

electro expo 2022

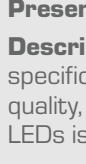


powering
innovation +
technology

Educational Conference

Wednesday, March 30

Lighting Power Clean Energy Communication Systems Project Management & Leadership



8 am - 9 am Continuing Education: AIA LU HSW 1 Specifying Architectural Lighting and Controls with Confidence

Presented by: Kristen E. Mallardi, Sr. Specification Sales Manager, Acuity Brands

Description: Learn the basic language that should be included in your LED luminaire and control specifications. Know what that specification language really means and why it is important to include it in your LED specifications. Fully understand color and quality, how they are measured, and why they are key components of LED specification. Understand and know how the life of LEDs is determined and verified.



8 am - 10 Continuing Education: OCILB 2 CEU CODE | OBBS 2 | PDH 2 ENC 2020 Changes

Presented by: Tim McClintock, NEMA Midwest Field Rep

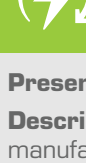
Description: This course is scheduled for a two-hour presentation that will include an overview of top significant changes to 2020 NEC. The slide presentation will include the IAEI Analysis of Changes program. Review of new articles and revised requirements addressing industry trends in new technology and delivery and generation of electric power are key highlights included in the program. Speakers will provide the background and rationale behind key changes to the 2020 NEC and will engage with the audience on the impact and application/methods of compliance.



9 am - 10 am Continuing Education: OCILB 1 CEU CODE | PDH 1 ASHRAE 90.1 vs IECC: What is Right for Your Project, The Difference Between Energy Standards & Codes

Presented by: Matt Priebe, Karpinski Engineering

Description: In this presentation you will learn the differences between Energy Standards and Codes – ASHRAE 90.1 vs IECC. What is ASHRAE 90.1? What is IECC? Version Comparisons, Compliance Paths, State by State Energy Code Adoption Status, Green Building Standards – Energy Code References, State of Ohio Code Adoption Status, 2010 vs 2012, Power: Transformers, Voltage Drop and Automatic Receptacle Control; Lighting: Interior - Power Density, Lighting Controls, Automatic Shutoff, Daylight Controls, Additional Controls; and Exterior: Reduction of Lighting Power; Automatic Shutoff, Power Density, Power Allowance Zones, Functional Testing and Completion Requirements; 2013 vs 2015, Power Voltage Drop, Automatic Receptacle Control, Electrical Energy Monitoring, Transformers; Lighting – Interior: Power Density, Lighting Controls, Automatic Shutoff, Daylight Controls, Additional Controls; Exterior: Reduction of Lighting Power; Automatic Shutoff, Power Density, Power Allowance Zones, Functional Testing, Completion Requirements and 2016 vs 2018.



9 am - 10 am Continuing Education: OCILB CEU 1 TECHNOLOGY | PDH 1 Fundamentals of PreCast Concrete for Electrical Infrastructure

Presented by: Bob Kramer, Senior Executive/ Consultant - Mack Industries

Description: Upon completion of this course the attendee will have an understanding of the fundamentals for designing and manufacturing precast concrete products, advantages of using precast and applications for using precast for building electrical infrastructure. Course Outline 1. Basic Components of Concrete 2. Fundamentals of precast Concrete manufacturing a. Mix Design b. Self-Consolidating Concrete c. Forming systems d. Testing and Quality Control 3. Engineering Precast Products 4. Advantages of Precast VS Poured in Place concrete 5. Applications for using precast solutions for electrical infrastructure a. Power Generations Applications (including renewable) b. Power Transmission Applications (including use of precast in substations) c. Power Distribution Applications 6. Review followed by questions and answers.



9 am - 11 am Continuing Education: OCILB 2 CEU TECHNOLOGY | 2 PDH Efficient Green Power for Islandable MicroGrids and Virtual Tour of ESXP Innovation Lab

Presented by: Carleen Yankosky, Consulting Engineer Specialist, Square D by Schneider Electric

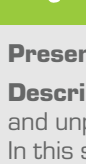
Description: Discussion on Microgrid operation efficiencies and proactively managing microgrid power production and demand to prioritize renewable energy. There will be a the virtual/ remote demonstration (ESXP Innovation Lab).



