



2023 Fundamentals of Lighting Course

Course Overview: This three day in-person course provides participants with an introduction to the fundamentals of illumination. It gives a comprehensive overview of basic lighting principles, lamp and luminaire types, lighting calculations, and controls, as well as functional and aesthetic applications best practices. This course is ideal for architects, engineers, designers, contractors, sales reps, customer service reps, manufacturers, distributors, and students. Find full description for each module below.

CEUs: 25 CEUs, 25 LU-HSW approved based on course completion (does not qualify for NCQLP CEUs).

Dates: Friday October 27th 8am-5pm
Friday November 3rd 8am-5pm
Saturday November 4th 8am-3pm

Class will be based in Seattle Area
Specific Class locations TBD

Continental breakfast and lunch will be provided each day.

Format: Each module will include 2 hours of instruction followed by a Quiz and Q&A Session. Sessions will be taught by local section lighting experts.

Pricing:

US:

\$350 IES members

\$475 non-members

\$225 Emerging Professional Members

\$125 Students

+ IES Course Materials

[Purchase Course Materials HERE](#)

Class Registration:

<https://seattle.ies.org/events-calendar/>

Class materials will be \$100 for members, EPs, and Students; \$125 for non-members.

Materials must be purchased directly from the IES web site.

- New to lighting? Not a member yet? **\$100 of new EP membership cost will be reimbursed to student on successful completion of the class.**
- Students must be currently enrolled in a college, university, or trade program.
- *Note: IES Sustaining Members Receive 10% Discount on course materials*

Students Must Register by Friday, October 20th.

IES District 6 and Seattle Section are also offering a virtual version of Fundamentals of Light held on Tuesday and Thursday evenings between October 10th and November 16th. For more information:

<https://seattle.ies.org/events-calendar/>

Questions? Contact Shaun Darragh at liteshaun@gmail.com (Seattle EDU Chair)

Learning Modules

Friday October 27th

Class introductions and format discussion

Module 1: Introduction to Light and Lighting A brief history of light and lighting. Professional practice. The physics of light. Vision. Color. Light and health

Module 2: Electric Light Sources Introduction to electric light sources. Legacy sources. Incandescent. Fluorescent. High Intensity Discharge. Solid state

Lunch Break

Module 3: Daylighting Introduction to daylighting. Characteristics of daylight. Delivering daylight. Integrating daylight and electric light. View. Modeling daylight

Module 4: Luminaires (*Portland: Mariel Acevedo & Vancouver: Colin Macduff*). Introduction to luminaires. Luminaire optics. Classification. Mounting. Interior luminaires. Exterior luminaires

Friday November 3rd

Module 5: Lighting Controls Introduction to Lighting Controls. Dimming. Sensors: presence detection. Sensors: light detection. Networked systems. General Considerations

Module 6: Metrics, photometry, calculations, and rendering Introduction. Photometry: Lab and Reports. Calculations. Point method calculations. Lumen method calculations. Computer modeling. Field Measurements

Lunch Break

Module 7: Thursday, November 2nd – Codes & Standards, and Practice Introduction. Electrical and Building Codes. Energy Codes. Aspirational Standards. Lighting Standards. Economics

Module 8: : Lighting for interior environments Fundamentals of lighting design. Languages of lighting design. Visibility and comfort. Visual experience. Attraction and display. Light and architecture. Wellness and sustainability

Saturday November 4th

Module 9: Lighting for exterior environments Lighting for dark environments. Parks, campuses, and civic spaces. Streets and roadways. Parking facilities. Athletic facilities. Facades and landscapes. Sustainability and wellness

Module 10: Tuesday, November 14th – Review. Lighting basics. Vision & Perception (color, contrast). Daylight, Electric Light, Controls. Light & Professional Practice. Balancing Needs and Sustainability. Resources.

Lunch Break

AME: Ask me anything. Your time to discuss anything in the course you'd like to go over again or may still be unclear.

Class Exam and Review

Note: Specific module order may vary based on instructor availability.