



## 2023 Fundamentals of Lighting Course

**Course Overview:** This five-week virtual 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).

**Participating Sections:** Anchorage, Calgary, Edmonton, Portland Oregon, Regina/Saskatoon, **Seattle**, Vancouver, Winnipeg, Las Vegas

**Dates:** October 10<sup>th</sup> - November 16<sup>th</sup>, 2023, Tuesdays & Thursdays (no class on October 31<sup>st</sup>)

**Times:**

3:00 PM-5:30 PM  
AKST

4:00 PM-6:30 PM  
PST

5:00 PM-7:30 PM  
MST

6:00 PM-8:30 PM  
CST

**Format:** Each module will include 2 hours of instruction followed by an Online Quiz and Q&A Session.

**Location:** IES Zoom Room – See calendar invite for sign-in details.

**Pricing:**

US:

\$300 USD for IES members

\$400 USD non-members

\$180 USD EPs<sup>1</sup>

\$100 USD Students<sup>2</sup>

+ IES Course Materials<sup>3</sup>

[Purchase Course Materials HERE](#)

Class Registration:

[Register Here](#)

<sup>1</sup> EPs = \$100 of new EP membership cost will be reimbursed to student on successful completion of the class

<sup>2</sup> Students = currently enrolled in college, university, or trade program

<sup>3</sup> Course participants **must** purchase their own course materials from the IES website

*Note: IES Sustaining Members Receive 10% Discount on course materials*

**Students** Must Register by Friday, October 5<sup>th</sup>.

Seattle is also offering an in person version of Fundamentals of Light held on October 27, November 3<sup>rd</sup>, and November 4<sup>th</sup>. For more information: [Click Here](#)

**Questions?** Contact Shaun Darragh at [liteshaun@gmail.com](mailto:liteshaun@gmail.com) (Seattle EDU Chair), Jennifer Blake at [jenniferblake85@gmail.com](mailto:jenniferblake85@gmail.com) (organizational), or Dan Salinas at [danielgsalinas@comcast.net](mailto:danielgsalinas@comcast.net) (instruction)

ANCHORAGE - CALGARY - EDMONTON – PORTLAND, OREGON -  
REGINA/SASKATOON – **SEATTLE** – VANCOUVER WINNIPEG– LAS  
VEGAS

**Module Schedule:**

**Module 1: Tuesday, October 10<sup>th</sup> – Introduction to Light and Lighting** (Portland: Naomi Miller). A brief history of light and lighting. Professional practice. The physics of light. Vision. Color. Light and health

**Module 2: Thursday, October 12<sup>th</sup> – Electric Light Sources** (Anchorage: Adrian Oehrlein & Jeremy Maxie). Introduction to electric light sources. Legacy sources. Incandescent. Fluorescent. High Intensity Discharge. Solid state

**Module 3: Tuesday, October 17<sup>th</sup> – Daylighting** (Seattle: Chris Meek & Regina/Saskatoon: Kristen Ernst). Introduction to daylighting. Characteristics of daylight. Delivering daylight. Integrating daylight and electric light. View. Modeling daylight

**Module 4: Thursday, October 19<sup>th</sup> – Luminaires** (Portland: Mariel Acevedo & Vancouver: Colin Macduff). Introduction to luminaires. Luminaire optics. Classification. Mounting. Interior luminaires. Exterior luminaires

**Module 5: Tuesday, October 24<sup>th</sup> – Lighting Controls** (Seattle: Shaun Darragh). Introduction to Lighting Controls. Dimming. Sensors: presence detection. Sensors: light detection. Networked systems. General Considerations

**Module 6: Thursday, October 26<sup>th</sup> – Metrics, photometry, calculations, and rendering** (Calgary: Dan Hadash & Las Vegas: Javid Butler). Introduction. Photometry: Lab and Reports. Calculations. Point method calculations. Lumen method calculations. Computer modeling. Field Measurements

**Tuesday, October 31<sup>st</sup> - No Class – Holiday / IES Street & Area Lighting Conference (SALC)**

**Module 7: Thursday, November 2<sup>nd</sup> – Codes & Standards, and Practice** (Edmonton: Sunil Nakia & Portland: Jeff Schwartz). Introduction. Electrical and Building Codes. Energy Codes. Aspirational Standards. Lighting Standards. Economics

**Module 8: Tuesday, November 7<sup>th</sup> – Lighting for interior environments** (Calgary: Hilary Zorn). Fundamentals of lighting design. Languages of lighting design. Visibility and comfort. Visual experience. Attraction and display. Light and architecture. Wellness and sustainability

**Module 9: Thursday, November 9<sup>th</sup> – Lighting for exterior environments** (Winnipeg: Elaina Samardzija). 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**. (Instructor: TBD). Lighting basics. Vision & Perception (color, contrast). Daylight, Electric Light, Controls. Light & Professional Practice. Balancing Needs and Sustainability. Resources.

**AME: Thursday, November 16<sup>th</sup> – Ask Me Anything - Optional** (Multiple Instructors). Your time to discuss anything in the course you'd like to go over again.