

Module 1 — Introduction to Light and Lighting

This module establishes the foundational principles of light, lighting, and visual perception. Students are introduced to the science of visible light, basic lighting terminology, and the role lighting plays in architecture and human experience. It also introduces the lighting profession, common applications of illumination, and the relationship between lighting, architecture, safety, and occupant experience. It serves as the conceptual framework for all subsequent modules.

Module 2 — Electric Light Sources

This module examines the characteristics, operation, and application of electric light sources used in modern lighting systems. It emphasizes how source selection affects efficiency, maintenance, visual appearance, controllability, and application suitability. Significant attention is typically given to solid-state lighting and modern LED system behavior.

Module 3 — Daylighting This

introduces the principles and application of daylight as an architectural lighting source. Students learn how daylight can improve occupant comfort, reduce energy consumption, and enhance architectural spaces while also understanding the design challenges associated with uncontrolled natural light.

Module 4 — Luminaires

This module focuses on luminaire construction, classification, optics, and performance. Students develop an understanding of how luminaires distribute light and how optical design influences visual comfort, beam control, efficiency, and aesthetics.

Module 5 — Lighting Controls

This module explores lighting control strategies and their role in energy management, flexibility, and occupant comfort. Students learn how controls improve system performance, support code compliance, reduce energy consumption, and enhance user experience. Modern networked and intelligent lighting systems are often introduced in this module.

Module 6 — Metrics, Photometry, Calculations, and Rendering

This module introduces the quantitative tools used to measure, calculate, and evaluate lighting performance. Students learn how photometric data is generated and applied in lighting design and analysis.

Module 7 — Codes, Standards, and Practice

This module introduces the regulatory and professional framework governing lighting design. Students gain familiarity with how codes and standards shape real-world lighting design decisions and project documentation.

Module 8 — Lighting for Interior Environments

This module applies lighting principles to interior architectural spaces and occupancy types. Students learn how lighting design supports occupant comfort, productivity, safety, and architectural intent within interior environments.

Module 9 — Lighting for Exterior Environments

This module focuses on exterior and site lighting applications. Students learn how exterior lighting balances visibility, safety, aesthetics, energy efficiency, and environmental responsibility.

Module 10 — Review

The final module consolidates the course material and reinforces the major principles introduced throughout the program. The review module helps students connect the technical, visual, architectural, and regulatory aspects of lighting into a cohesive understanding of professional lighting practice.