

ENERGY CONNECTIONS EDUCATIONAL PROGRAMS

101 Course: Introduction to Lighting

SCHEDULE:

Wednesday 5:30-8:30pm
September 27

INSTRUCTOR:

John M. Sundy, LC
jsundy@cjlengineering.com

3 professional credit hours will be earned upon completion

What are lumens, what's the difference between luminance and illuminance, and who in the world is this Kelvin guy? If you've ever asked yourself these questions then this course is for you. This 3-hour course is designed for the person just entering the lighting industry, whether you're a factory sales rep, distributor, contractor, or a college student just entering the professional world. The course will cover basic lighting terms including definitions of lumens, foot candles, luminance, illuminance, color temperature, and color rendering.

101 Course: Basic Electrical Fundamentals

SCHEDULE:

Wednesday 5:30-8:30pm
October 9

INSTRUCTOR:

Jerry J. Telin, P.E.
jtelin@duqlight.com

3 professional credit hours will be earned upon completion

This three-hour course was designed to provide a basic understanding of electricity and electrical fundamentals. The course discussion will include basic electricity including definitions of voltage, current, impedance, wattage and power factor. In addition, electrical transmission and distribution systems including single phase and three phase low voltage systems will be defined. Fundamental electrical formulas for calculating current will be provided and example problems will be solved. There will be a discussion on metering and metering equipment. Recent college graduates, project managers, electrical sales reps, and other individuals seeking a general understanding of the practical use of electrical fundamentals will benefit from this course.

2014 National Electrical Code (Chapter 1 & 3) and Electrical Fundamentals

SCHEDULE:

Mondays 5:30-8:30pm
Oct. 16, 23, 30, Nov. 6

INSTRUCTOR:

Jerry J. Telin, P.E.
jtelin@duqlight.com

12 professional credit hours will be earned upon completion

This course will cover basic wire design as it relates to National Electric Code chapters 1, 2, and 3 and will explore the following subjects:

- Basic understanding of electrical fundamentals
- Understanding Single Phase and Three phase voltage Systems
- Conductor properties and Ampacity ratings – 2014 NEC, Article 310
- Raceways - 2014 NEC, Chapter 3 and 9 and Annex C
- Overcurrent Protection 2014 NEC – Article 240

2014 National Electrical Code (Chapter 2)

SCHEDULE:

Mondays 5:30-8:30pm
Nov. 13, 20 27, Dec. 4

INSTRUCTOR:

Jerry J. Telin, P.E.
jtelin@duqlight.com

12 professional credit hours will be earned upon completion

This course will cover basic wire design as it relates to National Electric Code chapters 1, 2, and 3 and will explore the following subjects:

- Service and Service Equipment
- Grounding – Article 250 / Branch Circuits – Article 210
- Branch Circuit, Feeder & Residential Service Calculations – Article 220

2014 National Electrical Code (Chapter 4 & 5)

SCHEDULE:

Tuesdays 5:30-8:30pm

Dec. 5, 12, 19, Jan. 2

INSTRUCTOR:

Timothy J. Bray, P.E.

timbray47@gmail.com

12 professional credit hours will be earned upon completion

This course will cover advanced wire design as it relates to National Electric Code chapters 4 and 5 and will explore the following subjects:

- Motor Branch Circuit and Feeder Design – 2014 NEC, Article 430
- Motor Control Circuits – 2014 NEC, Article 430
- Reduced Voltage Starters
- Transformer Protection, Autotransformers – 2014 NEC, Article 450
- Power Factor Improvement and Capacitor Sizing – 2014 NEC, Article 460
- Electric Welders – 2014 NEC, Article 630
- Health Care Facilities – 2014 NEC, Article 517
- Power Quality - Harmonics

Sustainable Lighting Design I

SCHEDULE:

Wednesdays 5:30-8:30pm

Oct. 11, 18, 25, Nov. 1

INSTRUCTOR:

Kevin McGahey

mccahey49@yahoo.com

12 professional credit hours will be earned upon completion

So you think you know everything there is to know about Lighting Design and Application? Join us for this course and find out. There has never been a more exciting time for artificial lighting since the introduction of the first incandescent light bulb. The 4 classes of part 1 take us through the basics of how and why indoor and outdoor spaces are illuminated like they are. We focus on:

- Human activity and the biology of light
- The story of light sources and how to use them
- Standard Lighting calculations
- Energy issues and lighting economics
- The influence of regulators and their creations
- The interaction of lighting and Architecture
- Luminaires and the shaping of light with optical control
- Commercial, residential, and institutional design applications and case studies

Sustainable Lighting Design II

SCHEDULE:

Wednesdays 5:30-8:30pm

Nov. 8, 15, 29, Dec. 6th

INSTRUCTOR:

Kevin McGahey

mccahey49@yahoo.com

12 professional credit hours will be earned upon completion

Now you know the basics of artificial light application. You are nowhere near done yet. You will now be expected to create your own lighting design given the kinds of parameters, plus a little, that an architect or engineer would have to work with. We also look to contemporary advanced lighting techniques and tools. In this session of 4 classes we concentrate on:

- LEED
- Daylighting
- Lighting and building controls
- Next generation light sources
- The Project
- The Business of Lighting
- Reading and applying lighting fixture photometric reports
- The IES, their standards, and designing lighting for a space

Energy Connections Educational Programs Registration Form

Register at www.electricleague.com

(3 or more from the same company receive 20% discount per person on all courses)

4-WEEK COURSE: \$200 EL members • \$225 non-members

101 COURSE: \$100 EL members • \$125 non-members

Professional Development Hours (PDHs) offered for each course.

PLEASE SELECT YOUR COURSE(S):

- 101 Course: Intro to Lighting _____ (# of attendees) x \$ _____ = \$ _____
- 101 Course: Basic Electrical Fundamentals _____ (# of attendees) x \$ _____ = \$ _____
- 2014 National Electrical Code (Chapter 1 & 3) _____ (# of attendees) x \$ _____ = \$ _____
and Electrical Fundamentals NOTE: We do NOT recommend taking the 101 Course if you are taking this class.
- 2014 National Electrical Code (Chapter 2) _____ (# of attendees) x \$ _____ = \$ _____
- 2014 National Electrical Code (Chapter 4 & 5) _____ (# of attendees) x \$ _____ = \$ _____
- Sustainable Lighting Design I _____ (# of attendees) x \$ _____ = \$ _____
- Sustainable Lighting Design II _____ (# of attendees) x \$ _____ = \$ _____

TOTAL ENCLOSED: _____

Name: _____ Company: _____

Address: _____ Phone: _____

City: _____ State: _____ ZIP: _____

Email: _____

- Check (payable to Electric League) Mastercard VISA AmEx

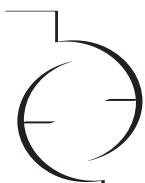
Name as it appears on the card: _____

CC# _____ Security Code _____ Exp. Date _____

Billing address (if different than above) _____

Names of additional attendees:

CANCELLATION POLICY: 50% refund if cancelled 7 days prior to start of class.



Electric League
of Western Pennsylvania

SEND TO:

Electric League
1932 Beechwood Blvd
Pittsburgh, PA 15217
412-419-8868

All Classes are held at
Duquesne Light Company

Woods Run, Building 6, Room 108
2825 New Beaver Ave
Pittsburgh, PA 15233-1003

(Please note: The facility is next door to Western
Penitentiary in the Northside)

www.electricleague.com

