face Course – 16 Hours – 16 CEPs

RECOMMENDED PREREQUISITES:
COR103 – Understanding and Using Construction Documents
COR117 – Door, Frame, and Architectural Hardware Applications

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, which requires disciplined attention to detail. This course teaches you how to coordinate installations and provides you

COURSE DESCRIPTIONS

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

Face to Face Course – 8 Hours – 8 CEPs
Instructor-Led, Online Course

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 materials 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

COR163
Developing Masterkey Systems

Face to Face Course – 8 Hours – 8 CEPs
Instructor-Led, Online Course

RECOMMENDED PREREQUISITES:
COR117 – Door, Frame, and Architectural Hardware Applications

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. Discover the different types and styles of cylinders and keys used in today's locks, understand industry-standard key-set symbols and terminology, and integrate mechanical cylinders and keying into access control and security systems. Learn to organize and conduct a successful keying meeting and how to relay the importance of key control and maintenance to your customers.

You will learn:
- Levels of Masterkeying
- Types of Keys used in Master Key Systems

- Limitations of Keying Systems
- Options for Keying Systems
- Key Control
- How to Hold Keying Meetings

DHT120
DHT Exam Prep + Exam

Face to Face Course – 20 Hours – 20 CEPs
Instructor-Led, Online Course

Students pursuing the Door Hardware Technician (DHT) designation will review material and complete in-class exercises that cover the 8 segments of the exam, Hardware, Doors & Frames, Electrified Hardware and Access Control, Keying, Project Management, Codes, Contract Documents, and Coordination, that are found on the DHT exam. You will leave this class with a firm understanding of what you need to know to be prepared for the DHT credentialing exam. Students are not required to have taken all of the review courses, attendees may have obtained this knowledge through other education or on the job training.

You will review material from the follow intermediate level courses:
- COR103 – Understanding and Using Construction Documents
- COR117 – Door, Frame and Architectural Hardware Applications
- COR123 – Using Door, Frame and Hardware Standards
- COR133 – Electrified Architectural Hardware
- COR140 – Using Codes & Standards
- COR146 – Introduction to Detailing Doors, Frames and Hardware
- COR147 – Introduction to Specification Writing
- COR153 – Installation Coordination and Project Management
- COR163 – Developing Masterkey Sytems
- DHC205 – Intermediate Detailing Doors, Frames and Hardware

The computerized DHT credentialing exam will be administered on Day 3 of the DHT120 course. Students who complete the course and pass the DHT exam will receive the Door + Hardware Technician Credential.

DHC205
Intermediate Detailing Doors, Frames and Hardware

Face to Face Course – 32 Hours – 32 CEPs

RECOMMENDED PREREQUISITES:
COR117 – Door, Frame, and Architectural Hardware Applications
COR140 – Using Codes and Standards
COR146 - Introduction to Detailing Doors, Frames and Hardware

Perhaps the most necessary skill you can develop in our industry is learning how to properly create detailed hardware schedules. Coordinating 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 exercise as well as introduces students to the techniques and skills necessary to become a more precise detailer.

COURSE DESCRIPTIONS

You will learn how to:
- Interpret plans and specifications
- Create door, frame, and hardware submittals
- Create proper headings for hardware sets
- Use sequence and format to list hardware items in the proper order
- Write detailed hardware sets
- Coordinate hardware with doors and frames
- Illustrate door opening details and elevations
- Coordinate hardware templating requirements

DHI will provide students with catalogs on a USB drive for this class.

DHC210
Mastering the Key Meeting
Face to Face Course – 8 Hours – 8 CEPs

RECOMMENDED PREREQUISITES:
COR117 – Door, Frame, and Architectural Hardware Applications
COR146 – Introduction to Detailing Doors, Frames and Hardware
COR163 – Developing Masterkey Systems

Even with the introduction of access control systems to many projects, masterkey systems are still the foundational bedrock of building security. Consultants need to be able to interpret specification language and listen to an owner's requirements to create a key system that functions properly.

This course will bring you through the process of organizing, preparing and conducting a successful key meeting. You will leave this course confident that you understand key system capabilities, layouts and key management, and can relay that information to other meeting participants.

Develop the skill to see through the complications of advanced keying and to keep your keys systems both simple and secure.

