AIA/CES

Continuing Education Courses

CRESTRON

As a registered AIA/CES Continuing Education Provider, Crestron is committed to offering expert-level education in accordance with AIA/CES standards.

Our AIA continuing education courses were developed to meet the specific needs of architects, electrical engineers, and lighting designers. Courses are typically one-hour in length, and you'll earn 1 Learning Unit [LU] upon completion.

All courses include Health, Safety, and Welfare [HSW] or Sustainable Design [SD] topics.

We welcome the opportunity to present these continuing education courses at your office or in cooperation with local chapter events via video conference.

More information: 1.855.263.8754
To register, go to crestron.com/AIA

Health Safety Welfare: Yes
Sustainable Design: Yes
IESNA Lighting Certification (LC): Yes, 1 LEU (NCQLP's 1.0 Continuing Education Lighting Course/1.1 AIA Courses)
USGBC's LEED Green Associate and LEED AP with Specialty: Yes, LEED "Green building task" credit, not "LEED-specific task"
NCEES Professional Engineer (PE): Dependent on individual state's acceptance of AIA courses
ASID/IDCEC: Not formally approved at this time

CRES38: **Planning for Whole Building Lighting Controls and Integration**

Length: 1 Hr **Credits:** 1 LU/HSW **Cost:** Free
Target Audience: Architects, Engineers

This course offers designers a conceptual, high-level overview of connected buildings and key control systems. Focus is on the basics of each system and how to effectively communicate concepts to clients, vendors, and other members of the design team. Integrating lighting, controls, shading, AV, BMS/BAS software, and other connected systems involves multiple disciplines, and the technical knowledge can often seem overwhelming. This aims to consolidate and conceptualize, supporting the designer or project manager in strategically coordinating responsibility and offering the most value for each client.

After completing this course you'll be able to:

- Understand the most common connected building systems and why it is important for them to talk with each other
- Define the most common methods of building communication and apply these concepts to any system or protocol
- Identify key lighting control and dimming protocols, how to network a lighting system, and how to plan for consistency
- Hold specifications by applying key concepts to documentation, the design team, and to vendors
- Plan and coordinate projects when there's no integration consultant involved

CRES40: **Meeting Energy Codes with Wireless Solutions**

Length: 1 Hr **Credits:** 1 LU/HSW **Cost:** Free
Target Audience: Engineers, Electrical Contractors, Electrical Distributors

This course examines the many wireless protocols lighting control manufacturers are implementing today along with their benefits and detriments to our already crowded wireless atmosphere. These new technologies, along with their communications, are becoming vastly more popular and well adopted in the commercial space; one strictly dictated by a constantly evolving energy code. This course explores these protocols and offers helpful compliance paths to ease the daunting task commercial consultants face with the newest release of ASHRAE 90.1 2016.

After completing this course you'll be able to:

- Understand the wireless communication protocols available to manufacturers of controls and how they differ
- Understand the energy code requirements adopted by each state and the compliance path associated with each
- Review and analyze the newest energy code for lighting controls released in the United States: ASHRAE 90.1 2016, chapter 8 and 9
- Discuss ways wireless lighting control can aid in the compliance of ASHRAE 90.1 2016

CRES41: **Energy Codes-Comparative Analysis**

Length: 1 Hr **Credits:** 1 LU/HSW **Cost:** Free
Target Audience: Engineers, Electrical Contractors, Electrical Distributors

This course provides an overview of IECC 2015 and 2012, and ASHRAE 90.1 2013 and 2010. You'll also gain a basic understanding of best practices and how these codes apply to various spaces, such as commercial interior, retail, healthcare, and hospitality.

After completing this course you'll be able to:

- Discuss the adoption of current building energy codes across the country
- Explain how the current codes apply to various commercial building spaces and latest best practices
- Review and highlight the latest changes to energy codes
- Demonstrate how lighting control requirements change under each energy code

CRES42: **Integrated Building Technology**

Length: 1 Hr **Credits:** 1 LU/HSW **Cost:** Free
Target Audience: Architects, Engineers, Electrical Contractors, Electrical Distributors

This course begins with a discussion of the current building industry design and construction processes, limitations, and issues which hinder its success. Afterward, you'll be able to define Integrated Building Technology (IBT) and how it can help projects run smoothly as technology changes. Finally, attendees will review case studies in which lighting controls and CSI Division 25 implementation have acted as a catalyst to successful IBT integration.

After completing this course you'll be able to:

- Discuss the current building industry design and construction processes, limitations, and issues that hinder its overall success
- Define IBT and how it relates to the changing design and construction process
- Explain how IBT can help projects run smoothly as technology becomes more complicated
- Review case studies in which lighting controls have acted as a catalyst to a successful IBT integration

CRES43: **Daylight Harvesting & Controls**

Length: 1 Hr **Credits:** 1 LU/HSW **Cost:** Free
Target Audience: Architects, Engineers, Electrical Contractors, Electrical Distributors

This is a one-hour AIA Continuing Education Seminar. The presentation is an overview of topics related to daylight harvesting and the controls required for its success.

