

ENCELIUM Training for American Institute of Architects/CES

AIA Provider #: 40107151/2015

Course Title: Sustainable Design & Energy Management through Addressable Lighting Controls (OSRAM111)

Duration: 1.0 – hours

Learning Unit hours: 1HSW/LU Hour

Pre-requisite: None; however, exposure to lighting, controls, building automation and information technology would be beneficial.

Course Description:

The course begins by defining the concept of “Addressable Lighting Controls” and how it aids in the design and construction of “green” or “high performance building” otherwise known as “sustainably” designed building.

Architects, engineers and other building system specifiers are then introduced to the benefits addressable lighting controls offer such as optimization of energy use while providing comfortable & safe work environment to the occupants of a building. Learners are also reminded the fact that lighting is the single major energy consumer in any building.

The course dives deeper to define the major characteristics of an addressable lighting control system namely, addressable dimming controls, six energy management strategies (Daylight harvesting, Demand responsive load shedding, Personal control, Task tuning, Occupancy sensing & Time schedule) and their simultaneous application. Published scientific data are used to estimate the lighting energy savings by each of these management strategies when used individually. How these digital lighting controls outperform traditional analog controls is then analyzed by citing data from industry case studies.

The course ends with the discussion on “Intelligent Buildings” concept and the digital lighting control system’s ability to share the same IP backbone with various building automation and Fire & Safety systems.

Learning Objectives:

Upon completion of this course, participants will be able to:

- a. Define how “Addressable Lighting Controls” reduce carbon footprint while aiding in the design of energy efficient “sustainable” buildings;
- b. Identify the six energy management strategies and their effect on energy efficiency while not compromising the health, safety and welfare of the occupants in buildings;
- c. Evaluate the benefits a digital lighting control can offer with respect to user comfort, safety and energy savings when compared to traditional analog lighting control systems;
- d. Analyze the benefits digital lighting controls can offer in the design of “Intelligent Buildings”.