9 am - 10 am Continuing Education: BICSI CEC 1 SMART Building Design and What It Means for the Industry Moving Forward

Presented by: Phillip Baker, Sales Engineer (Western PA/ NE Ohio/ WV) , Corning Optical Communications

Description: Smart is everywhere these days, but what exactly makes a building ... smart? These structures are designed with technology that needs a fully integrated system that can manage advanced building automation to increase efficiency, optimize operations and enhance occupant productivity, safety & wellbeing as well as security and sustainability goals. And with more connected devices coming online every day and technology like 5G knocking at the lobby door; it's more important now than ever to design the right network that can handle whatever challenges are around the corner. This smart, robust communications infrastructure is so vital to buildings today, that it is referred to as the fourth utility, just as crucial as electricity, water, and gas. The amenities and connectivity that building owners and tenants expect today are much different than they were 30 years ago. So why are we still designing and building networks the same way? In this session, Corning will discuss smart building technologies and the importance of thinking differently about the network. Fiber-to-the-Edge is enabling smart buildings owners to achieve a cost effective, future-ready smart building.



9 am - 10 am Continuing Education: OCILB 1 CEU BUSINESS | PDH 1 How Trade Contractors Are Managing Volatile Materials Prices

Presented by: Ken Wohl, Head of Marketing & Education, Agora Systems

Description: Recent disruptions to the construction supply chain have caused construction materials prices to become volatile and unpredictable. Trade contractors have been forced to adapt their businesses on the fly to remain competitive and profitable. In this seminar, you'll hear how companies are adapting to overcome new challenges with materials prices. You will learn: What caused disruptions to our materials supply chains; The effect disruptions had on construction materials prices; The impact on contractors and distributors and How to manage and overcome price volatility.



10 am - 11 am Continuing Education: TBA Division 25 and Opportunities for Better Building System Integration

Presented by: Brian Tenney and Mattie DeDoe, Karpinski Engineering

Description: With recent advances in technology, building system data is now more accessible than ever. Information on lighting controls, security access, HVAC controls, fire protection, utility metering, and much more is available to owners – but it remains largely untapped. That means that owners are missing out on opportunities for to integrate, share, and act on their data. In this presentation, we're going to discuss trends in controls technology, with a focus on Division 25, the specification for integrated automation. Key topics include defining Division 25, the three levels of automation, the difference between OT and IT, and finally, what you need for a successful Division 25 project. The presentation will include real-life Division 25 examples and a discussion of the application of Division 25 in different markets.



10 am - 12 pm Continuing Education: 2 CEU OCILB CODE | 2 OBBS | 2 PDH Equipment Short Circuit Current Rating (SCCR) Basics

Presented by: Joe Pavia, P.E., Field Application Engineer, Eaton Busmann Business

Description: This presentation will cover the basic code requirements for equipment short-circuit current ratings and the 2020 NEC including definition and key requirements. In addition, marking and documentation requirements are discussed for available fault current for various types of equipment. Tools will be provided to help comply with the Code. The seminar will also address industrial control panels and UL508A to provide overview of SCCR determination and achieving a higher SCCR.



10 am - 11 am Continuing Education: OCILB 1 CEU CODE | 1 OBBS | 1 PDH NEC 2020 Solar Power Photovoltaic and Wind Electric Systems

Presented by: Tim Pool, P.E., RCDD Executive Vice President, Director of Engineering, Tec Inc. Engineering and Design

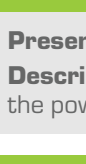
Description: More and more technologies have emerged to allow conversion of energy from the sun or wind into building electrical systems. Storage battery systems are also developing better methods to store larger amounts of energy and bi-directional power systems now allow transfer from all types of battery systems into the building electrical distribution. This class course will cover the basics of Solar Photovoltaic and Wind Systems to understand the safeguards needed when buildings are supplied by these types of power sources.



10 am - 11 am Continuing Education: OCILB 1 CEU HEALTH & SAFETY | BICSI CEC 1 (Pending) Physical and Cyber Security...America's Two Biggest Security Concerns

Presented by: Timothy A. Dimoff, CEO/President, SACS Consulting and Investigative Services, Inc.

