



The
**Electrical
Board** of Missouri
and Illinois

EDUCATION COURSES

2022-23 SCHEDULE

IMPORTANT TO NOTE FOR ALL CLASSES FOR THIS YEAR:

While things are opening up since the pandemic changed many things, please understand that we may need to make adjustments to virtual, should CDC guidelines change during the course of the year.

EBMI staff, instructors and their companies and EBMI Board of Directors assume NO liability with anyone (those vaccinated or unvaccinated) who attend our in-person classes/seminars.

For VIRTUAL classes: (noted by seminar/class)

*Instructor will use Microsoft Teams and *Student must have computer with video capabilities.

For IN-PERSON classes at EBMI Office, please note:

*25 person maximum. In EBMI classroom, we will have TWO students assigned to a 6 or 8 foot table in the classroom setting. It is up to each student to decide if you are comfortable in this setting BEFORE signing up for class. Many classes work better in-person.

For IN-PERSON classes at other locations, please note:

*That company will provide setting similar to EBMI office as well as their requirements for class. If you want more details on size of classroom for a particular company, please call EBMI OFFICE.

Providing Educational Value to the Industry for 45 years!

Please forward this information (also will be available on our website...www.electricalboard.org) to your customers, suppliers, etc. who may need education units as described below or wish to attend these classes to enhance their careers.

PDH listed by a class - *accepted hours for engineering community*

JC's listed – *for Jefferson County contractor license. They will accept 8 PEU hours of code related -OR- 4 hours of code-related and 4 elective classes showing JC's by them; no carryover of hours to next cycle. Current license renewal: January 1, 2022- December 31, 2024.*

City listed – *accepted hours for City of St. Louis license renewal. 8 hours are due with license renewal for the rest of 2022. NOTE: Beginning in 2023, a code update class in 2023 will satisfy three years of future CEU requirements for license renewals. Mark your calendar for August 24, 2023 for a code update class to be offered at Expo 2023.*

****PLEASE NOTE: We do need a minimum number for EACH class so don't delay if you are interested in registering. We must decide if we have enough to run classes 7 days PRIOR to class scheduled start, so your registration could make a difference.**

CLASSES

*(*Some classes are held only ONCE a year...in FALL or SPRING.*

| | |
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| READING ELECTRICAL CONSTRUCTION DRAWINGS (SPRING only) | PAGE 13 |
| PRACTICAL APPLICATIONS OF ELECTRICAL EQUIPMENT & DEVICES (SPRING Only) | PAGE 4 |
| FUNDAMENTALS OF ELECTRICAL THEORY (LIMIT OF 15) | PAGE 5 |
| UNDERSTANDING MOTOR CONTROLS (FALL Only) | PAGE 6 |
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| GROUNDING -VIRTUAL (FALL Only) | PAGE 8 |
| UNDERSTANDING THE NATIONAL ELECTRICAL CODE (2020) | PAGE 10 |
| NEC CALCULATIONS (Based on 2020 Code) (SPRING Only) | PAGE 11 |

HALF OR FULL DAY SEMINARS

| | |
|--|---------|
| HARSH AND HAZARDOUS AREA LOCATIONS-2 hours (FALL Only) | PAGE 7 |
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REGISTRATION FORM

PAGE 16

*Please scan/email to annie@electricalboard.org OR mail it to EBMI, 900 S. Highway Dr., Suite 203, Fenton, MO 63026

Electrical Board Accepts Mastercard, Visa and American Express
– call office, 636/305-6434 if you wish to pay by credit card.

We also offer other seminars throughout the year including:

| | |
|---------------------------------|---------|
| Clean Energy Summit | Page 17 |
| Electric Power Topics | Page 17 |
| Energy Efficiency Workshop | Page 17 |
| Emerging Illinois Energy Topics | Page 17 |
| Illinois Electric Power Issues | Page 17 |

To: Industry Associates

*From: Phil Wentz, Chairman
The Electrical Board Education Committee*

The Electrical Board of Missouri and Illinois (EBMI) is entering its 45th year of providing educational courses on various electrical topics to the industry.

