



AIA COURSE LISTING

May 2020

**COURSE NUMBER:** SIGNIFY 01

**COURSE NAME:** Connected Lighting: Lighting Beyond Illumination

**CREDITS:** 1.0 LU/HSW

**EXPIRES:** 2021

**DESCRIPTION:** As LEDs continue to penetrate the lighting market in many application areas, it is legislated requirements for controls which will ultimately drive the adoption of LEDs for general lighting in commercial space. This seminar explores how controls will drive the value of lighting far beyond illumination to connect people to the very spaces they inhabit and enable “the internet of things” indoors and out. Discover how connectivity in lighting has brought about change to enable us to sense, anticipate and respond to the world surrounding by enabling location-based services and information retrieval.

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**COURSE NUMBER:** SIGNIFY 02

**COURSE NAME:** Brightness, Comfort and Efficacy with Today’s LED Luminaires

**CREDITS:** 1.0 LU/HSW

**EXPIRES:** 2021

**DESCRIPTION:** This one-hour seminar applies LED technology to point source luminaires, principally specification-grade downlights. The course first covers the primary performance attributes of light output, efficacy, life, color, and controllability. It then evaluates key aspects of point source luminaire design – performance, photometry, glare control, and construction – and benchmarks LED luminaires to familiar “conventional” luminaires. It closes by identifying significant trends in LED point source luminaire development. Regarding, HSW - this program addresses point source lighting, which is frequently used in spaces that promote mental and social wellbeing and specifically to engender positive emotional responses among users of the spaces. Specifically, 75% of this course covers electrical building systems, interior design, energy efficiency and materials.

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**COURSE NUMBER:** SIGNIFY 02a

**COURSE NAME:** Brightness, Comfort and Efficacy with Today’s LED Luminaires

**CREDITS:** 1.5 LU/HSW

**EXPIRES:** 2020

**DESCRIPTION:** This 90 MIN seminar applies LED technology to point source luminaires, principally specification-grade downlights. The course first covers the primary performance attributes of light output, efficacy, life, color, and controllability. It then evaluates key aspects of point source luminaire design – performance, photometry, glare control, and construction – and benchmarks LED luminaires to familiar “conventional” luminaires. It closes by identifying significant trends in LED point source luminaire development. Regarding, HSW - this program addresses point source lighting, which is frequently used in spaces that promote mental and social wellbeing and specifically to engender positive emotional responses among users of the spaces. Specifically, 75% of this course covers electrical building systems, interior design, energy efficiency and materials. (EXPANDED VERSION OF PHIL 35)

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**COURSE NUMBER:** SIGNIFY 03

**COURSE NAME:** Visual Impact and LED Technology

**CREDITS:** 1.0 LU/HSW

**EXPIRES:** 2021

**DESCRIPTION:** This one-hour seminar applies LED technology to the visual impact created by focal lighting. The course first covers the primary considerations of focal lighting, including contrast, intensity, and color, as well as the economics of luminous efficacy and product reliability and life. The course then looks at typical applications of lighting objects and vertical surfaces with aiming and spacing guidelines and compares various luminaire options. Finally, it explains the basic illuminance calculations for focal lighting.

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**COURSE NUMBER:** SIGNIFY 03a

**COURSE NAME:** Visual Impact and LED Technology

**CREDITS:** 1.5 LU/HSW

**EXPIRES:** 2021

**DESCRIPTION:** This 90 MIN seminar applies LED technology to the visual impact created by focal lighting. The course first covers the primary considerations of focal lighting, including contrast, intensity, and color, as well as the economics of luminous efficacy and product reliability and life. The course then looks at typical applications of lighting objects and vertical surfaces with aiming and spacing guidelines and compares various luminaire options. Finally, it explains the basic illuminance calculations for focal lighting. (EXPANDED VERSION)

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**COURSE NUMBER:** SIGNIFY 04

**COURSE NAME:** Lighting Controls: The VIEW Paradigm

**CREDITS:** 1.0 LU/HSW

**EXPIRES:** 2021

**DESCRIPTION:** This one-hour seminar shows how connected systems of LED luminaires and advanced controls can add value beyond illumination. These benefits include improved real estate values and wellness, in addition to deep energy savings, as case studies show, the benefits can be quantified. Technologies discussed include wireless communication, luminaire-integrated sensors, indoor positioning, POE, and dynamic control of color. 1. Supporting the HSW definition: This program specifically addresses the impact of lighting on circadian systems and the mental and social wellbeing of occupants. 2. Topics: This program specifically addresses electrical building systems, , energy efficiency and sustainability. 3. Focus: At least 75% of the course covers the topics listed above.