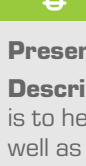
Description: SACS Consulting & Investigative Services, Inc.'s Critical Elements of Physical & Cyber Security training discusses how to guide your company against today's current threats to security; both the physical and the numerous digital platforms that are utilized and present challenges for your employees on a daily basis. Identify the three physical levels of security that need to be assessed in order to maximize your security posture for your facility and your employees. The importance of when and how to conduct a dual security assessment. Understand physical security vulnerabilities and implementation of solutions. Identify the daily weaknesses that can enable people to hack your email, computers and social media and solutions. Learn how your greatest security asset is each and every employee becoming proactive in your security processes daily.



10 am - 11 am Continuing Education: OCILB CEU 1 TECHNOLOGY | PDH 1 Guide to Digital Transformation in Electrical Construction

Presented by: Cedric Kennedy, Director of Business, Rivet Work

Description: Position your company for profitable growth by transitioning your workforce and equipment processes online with the power of data that will improve communication, efficiency, productivity and safety.



11 am - 12 pm Continuing Education: AIA LU HSW 1 Lighting WELL

Presented by: Marian K. Perez, WELL AP, LC, Associate IALD, MIES, Director of Lighting Design, Osborn Engineering

Description: This presentation takes an in-depth look into the Light concept of the WELL Building Standard. The Program goal is to help the attendees understand the basics of light with a deeper look into the illumination guidelines of the Light concept, as well as an overview of the features that are available as part of the WELL Building Standard. This program will allow the attendee to identify how the human visual system processes light and color; and how it can evoke emotional and physical responses and also understand the physiological processes of light, and the important effects of light on human health. The program will also take an in-depth look into the preconditions required for the Light concept in the WELL Building Standard, with an overview of the optimizations available. The presentation is designed to bring awareness to the attendees on the importance of light as it relates to Health, and the design opportunities that are available to provide proper illumination to minimize the disruption to the body's circadian system.



11 am - 12 pm Continuing Education: OCILB 1 CEU CODE | OBBS 1 | PDH 1 Fire Protection Overview - NEC Code Compliance

Presented by: Arjun Krishnan Srinivasan, Technical Account Manager Industrial Specialties, Prysmian Group

Description: Overview of Prysmian Group and Fire Protection Organization. Review key terms, history, UL 2196 Qualification Test, UL 2196 Standard Changes, Key Markets, Circuit Integrity Cable: In the Codes, Product Training, Fire Protection Product Portfolio, Case Studies and Emergency Circuit Compliance Options.



11 am - 12:15 pm Continuing Education: OCILB 1 CEU BUSINESS | 1 PDH C-PACE: Affordable, Long-Term Green Energy Financing for Closing More Deals

Presented by: Nicole Stika, Vice President, Energy Services for the Greater Cleveland Partnership (GCP); Christopher J Ellis leads Greenworks Lending from Nuveen's origination efforts in the Midwest. Jennifer Kuzma, Executive Director of the Northeast Ohio Advanced Energy District and Jessica Renner serves as Loan & Grant Associate at the Northeast Ohio Public Energy Council (NOPEC)

Description: Property Assessed Clean Energy Financing (C-PACE) is an innovative financing program that helps commercial, industrial, non-profit, and multi-family property owners get affordable, long-term financing for clean energy upgrades to their buildings. With C-PACE, building owners enjoy the advantages of energy upgrades immediately and pay for them over time through a voluntary assessment on their property tax bill. One of the biggest benefits is the ability to preserve capital and credit line for core business investments and leverage a property assessment as part of the capital stack. C-PACE is an invaluable asset to contractors, engineers and building owners because it enables them to sell comprehensive energy projects to eligible clients in almost any area of business.