You will learn how to:
- Organize a key meeting
- Prepare for a key meeting
- Conduct a key meeting
- Understand key system capabilities
- Interpret specifications
- Prepare advanced keying layouts
- Recommend and explain key management

DHC307
Advanced Detailing Doors, Frames and Hardware
Face to Face Course – 40 hours – 40 CEPs

RECOMMENDED PREREQUISITES:
COR117 – Door, Frame, and Architectural Hardware Applications
COR133 – Electrified Architectural Hardware
COR140 – Using Codes and Standards
COR146 – Introduction to Detailing Doors, Frames and Hardware
DHC205 – Intermediate Detailing Doors, Frames and Hardware

Building on the principles learned in DHC205 Intermediate Detailing Doors, Frames and 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 where students were introduced to the techniques and skills necessary to become an expert detailer. 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 complex door openings
- Select hardware products for complex openings
- Create detailed hardware sets
- Include elevation diagrams for openings with electrified hardware
- Create door and frame shop drawings
- Prepare door and frame submittals
- Illustrate door opening details
- Coordinate hardware templating requirements

DHI will provide students with catalogs on a USB drive for this class.

DHSC310
Writing Door and Frame Specifications
Face to Face Course – 24 Hours – 24 CEPs

RECOMMENDED PREREQUISITES:
COR147 – Introduction to Specification Writing
COR123 – Using Door, Frame and Hardware 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

STUDENT TO PROVIDE ADDITIONAL REFERENCE MATERIALS.
SEE CHART ON PAGE 12.

COURSE DESCRIPTIONS

DHSC315
Writing Hardware Specifications

Face to Face Course – 40 Hours – 40 CEPs
Instructor-Led, Online Course

RECOMMENDED PREREQUISITES:
COR117 – Door, Frame, and Architectural Hardware Applications
COR133 – Electrified Architectural Hardware
COR140 – Using Codes and Standards
COR147 – Introduction to Specification Writing
DHC205 - Intermediate Detailing Doors, Frames and Hardware
DHC307 - Advanced Detailing Doors, Frames and 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 hardware and access control systems

DHI will provide students with catalogs on a USB drive for this class.

AHC220
AHC Exam Prep

Face to Face Course – 24 Hours – 24 CEPs
Instructor-Led, Online Course

Students pursuing the Architectural Hardware Consultant (AHC) 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

STUDENT TO PROVIDE ADDITIONAL REFERENCE MATERIALS.
SEE CHART ON PAGE 12.

CDC320
CDC Exam Prep

Face to Face Course – 16 Hours – 16 CEPs

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

EHC400
Electrified Hardware Applications and Documentation

Face to Face Course – 32 Hours – 32 CEPs
Instructor-Led, Online Course

RECOMMENDED PREREQUISITES:
COR117 – Door, Frame, and Architectural Hardware Applications
COR133 – Electrified Architectural Hardware
COR140 – Using Codes and Standards
DHC205 – Intermediate Detailing Doors, Frames and Hardware
DHC307 – Advanced Detailing Doors, Frames and Hardware

One of the most important steps in detailing today's projects is creating the low voltage wiring drawings / diagrams and related documentation for door openings with electrified hardware. In this course you will learn to use a free downloadable computer drawing program (Libre Office Draw) to create your drawings and will return to your workplace with the ability to create drawings for your projects. This course will teach you how to use correct industry recognized ymbols and drawing techniques to help you communicate the project's requirements more effectively with the electrician, installer and systems integrators.

You will learn how to:
- Create electrified door elevation diagrams
- Create riser diagrams
- Create point-to-point wiring diagrams
- Use relays to control circuits

Students are required to bring a PC laptop that is using Windows 7, 8, 10 or WINE. A USB flash drive will be used for the program and will not require that the software be installed on your computers. A separate mouse (rather than the mouse pad built into the laptop) is also required.

EHC433
Advanced Electrified Architectural Hardware

Face to Face Course – 40 Hours – 40 CEPs

RECOMMENDED PREREQUISITES:
COR117 – Door, Frame, and Architectural Hardware Applications
COR133 – Electrified Architectural Hardware
COR140 – Using Codes and Standards
DHC205 – Intermediate Detailing Doors, Frames and Hardware
DHC307 – Advanced Detailing Doors, Frames and Hardware
EHC400 – Electrified Hardware Applications and Documentation

Building upon the fundamentals that you learn in COR133, this class will teach you how to take the lead in coordinating electrified hardware

COURSE DESCRIPTIONS

devices that your company supplies, with all other low voltage electrified systems to be installed as part of the openings on a project. Coordination is critical in order to ensure a seamless, trouble free, product integration, and will substantially reduce call backs to the site. Through hands-on electrified hardware exercises, we will demonstrate how different systems work together to create secure, and fully functional electrified openings. After taking this course, whether you supply product, create drawings, run coordination meetings, or all of the above, you will develop a true consulting approach that can greatly impact your company's bottom line. As the hardware industry becomes more dependent on the versatility of electrified hardware, this curriculum will prepare you to communicate effectively with Architects, Owners, Contractors, and Subcontractors by teaching you the necessary skills to coordinate a project as an expert industry professional. By developing a concrete understanding of the systems involved in integrated openings, and an assurance that all code requirements for the project are satisfied, you can take your company to the next level.