We offer courses that provide useful and practical information. Hopefully, these courses will assist participants with the knowledge enhancement process, which is so vital to the continued success of the individual, and increase their contribution to their firm.

Don't delay in registering for classes especially if needing education hours for your licensing requirements. We can only hold the class/seminar if we reach the minimum # of students, so the earlier you sign up, the better chance the class may run.

*Our emphasis is on the **operation and applications** of the various electrical components being used in the industry. These courses are not intended as "manual skills training" for individuals but rather emphasize the theory, principles and applications associated with the various electrical components and systems that are discussed. Introduction of new and changing technologies will also be presented wherever possible.*

If you have any questions concerning the courses, please call the Electrical Board office at 636/305-6434.

**I UNDERSTAND THESE COURSES DO NOT ADDRESS
WIRING SKILLS AND PROFICIENCIES, AND THAT
THE ELECTRICAL BOARD, ITS OFFICERS AND
INSTRUCTORS ARE HERE-BY RELEASED FROM ANY
LIABILITY ARISING FROM ANY USE OR
APPLICATION OF THE KNOWLEDGE GAINED FROM
THESE SEMINARS/COURSES.**

REGISTRATION PROCEDURES & CLASS INFO

- 1) ****To confirm your position in a class/seminar, the easiest way is to complete registration form on page 16 and:**
 - *Scan/email it to annie@electricalboard.org, or
 - *Mail to EBMI, 900 S. Highway Dr.-Suite 203-Fenton, MO 63026

*NOTE: You can call in to sign up for a class, BUT we will need to complete all information with you that is contained on registration form over the phone. So, it may save YOU time if you scan/email completed registration form.
- 2) **Advanced rate given ONLY if your REGISTRATION FORM is received 2 weeks prior of class.** (Payment can follow later.) If form is not received two weeks prior to class, the late registration fee will be applied.
- 3) **Courses will be cancelled one week prior to class start, if there is not sufficient enrollment.** This allows time for others to transfer to another class. 100% refund is given should we need to cancel your class. Each course has a minimum number of students that must be reached before we can offer it, so please make sure you send in your registration form early as this helps in determining if a class will be held! ONE registration can make a difference!
- 4) **Payment must be received before the FIRST night of class,** unless you call EBMI in advance to indicate payment is being processed within your company and full payment will be received shortly after class begins. We realize some companies cannot process as quickly, so we will work with you.
- 5) **We do accept Mastercard, Visa and Amex but we ask that you call us when using credit card and we will email or mail receipt to you.**
- 6) Please understand that for reasons beyond our control, some classes may be cancelled and rescheduled, so **your class may go one or two weeks past the nights shown in the booklet.** Most of our instructors work full-time and assist us in the evening. Sometimes, they may be called out of town with business or the weather may deem it necessary to cancel class. We ask you to understand that the possibility for such changes might occur during your class and may cause you to go a few classes past the date scheduled in booklet.
- 7) **Jefferson County (JC) PEU Credit Hour requirements: Students must have a minimum of 8 education hours -- at least 4 hours MUST BE CODE-RELATED and others can be electives pre-approved hours -- per 3 year cycle... (Current licensing renewal cycle is January 1, 2022- December 2024).** They will NOT allow any PEUs to be carried over to next cycle. Students must attend 100% of the actual classroom instructions. They will allow a student to be absent 10% of the required hours, but only for reasons of personal illness, illness or death in their immediate family or hazardous road conditions. **It is the STUDENTS' responsibility to submit certificate or letter to Jefferson County office WITHIN 30 days AFTER class ends or they will not approve at later date.**
- 8) **City of St. Louis 8 hour code-related education – 8 hours are due with license renewal for the rest of 2022.** Note: Beginning in 2023, a code update class in 2023 will satisfy three years of future CEU requirements for license renewals.
- 9) **REFUND POLICY - If you withdraw before the class starts, we will refund the enrollment fee minus the registration fee. After the first night of class, you will receive 50% of enrollment fee. After the second night, 25% will be refunded. No refunds will be made after the third night of class.** Substitutions can be made.