11 am - 12 pm Continuing Education: OCILB 1 CEU TECHNOLOGY | BICSI CEC 1 (Pending) DataCenters in Review

Presented by: Patrick Gannon, Commercial Power Quality Initiative within GE's and ABB's Critical Power Groups

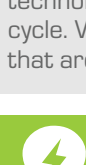
Description: This presentation will cover an overview on data centers. Discussion of factors to consider such as Proximity to Utility Grid Substation, Availability of diverse fiber cables, Communication infrastructure , Land prices and tax incentive, Ease of access, Environmental factors: earthquakes, hurricanes, free cooling, Geographic Location - Stability Cost of Energy (Local Rates and Green Energy Incentives), Availability of Skilled Labor and Costs, Operational consideration, for example, maintenance crew access. Will cover Data Center types and power system components, energy efficiency and Lithium Ion Batteries for UPS Systems.



11 am - 12 pm Continuing Education: OCILB 1 CEU TECHNOLOGY | 1 PDH Innovative Technologies Transforming the Electrical Construction Industry

Presented by: Josh Bone, Executive Director, ELECTRI International

Description: Project delivery methods and building's systems are growing increasingly complex, while owners and GCs push to keep schedules short and cost down. How do electrical contractors meet the growing demands and stay ahead of the competition? In this presentation we will discuss the ever-changing landscape of construction and identify new opportunities that can help electrical contractors shift from a low bid mindset to being seen as a trusted project consultant. We will discuss emerging technologies that are transforming buildings through data collection to increase their efficiency throughout the building's life cycle. We will explore how these new technologies are providing ECs with specialized skills that generate new revenue streams that are far less cyclical and commoditized than traditional transmission and distribution of power.



1 pm - 2 pm Continuing Education: 1 AIA LU HSW IoT Connected Lighting: An IES Practice

Presented by: Ardra Zinkon, CLD, IALD President | Zinkon Creative Studio

Description: IoT Connected lighting systems provide challenges as well as opportunities for the Design Team and Owner. The IoT Connected Lighting Committee of the IES has published a Design Guide to assist with planning. Lighting has the ability to take on a key role in developing a connected space. This session will review opportunities for connected light in typical project environments; discuss the lighting designer's enhanced role as well as providing a knowledge base on technology objectives and features. Additionally, we will uncover steps to take in the planning process, discuss and potential pitfalls. Learning Objectives: 1. Analyze goals and objectives for the use of connected light systems and develop a Sequence of Operations for the Owner. 2. Explore required components for a connected light system and how to integrate them with the design team. 3. Investigate strategies for teamwork on connected light projects. 4. Identify key players and roles in an IoT connected project.



1 pm - 2 pm Continuing Education: OCILB 1 CEU HEALTH & SAFETY | 1 PDH Electrical Preventative Maintenance

Presented by: Dave Ross, Harrington Electric and Keith Bushik, Electrical Power Solutions

Description: Learn about the fundamental procedures performed on a scheduled, recurring basis to maintain electrical system safety and reliability. Topics being discussed are Infrared Thermography, IR Windows, Ultra-sonic Listening, Transformer Oil Sampling, Cable Testing, Single-Line Diagrams, and Power Studies (Fault & Coordination + Arc Flash).



1 pm - 2 pm Continuing Education: OCILB 1 CEU TECHNOLOGY | 1 PDH Electric Vehicle – Market Expansion & Business Development Opportunities

Presented by: Jennifer Mefford, President, MTD Marketing Group, Powering Cleveland

Description: The Electric Vehicle market is expanding rapidly with the design and manufacturing of dozens of consumers EVs happening now or planned for production in the coming months. A key to the expansion of the market is the charging infrastructure needed to provide consumer confidence, especially in public, workplace, and residential applications. There are many considerations regarding the implementation of EV Charging Equipment and the on-going maintenance of EVSE to consider as the market expands. From EV Readiness ordinances to thoughtful design, integration of renewables and energy storage, and incentives, this session will explore best practices, planning considerations and technology options. Workforce readiness also plays a key to the successful expansion of the EV market. The Electric Vehicle Infrastructure Training Program (EVITP), recognized by the U.S. Department of Energy and included in the Biden Infrastructure Plan, has been collaborating with electricians, contractors, automakers, utility companies, EVSE manufacturers and industry stakeholder for over a decade to meet market demand with proven skill and expertise. Jennifer Mefford will share her insights as EVITP National Co-chair and in her role as a Business Development professional for the electrical industry, share ways to expand your business in the EV market today.