STUDENTS ARE REQUIRED TO BRING A LAPTOP OR TABLET, AND A HANDHELD MOBILE DEVICE (CELLPHONE)

EHC420
EHC Exam Prep

Face to Face Course – 16 Hours – 16 CEPs

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, video surveillance terminology, principles of low voltage electricity, and specification writing

DAI600
Fire and Egress Door Assembly Inspections + Exam

Face to Face Course – 28 Hours – 24 CEPs

RECOMMENDED PREREQUISITES:
COR101 – Fundamentals of Architectural Doors and Hardware
COR102 – Introduction to Building Codes
COR117 – Door, Frame and Architectural Hardware Applications
COR140 – Using Codes and Standards

The DAI600 curriculum is focused on understanding the role and responsibilities of the fire and egress door inspectors as well as interacting with the building owner and the Authority Having Jurisdiction (AHJ). It is paramount to ensure that the respective parties clearly understand the inspection process and documentation and how to follow through with the necessary corrections to improve safety in their facilities.

This class will teach you how to perform and record these inspections, as well as provide tips for interacting with building owners and AHJs. It requires an intermediate level of understanding of door, frame, and hardware products and applications, and applicable code familiarity to conduct inspections.

Students of this course are recommended to complete the specific DHI courses mentioned above, or have comparable knowledge or experience. The first critical course, *COR117- Door, Frame, and Architectural Hardware Applications*, is focused on products and their applications. If you have not taken this course but have significant experience in non-residential doors, frames, and hardware, a complimentary knowledge assessment exam is available to evaluate your readiness for the DAI 600 class. Because the DAI600 course is based heavily on understanding codes, which are updated every three years, we strongly suggest that the second course, *COR140 – Using Codes and Standards*, be taken prior to DAI600, and if not taken within the past three years, the DHI CEP code update classes may also be taken.

For those who do not work and/or are not directly related to the Door and Hardware Industry there are two excellent introductory courses - COR101 and COR102 – that should be completed prior to taking COR117, COR140 and ultimately DAI600. All 4 recommended courses are crucial in order to be successful in the DAI600 class and earn your FDAI credential.

You will learn how to:
- Perform visual inspections and conduct operational testing of swinging fire doors
- Authorize inspection reports for building owners and AHJ requirements
- Recommend corrective actions necessary in compliance with inspection requirements
- Interface with building owners and AHJs on inspection requirements and issues
- Understand NFPA 101 inspections, occupancy types, means of egress, special locking arrangements, capacity calculations, hazard contents, and perform egress inspections
- Provide Performance-Based option explanation and guidance
- Research manufacturers' labels and listings
- Provide instruction for the care and maintenance of components along with approved field modifications when necessary

The computerized CFDAI certification exam will be administered on Day 4 of the DAI600 course. Students who complete the course and pass the CFDAI exam will receive the Certified Fire + Egress Door Assembly Inspector Certification.

Students will receive the Guide to *Annual Inspections of Swinging Fire Doors* and *Field Reference Digest for Inspecting Swinging Fire Doors*, sample inspection reports, door gap gauge, and inspection magnet and mirror.

STUDENT TO PROVIDE ADDITIONAL REFERENCE MATERIALS.
SEE CHART ON PAGE 12.

STUDENT-SUPPLIED CLASS MATERIALS

Please note: All end of class exams will be held in TopClass; therefore, a computer will be required for all classes (except COR125).

