



LEARN ABOUT LIGHTING

We offer courses on a variety of lighting topics, each worth 1 CEU, at no charge, at your location

PRINCIPLES OF HUMAN CENTRIC LIGHTING



Learn the effects of chrono-biologically driven dynamic lighting on office workers' well-being, sleep quality and physiology.

Course Format: Instructor-led face-to-face
Prerequisite Knowledge: None
Course Number: AIACESZUM107

Learning Objective 1:

Understand the basis of human centric lighting and how lighting in offices effects the well-being of people.

Learning Objective 2:

Learn about lighting for visual comfort and the best practices to achieve this.

Learning Objective 3:

Understand the biological effects of lighting and the differences between photopic and melanopic evaluation.

Learning Objective 4:

Understand what constitutes the "Best Light for Offices", going beyond the light fixture to the needs and preferences of people.

LIGHTING FOR EDUCATION



Stimulating light extends the time students remain engaged. Pleasant and bright lighting encourages the willingness to learn. Learn what lighting techniques you can use in your education projects to create the best learning environment.

Course Format: Instructor-led face-to-face
Prerequisite Knowledge: None
Course Number: AIACESZUM105

Learning Objective 1:

Learn the factors that contribute to visual comfort in schools including avoiding luminaires with sharp cut-offs and glare control using UGR values.

Learning Objective 2:

Research suggests students who have access to daylighting perform better in all academic fields. Learn how daylighting helps meet Well Building Standards.

Learning Objective 3:

Learn the lighting standards of IES of North America for educational lighting.

Learning Objective 4:

Learn how lighting that enhances interior architecture can aid communication in the classroom.



RETAIL EXPERIENCE - MAXIMIZE YOUR BRAND WITH LIGHTING



A key aspect of retail design is to increase sales and improve the customer's experience. Emotion driven decisions impact buying choices. Learn about new research connecting lighting and emotion in retail environments.

Course Format: Instructor-led face-to-face
Prerequisite Knowledge: None
Course Number: AIAZUMTOBEL06

Learning Objective 1:

Recognize what drives shopping selections of consumers in a retail environment and how this can be used to the benefit of your clients. Learn how a retailer multiplied sales in a store by 10% with lighting techniques for their target group.

Learning Objective 2:

Study three unique lighting scenes that affect different demographic factors and trigger positive or negative emotions.

Learning Objective 3:

Learn why neuroscience explains how we are affected unconsciously by the built environment and lighting.

Learning Objective 4:

Understand which lighting solution suits which demographic and how to implement to increase sales.

LIGHTING AS A KEY LAYER IN URBAN DESIGN



Learn urban lighting techniques that put people at the center of a solution which goes beyond the technical requirements. Discover a multi-disciplinary design approach which integrates light into the urban landscape. Learn how light can create an identity; a night event of positive shared experiences for those using the space. Finally the course will demonstrate how to light a plaza & landscape space with layers of light.

Course Format: Instructor-led face-to-face
Prerequisite Knowledge: None
Course Number: ZumACDC002

Learning Objective 1:

Identify the opportunities in a masterplan engaging with a lighting designer/planner earlier.

Learning Objective 2:

Learn why lighting design is a key factor in urban design.

Learning Objective 3:

Understand the importance of putting people at the center of the design.

Learning Objective 4:

Understand the importance of balance in the lit effect between all parts of the urban landscape.

Learning Objective 5:

Identify the different opportunities for integrating light into the urban landscape to reduce the need for poles & bollards.

Learning Objective 6:

Understand different lighting application methods.



BIOADAPTIVE LIGHTING



The course presents the findings of a study whose goals were to understand the benefits of bioadaptive lighting. The study was carried out in office environment using a combination of neuroscientific methods. The lighting was designed to support the biorhythm of employees in a typical working environment. Emotional and cognitive responses to a new human-centric lighting system were measured.

Course Format: Instructor-led face-to-face
Prerequisite Knowledge: None
Course Number: AIACESZUM104

Learning Objective 1:

Understand how lighting can influence the attention span and emotional well-being of employees, and how the best combination of natural and artificial light can provide a more pleasant work environment and improve employee performance.

Learning Objective 2:

Explain the importance of planning a lighting system that incorporates the knowledge gained from the experiment, and how specific types of lighting can provide a solution.

Learning Objective 3:

Understand the Limbic® Emotional Assessment tool that combines different methods commonly applied in neuroscience and psychophysiology to measure the bodily processes that accompany emotional responses to a determined stimulus or situation.

Learning Objective 4:

Learn about the experiment Test of Attentional Performance and how the psychometrical tool was used to assess the cognitive performance of employees and how to interpret the findings of the experiment.

PRINCIPLES OF OUTDOOR ARCHITECTURAL LIGHTING



Outdoor architectural illumination helps people see buildings in a different way. Lighting a building at night reveals building forms not easily seen during the day. Learn how darkness allows designers to display, through lighting, a building's character, scale, and context.

Course Format: Instructor-led face-to-face
Prerequisite Knowledge: None
Course Number: ZumACDC003

Learning Objective 1:

Understand the key factors to consider while designing and specifying outdoor architectural façade lighting.

Learning Objective 2:

Learn six key considerations during conceptual phases: context, color, contrast, control, quality and people

Learning Objective 3:

Learn how to consider the building's setting to inform the best lighting (i.e. rural vs urban)

Learning Objective 4:

Discover how a building's color and finish will affect a lighting solution



PRINCIPLES OF ARCHITECTURAL BRIDGE LIGHTING



This course explores the importance of bridge lighting and its positive impact on communities. We'll introduce seven key factors to consider while formulating a bridge lighting solution. We'll demonstrate lighting for six typical bridge structural types. We'll introduce five fundamental methods of lighting bridges; we'll review a series of case studies discovering their lighting solutions.

Course Format: Instructor-led face-to-face

Prerequisite Knowledge: None

Course Number: ZumACDC001

Learning Objective 1:

Why is architectural lighting to a bridge so important

Learning Objective 2:

The key seven factors to consider before designing the lighting scheme for a bridge

Learning Objective 3:

The six types of bridge structures and how to consider their characteristics while lighting and the five fundamental methods of lighting a bridge

Learning Objective 4:

Ensure that lighting is a key element in part of a multi-disciplinary design