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**COURSE NUMBER:** SIGNIFY 04a

**COURSE NAME:** Lighting Controls: The VIEW Paradigm

**CREDITS:** 1.5 LU/HSW

**EXPIRES:** 2021

**DESCRIPTION:** This 90 MIN seminar shows how connected systems of LED luminaires and advanced controls can add value beyond illumination. These benefits include improved real estate values and wellness, in addition to deep energy savings, as case studies show, the benefits can be quantified. Technologies discussed include wireless communication, luminaire-integrated sensors, indoor positioning, POE, and dynamic control of color. 1. Supporting the HSW definition: This program specifically addresses the impact of lighting on circadian systems and the mental and social wellbeing of occupants. 2. Topics: This program specifically addresses electrical building systems, , energy efficiency and sustainability. 3. Focus: At least 75% of the course covers the topics listed above.

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**COURSE NUMBER:** SIGNIFY 05

**COURSE NAME:** The C-Change in Outdoor Lighting: Comfort, Control, and Community

**CREDITS:** 1.0 LU/HSW

**EXPIRES:** 2021

**DESCRIPTION:** This one-hour seminar looks at important changes in the application of LED technology to outdoor lighting. We will consider how new optics can enhance the comfort of pedestrians, how new controls are addressing code requirements and energy conservation, and how lighting and product design can influence community safety and environmental quality. This program specifically addresses the following HSW topics: Occupant Comfort, Legal, Environment, and Design. At least 75% of the course covers the topics listed above.

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**COURSE NUMBER:** SIGNIFY 06

**COURSE NAME:** Energy Codes: A Facilities Perspective

**CREDITS:** 1.0 LU/HSW

**EXPIRES:** 2021

**DESCRIPTION:** This one-hour seminar reviews key provisions of current energy codes with particular emphasis on controls requirements and tenant fit-out in office applications. In addition to the code provisions themselves, we will consider how those provisions are shaping interior lighting design and what may be ahead.

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**COURSE NUMBER:** SIGNIFY 07

**COURSE NAME:** Wireless Control Comes of Age

**CREDITS:** 1.0 LU/HSW

**EXPIRES:** 2022

**DESCRIPTION:** This one-hour seminar discusses how connected systems of LED luminaires and advanced wireless communication improve the usability of lighting controls and – importantly – reduce their complexity and cost. We will consider various system architectures and look at key issues, including capability, scale, reliability, and security. Supporting the HSW definition, this program specifically addresses the following HSW topics: Building Systems, Legal, Design and Environmental.

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**COURSE NUMBER:** SIGNIFY 08

**COURSE NAME:** Lighting for Vertical Surface and LED Technology

**CREDITS:** 1.0 LU/HSW

**EXPIRES:** 2022

**DESCRIPTION:** This one-hour seminar applies LED technology to the lighting of vertical surfaces. The course first covers importance of vertical illumination, including spatial brightness and perception, energy utilization, and occupant comfort. We then consider lighting strategies for lighting different surfaces and identify appropriate lighting equipment for each approach. Finally, we offer guidelines for locating luminaires for effective vertical illumination. Supporting the HSW definition: 1. This program addresses lighting of vertical surfaces, which is used in institutional, commercial and residential spaces to engender positive emotional and visual responses among users and to support social wellbeing and visual comfort. 2. Topics: This program specifically addresses electrical building systems, interior design, energy efficiency, and materials. 3. Focus: At least 75% of the course covers the topics listed above.

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**COURSE NUMBER:** SIGNIFY 09

**COURSE NAME:** Roadway Lighting: All Things Considered

**CREDITS:** 1.0 LU/HSW

**EXPIRES:** 2022

**DESCRIPTION:** Illuminating Engineering Society Recommend Practice documents are, in large part, the cornerstone to lighting design. Like many applications Roadway Lighting has a document all to itself. Unlike the name implies, however, there is much more to roadway lighting than the road surface. That said, have no fear, this one-hour AIA course will walk you through RP-8: Roadway Lighting so that you're well equipped to drive head on into your design.