Student Manuals and other materials are furnished as part of the class tuition. Several classes require students to bring product information, codes, standards, laptops and other important materials noted as follows:	COR123	COR140	COR147	DHSC310	AHC220	CDC320	DAI600	EHC420
NFPA80, Standards for Fire Doors and Other Opening Protectives (2013 edition)		●			●	●	●	●
NFPA101, Life Safety Code (2012 edition)		●			●	●	●	●
NFPA105 Standard for Smoke Door Assemblies and Other Opening Protectives (2013 edition)		●					●	
ICC/ANSI A117.1, Accessible and Usable Building and Facilities (2009 edition)		●			●	●	●	●
Catalogs or 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			●		●			
Catalogs or electronic files for pivots, continuous hinges, concealed in the floor closers, door bolts, coordinators, overhead stops and holders, removable mullions, bored and mortise locks and latches, auxiliary locks, surface-mounted and overhead concealed door closers, low-energy door operators, door pulls/ push bars, protection plates, gasketing, thresholds, and door stops					●			
Catalogs or electronic files for electrified hardware (e.g. power supplies, card readers, key pads, motion detectors, power transfer devices)					●			●
Steel Door Institute's SDI Fact File (Suggested electronic format) 2018, (Technical Documents and ANSI/SDI Standards and Test Methods)	●							
Hollow Metal Manufacturers Association's (HMMA) Hollow Metal Manual 800 Series of Technical Publications	●							
Window and Door Manufacturers Association (WDMA) IS-1A (2013) Architectural Flush Wood Doors and IS-6A (2013) Architectural Stile and Rail Wood Doors	●							
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.				●		●		

CONTINUING EDUCATION COURSES

ONLINE SELF-PACED CONTINUING EDUCATION COURSES

CE1401 NFPA101-2012 CODE UPDATES

CE1501 IBC-2015 CODE UPDATES

CE1601 NFPA101-2015 CODE UPDATES

CE1701 NFPA80-2013 CODE UPDATES

MICROLEARNING CLASS DESCRIPTIONS

In addition to the standard classes that are available to be taught locally or at Chapters, the following classes have been developed for local education as well. These classes are approximately two to four hours long.

CE1503
Intermediate Electrified Access Control

(3 hours, 3 CEPs)

Learning Outcomes:

- To introduce Electronic Access Control at an intermediate level.
- Furthering knowledge by use of Basic Terminology, system design and electrical drawings.

Class outline:

- What is access control
- When to use electronic access control
- Terminology
- Credentials
- EAC Components
- Clients Statement / Scheduling Exercise
- EAC Concepts
- Operation Descriptions
- Elevation Drawings
- Writing Operational Descriptions
- Selecting Power Supplies

INSTRUCTOR REQUIREMENTS: Suggested EHC or significant experience in scheduling from a client statement, writing operational descriptions and creating elevation drawings for electrified access control.

CE1504
ICC Code Update Roundtable

(2 or 4 hours, 2 or 4 CEPs)

Learning Outcomes:

- ICC 2015 Update, with reference information on previous versions
- To understand the requirements of section 716 addressing opening protections
- To understand the requirements of section 1010 addressing egress

Class Outline:

- Familiarize learners with ICC codes by use of discussions of specific building types/applications and related code sections.
- Session 1 relates primarily to commercial buildings and doors and hardware requirements, such as door size, door operations, opening force and temperature rise doors.
- Session 2 relates primarily to facilities requiring delayed or controlled egress, sensor release, electromagnetic lock egress and stairways.
- The class may be held as one four-hour class, or two shorter classes.

In addition to the student manual, each attendee will receive the two sample sections of the ICC that will be discussed, as well as a basic code overview manual.

INSTRUCTOR REQUIREMENTS: This course requires the lead instructor meet with the table leaders (instructors) prior to the class to review the questions and the portion of the codes that apply.

CE1505
Managing Projects, Time, Money, and Materials

(4 hours, 4 CEPs)

Learning Outcomes:

- Understand contract requirements
- Identify and effectively manage people involved in all aspects of project management
- Manage multiple activities including time, money and materials

Class Outline:

- Project relationships
- Contractual documents
- Project objectives
- Construction documents
- Key project elements
- Task order worksheet
- Power of 1%
- Project Phases

INSTRUCTOR REQUIREMENTS: Ideally AHC, but at least experience in project management and successfully completed DHI's COR153.

CE1603
Basic Masterkeying

(2 hours, 2 CEPs)

Learning Outcomes:

- Basic understanding of how a pin tumbler cylinder works
- Identify the common types of cylinders
- Identify the types of keying systems
- Learn Master Key Nomenclature and functions

Class Outline:

- Pin tumbler cylinder operation
- Common cylinder types
- Important key components
- Types of keying systems
- Master Key Nomenclature
- Identifying proper keyset symbols exercise

INSTRUCTOR REQUIREMENTS: Experienced in master keying and master key systems, and has successfully completed DHI's AHC200.

Cost for all CE classes listed above: $50 fee per student for materials within the U.S. If DHI provides an instructor, the cost for the instructor plus the travel expenses will be billed at actual cost.

Refer to **www.dhi.org** for a continually updated list of continuing education courses available online or for local delivery.