After completing this course you will:

- Understand the various techniques, concerns, and benefits associated with daylighting
- Gain an overview of the various daylight harvesting techniques
- Become familiar with the various Energy Codes that require daylight harvesting
- Understand the various controls necessary for a successful daylight harvesting system

CRES44: **Energy Codes & Integrated Building Technology**

Length: 1 Hr **Credits:** 1 LU **Cost:** Free
Target Audience: Engineers, Electrical Contractors, Electrical Distributors

In this course you'll learn about the evolution of various energy codes and standards such as ASHRAE 90.1, IECC, and LEED. You'll will also gain a basic understanding of Integrated Building Technology (IBT) and how this concept can help toward achieving energy code requirements. We'll discuss the current building industry design and construction processes, limitations, and issues that hinder its overall success, as well as how IBT can help projects run smoothly as technology becomes more complicated.

After completing this course you will:

- Be familiar with the evolution of the various energy codes that have occurred over the past 35 years
- Be able to define IBT and how it relates to the changing design and construction process
- Be able to define the role IBT will fill in successfully meeting the increasingly stringent energy codes
- Be able to convey the benefits of a single-platform IBT solution to an architect, engineer, electrical contractor, general contractor, facility manager, and others in the construction industry

CRES45: **Daylighting Design with Shading Solution**

Length: 1 Hr **Credits:** 1 LU/HSW **Cost:** Free
Target Audience: Architects

Energy conservation has become a critical component in building design. In this course you will learn about the energy flow in the U.S. and consumption in modern buildings. You will also gain a better understanding of the technical properties of shading solutions and discover how automated shading systems contribute to daylighting and daylight harvesting.

After completing this course you will:

- Understand the energy flow in the United States and the energy consumption in modern buildings
- Recognize energy divisions within buildings that can be made more efficient
- Define daylighting and daylight harvesting and understand the best practice methods for executing both by reviewing applications
- Explain the benefits of automated shades systems and interior window treatments by way of solar properties of shades

CRES49: **Pragmatic Methods of Tuning White Light**

Length: 1 Hr **Credits:** 1 LU/HSW **Cost:** Free
Target Audience: Architects, Engineers

Studies, products, and marketing around tunable white light abound. This course will unpack the practical tools of today and what to look forward to in the future to ensure successful tunable white solutions.

After completing this course you'll be able to:

- Identify aesthetic, physiological, and psychological objectives to light intensity and spectrum design
- Identify all the components of a tunable white solution
- Identify practical control solutions that are available today
- Discuss who may take ownership of "tuning" the fixtures in terms of quantitative color performance
- Identify important industry organizations that may help in the development of accurate tunable white

CRES50: **Circadian Rhythm and Lighting Control**

Length: 1 Hr **Credits:** 1 LU/HSW **Cost:** Free
Target Audience: Architects, Engineers, Electrical Contractors, Electrical Distributors

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- Identify important industry organizations that may help in the development of accurate tunable white

CRES51: **Lighting Control Compliance for IECC 2018**

Length: 1 Hr **Credits:** 1 LU/HSW **Cost:** Free
Target Audience: Architects, Engineers

The latest IECC energy code is IECC 2018. Lighting controls are impacted by various changes and requirements.

After completing this course you will:

- Understand the new commercial requirements for lighting controls in the IECC 2018
- Understand how different vertical markets are affected by the code changes
- Apply the new code criteria in lighting control system design where parts are required for code compliance

CRES52: **Lighting Control Compliance for IECC 2018 & NYCECC 2020**

Length: 1 Hr **Credits:** 1 LU/HSW **Cost:** Free
Target Audience: Architects, Engineers

The latest IECC energy code is IECC 2018 & NYCECC 2020. Lighting controls are impacted by various changes with the additions to NYC's adoption variations to IECC. In this course, you'll learn about the different changes and requirements.

After completing this course you will:

- Understand the new commercial requirements for lighting controls in the IECC 2018 and NYCECC 2020
- How different vertical markets are affected by the code changes
- Apply the new code criteria in lighting control system design where parts are required for code compliance

CRES53: **Introduction to DALI® and DALI-2 protocols**

Length: 1 Hr **Credits:** 1 LU/HSW **Cost:** Free
Target Audience: Architects, Engineers

Digital Addressable Lighting Interface (DALI) protocol is fast becoming a standard for lighting controls. In this course you'll learn the benefits of using this digital communications protocol solution, and how to leverage DALI to promote tunable white lighting, which has proven to increase employee efficiency and overall well-being.

After completing this course you will:

- Understand DALI, as well as its benefits and challenges
- Recognize the platform enhancements within the new DALI 2 protocol standards
- Understand how to apply and specify DALI, wired or wireless
- Understand DALI-2 tunable white light standardization

CRES54: **Smart Lighting Control for Emergency Power**

Length: 1 Hr **Credits:** 1 LU/HSW **Cost:** Free
Target Audience: Architects, Engineers

Proper design of emergency lighting controls is crucial to building safety. In this course you'll learn the basics of proper design, the different solutions for designing lighting controls that are part of the emergency power system, and changes to classifications of emergency lighting control products.

After completing this course you will:

- Understand the basics of egress lighting requirements and emergency power
- Understand the basics of power distribution and emergency power
- Understand key terms, concepts, and designs
- Understand how different devices work and where they are needed in the system, including:
  - » ATS
  - » ALCR for distributed solutions
  - » BCLELTS for distributed solutions
  - » Centralized phase-loss sensors (PLS) for panel-based solutions

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