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**COURSE NUMBER:** SIGNIFY 10

**COURSE NAME:** Tunable White Lighting Systems

**CREDITS:** 1.0 LU/HSW

**EXPIRES:** 2022

**DESCRIPTION:** Review the basic technology behind controlling the spectrum of indoor lighting systems that have a positive effect on the users of commercial spaces by leveraging the concept of “tunable-Lighting”.

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**COURSE NUMBER:** SIGNIFY 11

**COURSE NAME:** Lighting WELL: Lighting and the WELL Building Standard

**CREDITS:** 1.0 LU/HSW

**EXPIRES:** 2022

**DESCRIPTION:** We know how to design environments that fuel our bodies, keep us moving, inspire our best work and facilitate a good night’s sleep. The Well Building Standard endeavors to provide an evidence-based process to validate an approach to design for environmental health and well-being. This seminar explores methods to achieve health and well-being in the Light Concept of the 2019 Well Buildings Standard version 2.0 as it pertains to both electric and daylighting sources. We spend more than 90% of our lives indoors. Studies show strong links between better views, brighter light and better performance in office environments. The Well Light Concept promotes exposure to light and aims to create lighting environments that are optimal for visual, mental and biological health. Discover how the Standard supports circadian stimulus, hormone levels and the sleep-wake cycles of occupants derived through scientific and medical knowledge to promote alertness, better performance, and better sleep quality while potentially reducing obesity, diabetes, depression, breast cancer, sleep disorders and more.

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**COURSE NUMBER:** SIGNIFY 12

**COURSE NAME:** Evolving Technologies: LED and Tunable White Lighting’s Impact on Our Health and Well Being

**CREDITS:** 1.0 LU/HSW

**EXPIRES:** 2022

**DESCRIPTION:** This presentation is a review of white light terminology and addresses the potential effects of LED on the human body and the benefit that tunable white lighting technology can bring to optimize design aesthetics, increase productivity, and improve the health and well-being of humans in an architectural environment.

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**COURSE NUMBER:** SIGNIFY 13

**COURSE NAME:** THE EVOLUTION OF 5G: THE DIGITAL PATHWAY TO THE SMART CITY

**CREDITS:** 1.0 LU

**EXPIRES:** 2022

**DESCRIPTION:** Digital infrastructure today is important to a city’s economic vitality and quality of life, on par with physical infrastructure like roads, bridges, and water pipes. Yet most components of a city’s digital backbone are insufficient to meet the modern connectivity needs of today (and tomorrow). But

to fully understand the nationwide phenomena of the build out of the 5 G network it is critical to understand the evolution of the cellular industry from the inception at 1G analog phones to the new Smart phones and an understanding how technology and the consumer market drives the race to 5G deployment; how the new smart pole provides an all-in-one solution. Smart pole accommodates a wide variety of IoT applications, always-on connectivity, cameras and environmental sensors. The 4G-5G small cell concealed sites provide aesthetic solutions to site acquisition for carriers and municipalities.

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**COURSE NUMBER:** SIGNIFY 14

**COURSE NAME:** SMART Cities - Integrating Technology and Connectivity to Harness the Digital Revolution

**CREDITS:** 1.0 LU/HSW

**EXPIRES:** 2022

**DESCRIPTION:** City Beautification for decades employs Urban streetscaping through lighting as the means to build a strong sense of community for both historic and modern cities. SMART cities go well beyond by bridging the emotional and technical realms to enable urban mobility, strategic energy utilization, the future of telecommunications, and public safety. It is the ecosystem of implemented solutions that defines how SMART a city is. This session will endeavor to explore how public lighting is now Integrating technology and connectivity to harness the digital revolution as a driver for operational excellence, revenue potential and improved quality of life.

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**COURSE NUMBER:** SIGNIFY 15

**COURSE NAME:** LIGHTING JEOPARDY

**CREDITS:** 1.0 LU

**EXPIRES:** 2022

**DESCRIPTION:** Lighting Jeopardy is an introductory level lighting education course formatted on the game show Jeopardy. The course teaches a basic understanding of what information is required to make comfortable, aesthetic, and energy efficient lighting design decisions, gives examples of where to get technical information, teaches how to evaluate required lighting levels for various lighting applications, and shows how to apply some key lighting design techniques, for effective and environmentally conscious lighting design.