1 pm - 2 pm Continuing Education: OCILB 1 CEU BUSINESS | 1 PDH The Connected Job Site

Presented by: Michael Buckiso, Regional Sales Manager, Milwaukee Tool

Description: The construction industry has been challenged with labor shortages, stagnant productivity, risk and safety. Then comes a global pandemic. Technology has evolved to meet these challenges with a more connected jobsite. With an influx of tracking devices, reality capture solutions, and other on-site technologies, there are many ways to collect data on the jobsite. This session will discuss how you can leveraging these tools to collect critical data points that serve as key indicators for project performance, health and risk.



1 pm - 2 pm Continuing Education: OCILB 1 CEU TECHNOLOGY | PDH 1 Leviton Residential Smart Load Center & Decora Smart Home Automation

Presented by: Rick Forbush, Leviton Business Development Manager, Product Development Team Leader, Smart Breaker Development Specialist and Applications - The Leviton Load Center: Rick is a 30 year electrical industry veteran with experience in all applications from residential through commercial and industrial switchgear.

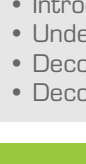
Patrick Donnelly, Leviton Regional Builder Specialist (Northeast) - focusing on Single Family residential builders as well as Multi-Family developers. Based in central Massachusetts. In the electrical industry for 40 years. Master Electrician (current), with experience in all facets of the electrical trade. Specializing in Smart home applications (IOT) in the builder market.

Leviton Load Center

- Introducing Leviton Load Center - This Changes Everything
- Leviton Load Center Overview and Breaker Behaviors
- NEC 2020 applications and the Leviton Load Center including surge suppression
- Leviton Smart Breakers - How to make your panel smart, and what smart delivers (App. Demo)

Leviton Decora Smart Home Controls

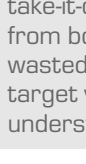
- Introducing to the Decora Smart Family
- Understanding the Technology
- Decora Smart Set up and Integrations
- Decora Smart Residential Applications Training



1 pm - 2 pm Continuing Education: OCILB 1 CEU BUSINESS | 1 PDH Lean in Design and Construction

Presented by: Rocco Gallo, LEED AP, Principal, Karpinski Engineering and Armando Francisco

Description: Lean design and construction is nothing new. Pockets of the design and construction industry have been adopting Lean methods for years. But now, with the COVID-19 pandemic, supply chain delays, and labor shortages, Lean is more than a take-it-or-leave-it opportunity. It's an imperative. In this presentation, Rocco and Armando will share the fundamentals of Lean from both the design team's and construction team's point of view. They will explain how project teams use Lean to eliminate wasted time and resources and to improve quality. The presentation will include a discussion of key Lean practices, including target value design, pull planning, choosing by advantages, and A3 decision-making. Attendees will walk away with a foundational understanding of what Lean is and why it matters to their projects.



2 pm - 3 pm Continuing Education: AIA LU HSW 1 | LEU NCGLP 1 Designing with Acoustics for A Better Working Environment in the Age of Open Space Planning

Presented by: Taylor Rightmire, Area Vice President, Finelite Inc.

Description: The design of tomorrow will increase the use of glass, concrete, exposed ceilings, and other hard surfaces in the built environment. These architectural elements not only deliver modern and desirable aesthetics, but also provide surfaces that are easily cleanable. The continued use of these non-sound absorbing elements will present us with acoustical challenges and will have direct impacts on occupants well-being and productivity. This course will dive into modern design and the health impacts related to these decisions. We will also explore the ways architectural acoustics impact the interior environment and occupants. Lastly, we will learn how to properly identify and specify sound-absorbing materials while exploring the types and benefits associated with luminaire integration. Attendees will: *Examine modern design trends *Examine the challenges and occupant impacts associated with these design trends. * Understand the basics of sound and how to create a sound environment *Understand how to specify and apply sound absorbing luminaire types into open office environments.



