



## 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 27<sup>th</sup> 8am-5pm

Friday November 3<sup>rd</sup> 8am-5pm

Saturday November 4<sup>th</sup> 8am-3pm

**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:

[Register Here](#)

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? For new Eps, **\$100 of 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 20<sup>th</sup>.

IES District 6 and Seattle Section are also offering a virtual version of Fundamentals of Light held on Tuesday and Thursday evenings between October 10<sup>th</sup> and November 16<sup>th</sup>. For more information: [Click Here](#)

**Questions?** Contact Shaun Darragh at [liteshaun@gmail.com](mailto:liteshaun@gmail.com) (Seattle EDU Chair)

# Learning Modules

## Friday October 27<sup>th</sup>

### **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 3<sup>rd</sup>

**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 2<sup>nd</sup> – 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 4<sup>th</sup>

**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 14<sup>th</sup> – 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.