GRADING POLICY -Each student who attends the required number of classes (80%) and perform coursework to pass the class, will receive a certificate of completion for this class. Many companies use this for reimbursement. However, if your company needs a letter showing the student's grade and attendance record, in addition to the certificate of completion or attendance, please check the attendance and grade information on registration form. This must be done in advance of the class!! We must also be provided with contact name. If a student attends the classes, but do not pass the course, they will receive a certificate of attendance. If a student is unable to attend the required number of classes, they will not receive a certificate. Each instructor will go over the required number needed on the 1st night of class, so please pay close attention.

PRACTICAL APPLICATIONS OF ELECTRICAL EQUIPMENT & DEVICES

(Offered ONLY in the SPRING)

INFORMATION: This course provides a working knowledge of all segments of the electrical industry and how these segments interact in the construction and MRO markets. It gives a hands-on overview of electrical products and their applications for industrial, commercial and residential applications. It is ideal for warehouse, clerical and purchasing personnel (as well as entry level sales personnel) desiring an understanding of the electrical construction industry and its practical applications. It includes terminology and definitions put into laymen's terms for a basic understanding of our industry.

- | | |
|--|---|
| 1. Overview of the Electrical Industry | 5. Fastening & Supporting; Splicing & Terminating |
| 2. Distribution Equipment & Motor Controls | 6. Wiring Devices; Signaling Equipment; Lighting Controls |
| 3. Raceways, Boxes, Enclosures & Fittings | 7. Lamps & Lighting Fixtures |
| 4. Wire, Cables & Accessories | 8. Heating & Ventilating Equipment; Electricians' Tools |

TIME AND DATES:

Feb. Class*

OFFERED IN SPRING ONLY

Tuesday
6:00-8:30 p.m.
8 sessions

Begins February 21, 2023
Ends on April 11, 2023

LOCATION:

Frost Supply
2429 Schuetz
Maryland Heights, MO 63043

INSTRUCTOR:

DAN ASARO
Frost Supply

COST: **Advanced** - registrations must be received 2-weeks prior to class start.

| | <u>Advanced</u> | <u>Late</u> |
|--|------------------------|--------------------|
| Employees of non-member firms | \$ 260 | \$ 310 |
| Employees of Electrical Board member firms | \$ 200 | \$ 250 |

Includes study manual, certificate of completion and registration fee of \$75 which is non-refundable.

REGISTRATION FORM ON PAGE 16

FUNDAMENTALS OF ELECTRICAL THEORY

(LIMIT OF 15 in class for each semester)

Course outline: The course is designed and will be taught to provide a fundamental understanding of the principles, terms, physical laws and mathematical concepts used to explain electrical circuit behavior. Areas covered will be an overview of D.C. and A. C electrical theory and introduces the student to electrical components and magnetic concepts, Ohm's Law, Kirchhoff's current and voltage Laws, and the calculation of single phase and three phase power. There will be many experiments where meters are used to verify calculated results. This instruction will be done with a short lecture on subjects and the class labs done by the students working as teams to obtain, record and analyze results. Electrical and job site safety will also be covered for the students. Labs and example problems will be taken from new textbook "Mike Holt's Illustrated Guide to Basic Electrical Theory 3rd Edition". Homework assignments do account for a portion of the grade.

- | | |
|---|-----------------------------------|
| 1. Math/Algebra review Basic Electrical Concepts | 6. Power in AC Circuits |
| 2. Basic Circuit Components | 7. Three Phase AC Circuits |
| 3. Circuits, Laws and Measurements | 8. Inductance |
| 4. Multiple-load Circuits | 9. Capacitance |
| 5. Magnetism and Electromagnetism | 10. Transformers, Motors (AC, DC) |

TIME AND DATES:

Sept. Class-LIMIT OF 15

Thursday
6:00-8:30 p.m.
10 sessions
Begins September 15, 2022
Ends on November 17, 2022

Feb. Class-LIMIT OF 15

Thursday
6:00-8:30 p.m.
10 sessions
Begins February 23, 2023
Ends on April 27, 2023

LOCATION:

EBMI
900 S. Highway Drive-Ste. 203
Fenton, MO 63026

INSTRUCTOR:

MILT MURRY

COST: **Advanced** - registrations must be received 2-weeks prior to class start.

| | <u>Advanced</u> | <u>Late</u> |
|--|------------------------|--------------------|
| Employees of non-member firms | \$ 290 | \$ 340 |
| Employees of Electrical Board member firms | \$ 230 | \$ 280 |

Includes study manual, certificate of completion and
registration fee of \$75 which is non-refundable.