2 pm - 3 pm Continuing Education: OCILB CEU 1 HEALTH & SAFETY | PDH 1 Electrical Testing

Presented by: Dave Ross, Harrington Electric and Keith Bushik, Electrical Power Solutions

Description: Learn about the testing procedures performed when electrical system anomalies are encountered. Topics being discussed are 4 types of cable testing (Partial Discharge, Hi Potential, VLF, Tan Delta), Transformer testing (Power Factor, TTR, Winding Resistance, and Insulation Megger/SRFA), and Overcurrent Protection Device testing (Primary Injection, Secondary Injection).

electro expo 2022



powering
innovation +
technology

Educational Conference

Thursday, March 31

Lighting Power Clean Energy Communication Systems Project Management & Leadership



8 am - 9 am Continuing Education: AIA LU HSW 1 / WELL APLU 1

Biologically Focused Lighting - The Truth About Circadian Lighting

Presented by: Ken Esterly ALA, IES, IIDA, Educator IALD, VP of Sales, Human, WELL Faculty Member, BIOS Lighting

Description: Architectural lighting is no longer just for the visual system. With growing emphasis on healthy built environments, circadian lighting is a popular topic that many designers and end-users are being asked to explore. Within the eye we each have non-visual photoreceptors which assist in regulating our circadian rhythms. Modern architectural lighting has been designed and calibrated to meet the needs of our visual system, however it provides insufficient stimulus for the human circadian system and does not allow our bodies to properly reinforce our natural biological signals. The lack of proper circadian stimulus and the desynchronization of our activity with the solar day has been shown to lead to a state of Social Jet-lag which has been tied to many dysfunctions, such as disrupted sleep cycles. This seminar explores the science behind the circadian system and outlines how to integrate essential spectral content in architectural lighting that helps entrain and reinforce healthy circadian rhythms. Learning Objectives: 1. Understand the basic science of circadian rhythms and its interaction with light. 2. Describe the design considerations needed for implementing circadian lighting. 3. Understand how color tuning addresses circadian lighting needs. 4. Understand how light spectrum addresses circadian lighting needs



8 am - 10 am Continuing Education: OCILB 1 CODE CEU | OBBS 1 | PDH 1

Top 10 NEC 2020 Changes

Presented by: Paul Abernathy, CMI, CMECP | Manager of Codes and Standards, Encore Wire



9 am - 10 am Continuing Education: AIA LU HSW 1

Exterior Lighting Applications, Equivalency and Design Considerations

Presented by: Kristen E. Mallardi, Sr. Specification Sales Manager, Acuity Brands

Description: Participants who complete this course will be able to describe:

- Specific differences between lighting for Safety vs. Security
- The four primary purposes for outdoor lighting
- Describe what the NFPA 101 Life Safety Code is and how it impacts outdoor lighting
- Describe the most common legislative requirements for outdoor lighting and understand how they affect outdoor luminaire selection.



9 am - 11 am Continuing Education: OCILB CODE 2 | OBBS 2 | PDH 2

Advanced Arc Flash Mitigation Techniques

Presented by: Carleen Yarkosky, Consulting Engineer Specialist, Square D by Schneider Electric

Description: Presentation and discussion on Advanced Arc Flash Reduction Techniques (Advanced), Review of 2014 National Electric Code, Article 240.87 Approved (NEC Article 240.87) methods of Arc Flash Mitigation, Advanced and Emerging Technologies of Arc Flash Mitigation



9 am - 10 am Continuing Education: OCILB 1 CEU TECHNOLOGY | PDH 1

All About Solar

Presented by: Alan R. Frasz, Commercial Business Manager, YellowLite Inc. and Member of Green Energy Ohio Board of Directors

Description: In this presentation your questions on Solar will be answered. The presentation will include: Why All the Fuss About Solar; What has changed in solar in the last 5 years, Industry trends, and Why Solar now makes good business sense; Installing Solar on Your Properties; Types of systems with examples; Installation requirements & concerns; Typical costs for various types of projects; Available incentives (state and federal); Economics and Return on Investment; Example Case Study of a NEO commercial installation and Questions & Next Steps.



9 am - 10 am Continuing Education: TBA

Security Systems - Tools of the Trade

Presented by: Ken Minard, Regional Sales Manager, Axis Communications, 36 years of experience in the Life Safety & Security industry. 21 years as an integrator; primarily focused on electronic security including video surveillance, access control, intrusion detection and integrated solutions. 15 years working for manufacturers, selling to security integrators and to end users. Have been a Regional Sales Manager for Axis almost 3 years selling and supporting our IP products including cameras, access control, intercom, and audio solutions.



