Delivery Provider Name: Fluxwerx Illumination Inc.

AIA Delivery Provider Nr: 404108259 | IDCEC Provider Nr: 12-00002646

Course Title:
Rethinking Light, Design + Human Experience in a Solid State world of LEDs

Course number: AIACESFW103 |CC-110120

Course Description:

Light plays a critical role in the spaces we construct and for the people who ultimately inhabit them. As the built environment transforms from the assembly of inanimate materials crafted by a series of independent trade artisans to a world of intelligent, interconnected solid state electronic devices throughout a facility that embraces the Internet of Things (IoT), new methodology is the imperative.

The advancement of LED technology has disrupted the electric lighting industry. As the rate of innovation continues, opportunities rise to leverage the aesthetic and performance of LED sources in ways that were never possible with fluorescent and other legacy sources. Yet many products being delivered to market are relatively unchanged from their incandescent and fluorescent predecessors. Rather than being an expansion of the creative palette, products are regressively inhibiting progress for the design profession as it tries to reimagine and redefine the way spaces are constructed and utilized.

In order to maximize the potential and minimize energy, unconventional thinking about light as a naturally occurring phenomenon, fixture design, application parameters, and base LED technology allows for greater design freedom and reduced environmental impacts. Determining basic and advanced optical theories of how natural and electric light can be used together to their maximum potential means redefining many of the elements of design to enhance the human experience and improve infrastructure and connectivity.

Learning Units: 1

Credit Designation: LU | HSW

Learning Objectives:

- Explore the basics of advanced architectural anidolic daylighting strategies and determine how they can be deployed with LEDs in solid state lighting technologies
- Analyze human visual interpretation of light and color and how that affects perception in the built environment; distinguish different types of light spectrum control, and discuss the color tuning abilities of tunable white fixtures to improve the comfort and well-being of people in the noted environment
- Identify application best practices for minimal energy usage in commercial and institutional settings using specific examples that focus on energy efficiency and sustainable design values
- Recognize the role of a lighting system as the backbone infrastructure in the next generation of buildings that synthesizes all elements of lighting design – industrial, optical, electrical, thermal and mechanical