REGISTRATION FORM ON PAGE 16

UNDERSTANDING MOTOR CONTROLS

PDH: 16/ JC & City: 8-code

(Offered ONLY in the FALL)

INFORMATION: This course is designed to teach a fundamental understanding of standard Motor Control terminology and equipment design. The basic operation of various motors will be presented. However, the major emphasis of this course will be to understand how and why to correctly control a motor. Considerable emphasis will be placed on relating the physical motor control components to symbols on drawings and how they interrelate in schematic or ladder diagrams. Components discussed in this course will include, but not be limited to, circuit breakers, disconnects, fuses, starters, relays, timers, limit-switches, push buttons, starting transformers and enclosures.

- | | |
|---|--|
| 1. Introduction and Definitions | 5. Other controls and pilot devices |
| 2. Control Schematics and Common Symbols | 6. Motor reversing topics |
| 3. Magnetic Control Topics | 7. Sequencing and Application notes |
| 4. Overload Protection Practices | 8. Review and Final Exam |

TIME AND DATES:

Sept. Class ONLY

Tuesday – 8 Sessions

6:00-8:00 p.m.

Begins Sept. 13, 2022

And ends November 1, 2022

OFFERED IN FALL ONLY

LOCATION:

Frost Supply

2429 Schuetz Road

Maryland Heights, MO 63043

INSTRUCTOR– DAN ASARO,
Frost Supply

| | <u>Advanced</u> | <u>Late</u> |
|--|-----------------|-------------|
| Employees of non-member firms | \$ 300 | \$ 350 |
| Employees of Electrical Board member firms | \$ 240 | \$ 290 |

REGISTRATION FORM ON PAGE 16

***NEW -- VARIABLE FREQUENCY DRIVES 101 AND
201 HALF-DAY SEMINARS**

VFD 101 – Fall only; AND VFD 201 – Spring only

PDH: 4

INFORMATION: TWO SEMINARS WILL BE HELD IN FALL and SPRING.

It is recommended that you take VFD 101 first, especially if NEW to drives.

VFD 101 (FALL ONLY)

THURSDAY, OCT. 20, 2022

Topics covered:

1. Basics of an electrical motor
2. Basics of VFD
3. Energy Savings
4. Simple applications and basis installation considerations
5. Safety considerations around VFDs

VFD 201 (SPRING ONLY)

THURSDAY, APRIL 13, 2023

Topics to be covered:

1. Advanced Applications
2. Safety considerations around VFD's review
3. Advanced installation considerations
4. Harmonics
5. Hands on/Programming

**LOCATION FOR BOTH
SEMINARS:**

EBMI OFFICE

900 S. Highway Dr.-Ste. 203

Fenton, MO 63026

8:00 a.m. – 12:00 noon

INSTRUCTOR:

JOHN FAHEY

Ensync

Costs for EACH seminar:

Employees of non-member firms

Employees of Electrical Board member firms

Advanced

\$160

\$110

Late

\$210

\$160

HARSH and HAZARDOUS AREA LOCATIONS

(Offered only in the Fall)

(2 HOUR Seminar)

PDH: 2 / JC & City: 2- code

INFORMATION: This seminar will provide a basic understanding of Harsh and Hazardous Areas; how they are defined, proper product installation and maintenance, and protection methods in accordance with NEC 500-516.

October Seminar

Friday, October 14, 2022

8:00 a.m. – 10:00 a.m.

LOCATION: - EBMI Office

900 S. Highway Dr.- Ste. 203

Fenton, MO 63026

INSTRUCTOR:

KURT SCHULZ

Eaton's Crouse-Hinds Division

Employees of non-member firms

Employees of Electrical Board member firms

Advanced

\$160

\$100

Late

\$210

\$150

GROUNDING (VIRTUAL) *Offered ONLY in the FALL*
(Will be using Microsoft Teams and you will need computer with video capabilities.)