10 am - 12 pm Continuing Education: OCILB 2 CODE | OBBS 2 | PDH 2

Selective Coordination on Emergency Systems

Presented by: Joe Pavia, P.E., Field Application Engineer, Eaton Bussmann Business

Description: Selective Coordination on Emergency Systems – The requirements for selective coordination in the NEC will be addressed. Time current characteristics of overcurrent protective devices will be explained and the process of achieving selective coordination with circuit breakers and fuses will be discussed. Participants will learn how to easily avoid unnecessary blackouts in facilities.



10 am - 11 am Continuing Education: AIA LU HSW 1

Treat Your Building as a Patient

Presented by: Jay Massa, Kenall

Description: This presentation will describe the role of the environment in Healthcare Acquired Infections (HAI's). It will specifically focus on the Operating Room and the concerns unique to that setting. Methods for improving environmental hygiene will be reviewed with attention given to a new class of solution whole room disinfection. The use of this solution in the Operating Room will be presented examining the relevant details between the two primary categories (continuous vs. episodic). After completion of this course, participants will be able to:

- Identify the types of Healthcare Acquired Infections (HAIs) and their collective impact upon the US healthcare system.
- Explain how infections can be acquired through the built environment.
- Describe the range of solutions to improve environmental hygiene which are available to healthcare providers.
- List the characteristics of specification-grade light fixtures that can reduce the spread of pathogens within the environment.
- Recognize the benefits of continuous environmental disinfection and the areas within a healthcare setting where it is best used.



10 am - 11 am Continuing Education: OCILB 1 CEU BUSINESS | PDH 1

Electrical Contractor Licensing: Pending Legislation, Law & Rule Change

Presented by: Carol Ross, Director, Ohio Construction Industry Licensing Board

Description: It is pertinent license holders understand the regulations and legislation to do business in the State of Ohio and the reciprocity with 6 other states. Learn the rules, penalties, reciprocity guidelines to continue safe compliant business. Discussion on legislations that will affect your work and what you need to know. Important Legislation is being proposed that you will need to understand if passes. Stay safe and compliant and attend this class.



11 am - 12 pm Continuing Education: OCILB 1 CEU TECHNOLOGY | PDH 1

Addressing the Future of Our Electrical Engineering Industry

Presented by: Joseph Karpinski, MT, Senior Lecturer and Founder of Kent State Construction Management Program & John Kellamis, Adjunct Professor at Kent State University and Lake Erie Electric

Description: The Kent State University Management Program began back in 2007. From its beginnings through its accreditation by the American Council for Construction Education, ACCE, the aim has been to prepare students for professional careers in the management of construction projects. The curriculum is built upon a balanced program of studies drawn from a variety of disciplines related to construction management and was ranked 8th in the nation by Intelligent Magazine. This course will provide a brief description of the program and curriculum with emphasis on the introduction of cutting-edge technologies affecting the construction industry. Utilization of the Industry Advisory Board, IAB, in research projects performed by the graduate students in the Masters of Construction Management as well as guest speaker talk series from around the country will be discussed.



11 am - 12 pm Continuing Education: AIA LU HSW 1

Human-Centric Lighting: Myth, Magic, or Metaphor? (IESNA Cleveland Chapter Meeting)

Presented by: Kevin Houser, PhD, PE (NE), FIES, LC, LEED AP Professor School of Civil & Construction Engineering, Oregon State University

Description: Is Human-Centric Lighting merely a new phrase for old concepts, or does it encapsulate transformative ideas and technologies that have the potential to reframe lighting practice? This talk will provide guidance about how one might approach human-centric lighting given both the credible potential and implausible hype. After this presentation, participants will: 1. Appreciate ways in which thoughtful lighting design balances requirements for vision and health. 2. Appreciate that Human-Centric Lighting is not a single idea with a well-defined meaning, but a spectrum of concepts that vary with user and intent. 3. Be aware of lighting recommendations that are intended to support photobiological health for day-active people



11 am - 12 pm Continuing Education: OCILB 1 CODE | PDH 1

Passive and Active Filter Current Harmonic Mitigation Techniques in Electrical Systems

Presented by: Mike Van Gheem, Hammond Power Solutions

Description: VFD's, rectifiers, chargers, inductive heating and other three phase non-linear loads create large amounts of current voltage harmonics which must be mitigated in modern electrical systems. Harmonics cause excessive heat, loss of efficiency, equipment damage, downtime and utility surcharges if mitigated. This presentation will explore passive and active filter techniques which will mitigate these harmonics and allow the electrical system to meet IEEE 529.