EDUCATION PROGRAM POLICIES

TUITION POLICIES

1. Tuition payment must be received with registration to ensure a place in a course. Confirmation of registration after receipt of payment will be provided.

2. 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.

3. For cancellations received up until 4 weeks prior to the start of a DHI Classroom Series, either a 95% refund or a 100% credit for future courses is available. Credit is valid for only one calendar year.

4. For cancellations received within 4 weeks of the start of a DHI Classroom Series, a 90% credit only will be applied to a future course and valid only for one calendar year.

5. Once a DHI Classroom Series begins, no refunds nor credit will be given for missed or non-completed courses.

6. Special circumstances (will apply to items 3, 4, and 5) 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.

CLASSROOM POLICIES

1. The use of computers and mobile devices to access allowable information during classes is permitted. However, internet access in the classroom cannot be guaranteed, so it is required that students download any allowable materials to their computer or mobile device prior to the class to ensure access when needed. Access to the internet is definitely not allowed for class tests, so any allowable use of an electronic device requires materials to be downloaded prior to the test. Students may also bring hard copy catalogs, or printed PDFs when allowed in that particular class.

COURSE EXAMS

1. All end of class exams except COR125 will be held in TopClass; therefore, a computer will be required for all classes.

2. Course exams, most of which consist of a battery of multiple choice questions, completed during a Classroom Series, DHI Chapter, or In-House training program are electronically graded and the results are final and not subject to review or analysis beyond this scoring process.

3. Some course exams may have multiple parts; in addition to multiple choice questions they may include a separate exercise that requires the students to demonstrate their knowledge, understanding, skill, and expertise of the subject matter covered in the respective course. These exercises are manually graded by DHI staff or Instructors and the results of these manually graded exams are final and also not subject to review or analysis with the student beyond this scoring process. Scored worksheets are returned to the students for their review.

4. Students must achieve a minimum passing score of 75% on course exams and multi-part course exams require a minimum score of 75% on each segment in order to pass the course. CFDAI certification and DHT credential exams require 80% to pass.

5. Failed end-of-class exams or segments of a multi-part course exam may be retaken one time by the student at their discretion. Electronically tested and graded exams or segments may be re-taken at no charge, administered through the online DHI TopClass system. Exams with exercises requiring manual grading may require a re-take fee. Failed re-take exams will then require the student to repeat the entire course and pass the course exam if successful completion is desired to be recorded in the student's record. Full registration cost is required for the retake course. Failed certification or credentialing exams require payment in full or part (where applicable) for retake of the exam.

COURSE PREREQUISITES

1. There are no prerequisite courses required to take any course, however, there are recommended preparative courses and or comparable knowledge or experience necessary to help students successfully complete specific courses. These details are listed in the course description along with the Learning Outcome Statements provided for each course.

2. Some highly technical, complex courses may require that if the student has not completed the recommended preparative courses, they are still required to successfully complete a complimentary knowledge assessment exam prior to taking the course. This is critical for the student to demonstrate familiarity with the prerequisite knowledge to prepare them to successfully complete the course and exam.

3. Even where not required, these complimentary knowledge assessment exam are available in DHI TopClass to be used as a guide for the student to determine their preparedness to take a class. However, the course description and Learning Outcome Statements should also be reviewed completely as the assessment exams may not cover all topics included in a course.

FREQUENTLY ASKED QUESTIONS

Are all class materials supplied by DHI?

No. Student Manuals and other materials are furnished as part of the class tuition, but several classes require students to bring product catalogs (print or electronic), as well as codes and standards and other important reference documents. Refer to the Chart of Student Supplied Class Materials for the materials you must bring. Students are responsible for shipping any Student Supplied Class Materials they need both to and from the class site should they decide not to hand carry them to class.

Does the class tuition fee include hotel room and meal charges for the DHI Classroom Series?

No. Class registration fees do not include hotel accommodations. There is a mandatory Facility Fee which covers the cost of food and beverage for some meals and breaks, along with other ancillary costs of the facility that DHI contracts to conduct the classes, and will vary from event to event depending on the property selected. These are negotiated costs and DHI does not profit from the Facility 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 end-of-class exam.

Am I required to have a computer?

Yes. All end of class exams will be held in TopClass; therefore, a computer will be required for all classes and DHT, DHC, and CFDAI certification exams.

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

No. Internet access for email, browser, instant-messaging, etc. is prohibited during in-class hours. Please keep this in mind if you have purchased electronic formats of any course materials and plan to use them in class, as permitted.