PDH: 10 / JC & City: 8- Code

INFORMATION: This course is intended to provide a clearer understanding on the subject of Grounding. The basic physics of grounding will be reviewed and compared to the National Electrical Code. We are recommending this course to electricians, electrical contractors, consulting engineers, utility and industrial maintenance personnel.

- 1. Definitions; Purposes; Physics; Electrical Systems
- 2. Grounding Electrical Systems; Main Bonding Jumpers; Clearing
Ground Faults & Short Circuits
- 3. Grounding Electrode Systems; Equipment Grounding Systems;
- 4. Separately Derived Systems
- 5. Grounding at more than One Building; Ground Fault Protection; Healthcare;
Special Locations

TIME AND DATES:
Sept. Class-OFFERED ONLY IN
FALL

Thursday
6:00-8:00 p.m.
5 Sessions
Begins Sept. 22, 2022
and ends Oct. 20, 2022

VIRTUAL CLASS ONLY!

INSTRUCTOR:
PHIL WENTZ
McClure Engineering

COST: Advanced - registrations must be received 2-weeks prior to class start.

| | <u>Advanced</u> | <u>Late</u> |
|--|-----------------|-------------|
| Employees of non-member firms | \$ 310 | \$ 360 |
| Employees of Electrical Board member firms | \$ 250 | \$ 300 |

Includes study manual, certificate of completion and
registration fee of \$75 which is non-refundable

REGISTRATION FORM ON PAGE 16

PROTECTION OF ELECTRICAL SYSTEMS

Offered ONLY in the SPRING

PDH: 8 / JC & City: 8- Code

Conductors: The installation of cables in wood and metal framing, shallow groves, behind panels that allow access and surface mounted; Installation of cables or conductors in the earth; Explain the effects of chemicals, water, direct sunlight and other conditions; Explain overcurrent protection and short circuit protection; Importance of clearances for feeders and service conductors; Explain why fill ratio is important and affects ampacity of conductors.

Equipment: Sizing equipment for available fault current; how to determine fault current and why it is important; selecting the correct overcurrent devices; importance of signage NFPA 70E commercial not dwellings; the separation of arcing parts from combustible material; explain working clearances; minimizing shock hazards for personnel.

TIME AND DATES:

LOCATION:

EBMI Office
900 S. Highway Dr.-Ste. 203
Fenton, MO 63026

April Seminar – SPRING

Thursday, April 27, 2023

7:30 a.m. – 4:30 p.m.

8 hour seminar

INSTRUCTOR:

Michael Smith
Vision Electric

COST: Advanced - registrations must be received 2-weeks prior to class start.

| | <u>Advanced</u> | <u>Late</u> |
|--|------------------------|--------------------|
| Employees of non-member firms | \$ 185 | \$ 235 |
| Employees of Electrical Board member firms | \$ 125 | \$ 175 |

REGISTRATION FORM ON PAGE 16

UNDERSTANDING THE NATIONAL ELECTRICAL CODE (Based on 2020 N.E.C.)

PDH: 60 / JC & City: 8-code

INFORMATION: This detailed course is designed to unlock the mystery, clarify the gray areas, and the how and where to apply the code. This class is based on the 2020 N.E.C. A study manual and workbook with questions are included in class fees.

Must have a 2020 Code Book. **If you need a 2020 Code Book, add \$120 to the class fees below.** **Tab for code books (optional) are \$20.**

TIME AND DATES:

Sept. Class

***TUESDAY** - 20 Sessions

6:00-9:00 p.m.