11 am - 12 pm Continuing Education: OCILB 1 CEU TECHNOLOGY | PDH 1

Overview of Battery Storage: Past, Present and Future

Presented by: Alan R. Frasz, Commercial Business Manager, YellowLite Inc. and Member of Green Energy Ohio Board of Directors

Description: In this presentation you will learn an overview of battery storage. Presenter will cover Where Does Battery Storage Stand Today, What has changed in the last 5 years, Industry trends, and Where storage now makes good business sense & where it doesn't; Installing Battery Storage on Your Properties; Types of systems with examples; Installation requirements & concerns; Typical costs for various types of projects; Available incentives (state and federal); Economics and Return on Investment; Example Case Study of a commercial storage installation and Questions & Next Steps



1 pm - 2 pm Continuing Education: OCILB 1 CEU CODE | OBBS 1 | PDH 1

Fundamentals of Backup Power and Code Requirements

Presented by: Connor Young, Applications Engineer, ME, Buckeye Power Sales

Description: Electrical engineers and contractors must consider many factors when designing backup power systems. Generator Sizing, Safety, Code Compliance and Financials all play crucial roles. This presentation is meant to encompass a variety of topics involved with backup power design and the code requirements surrounding them.



1 pm - 2 pm Continuing Education: AIA LU | HSW 1

Lighting Control Solutions

Presented by: Damian Rau, Specifications Sales Manger - Central Region US, GE Current a Daintree Company

Description: This course will explore lighting controls, from on/off simple solutions to IoT advanced platforms. The learner will gain an understanding how lighting control systems operate, difference control schemes, what's required by code, how control schemes work with emergency systems and advantages of networked / IoT platforms and the value they bring. LED light sources can save up to 75% in energy costs, contain no hazardous substances (mercury) and last up to 10X longer than traditional sources. LED sources also have significant control advantages, such as: Turned on/off with warm-up cycle times or their life being affected; Dimmed easily based on the driver limitations; Integrated and controlled with daylight harvesting and occupancy sensors; More easily incorporated into BMS systems (BACnet, Zigbee and other protocols); Integral part of a networked control system that provides scheduling, reporting, fault detection & more; Need to be carefully integrated into emergency egress lighting systems and Part of an enterprise-wide software and data collection system that incorporates IoT platform solutions not feasible a few years ago.



1 pm - 2 pm Continuing Education: OCILB 1 CEU TECHNOLOGY | 1 PDH

Using Technology to Enhance Electrical Safety

Presented by: Steve Abbott, President, Stark Safety Consultants



1 pm - 2:30 pm Continuing Education: OCILB 1 CEU TECHNOLOGY | PDH 1

Charging up for Electric Vehicles

Presented by: Brendan Kelley, Director of Drive Electric Ohio | Clean Fuels Ohio and Brandon Jones, Consulting Services Manager, Clean Fuels Ohio

Description: Introduction to EVs and Charging Stations, Market Trends | OEM announcements and why electrical contractors should care about preparing to install EV charging. Learn about the funding programs in the works or currently available on the federal, state and utility level. Discuss how fleet electrification can upgrade your current fleet.



1 pm - 2 pm Continuing Education: OCILB 1 CEU HEALTH & SAFETY | 1 PDH

Entering Electrical Construction: How to Become a Licensed Electrical Contractor

Presented by: Carol Ross, Director, Ohio Construction Industry Licensing Board

Description: Our industry is need of young people entering the trades. This presentation will discuss how to become a licensed electrical contractor and the pathway to success. Anyone interested in open discussion on electrical construction industry recruitment welcome to attend.