Begins Sept. 13, 2022

and ends Feb. 14, 2023

(Class will NOT be held on
Sept. 20, Dec. 20th, Dec. 27th)

INSTRUCTOR:

Michael Smith

Vision Electric

***2022-23 class is almost
full so if interested, call
EBMI, 636/305-6434
soon. It will be full
quickly.***

COST: Advanced - registrations must be received 2-weeks prior to class start.

| | <u>Advanced</u> | <u>Late</u> |
|--|------------------------|--------------------|
| Employees of non-member firms | \$ 540 | \$ 590 |
| Employees of Electrical Board member firms | \$ 480 | \$ 530 |

Includes study manual, workbook with questions, certificate of completion OR attendance, and registration fee of \$100 which is non-refundable

***** (A 2020 Code book is also required. If you need one, please ADD \$120 to the above class fees.) Order early as we have a limited supply on hand.**

REGISTRATION FORM ON PAGE 16

NATIONAL ELECTRICAL CODE CALCULATIONS

This class is based on the 2020 N.E.C

Offered ONLY in the SPRING

PDH: 36 / JC & Code: 8-code

INFORMATION: This detailed course is designed to unlock the mystery, clarify the gray areas in performing code calculations. A study manual with questions **is included** in class fees.

PRE-REQUISITE: YOU HAVE TAKEN A CODE CLASS IN THE LAST 3 CODE CYCLES (2014- 2017 - 2020). ONLY CODE CLASSES WITH A MINIMUM 24 HOURS OF CLASS TIME WILL BE ACCEPTED. SUBMIT A COPY OF YOUR CERTIFICATE OF COMPLETION ALONG WITH YOUR REGISTRATION FORM.

A 2020 Code Book is required for this class. If you need a 2020 Code Book, add \$120 to the class fees below.

Held in Spring only.

LOCATION:

EBMI Office
900 S. Highway Dr.-Ste 203
Fenton, MO 63026

TIME AND DATES:

Feb. Class*

Tuesday
6:00-9:00 p.m.
12 Sessions

**Begins March 7,2023
And ends May 23, 2023**

INSTRUCTOR:

MICHAEL SMITH
Vision Electric

COST: Advanced - registrations must be received 2-weeks prior to class start.

| | <u>Advanced</u> | <u>Late</u> |
|--|------------------------|--------------------|
| Employees of non-member firms | \$ 410 | \$ 460 |
| Employees of Electrical Board member firms | \$ 350 | \$ 400 |

Includes study manual, workbook with questions, certificate of completion OR attendance, and registration fee of \$100 which is non-refundable

***** (A 2020 Code book is also required. If you need one, please add \$120 to the above class fees.)**

(Co-sponsored with the Illuminating Engineering Society (IES) – St. Louis Section)

HALF-DAY SEMINAR (*Offered only in the FALL*)

PDH: 4 / JC: 4-elective

Description: This seminar will help you identify lighting control strategies based on application needs; Design and commission a lighting control solution; analyze your control solutions in order to satisfy energy code standards and choose appropriate lighting control equipment for your project.

- * Introduction to Lighting Controls
- * Commercial Building Energy Codes
- * Lighting Control Equipment
- * Lighting Control Design

NOV. SEMINAR

Thursday, November 10, 2022

8:00 a.m.-12:00 noon

LOCATION: EBMI Office

900 S. Highway Dr.-Ste. 203

Fenton, MO 63026

INSTRUCTOR:

Jeff Stoyanov-

Vector Electrical Sales

| | <u>Advanced</u> | <u>Late</u> |
|--|-----------------|-------------|
| Employees of non-member firms | \$ 210 | \$ 260 |
| Employees of Electrical Board/IES member firms | \$ 150 | \$ 200 |

IES FUNDAMENTALS OF LIGHTING 3-DAY SEMINAR

(Co-sponsored with the Illuminating Engineering Society (IES) – St. Louis Section)

(NOTE: Digital manual link is emailed to each student in advance as part of course fee. Students can then choose to download the class to view it on their computer during seminar or print their own copy.)

Offers: 20 pdhs; 2 IESNA CEUs; 20 USGBC CE Hours; and 2 AIA LUs with Health, Safety and Welfare.

Will cover: Lighting overview, history, professional practice, physics, vision, color, light and health; Electric light sources and Auxiliary Devices; Daylighting; Luminaires; Controls; Lighting Metrics, Photometry, Calculations and Rendering; Codes and Standards, Economics; Lighting Design Process and Techniques; Lighting for Interiors and Exteriors

LOCATION:

EBMI Office

900 S. Highway Dr.-Ste. 203

Fenton, MO 63026

INSTRUCTORS:

Variety of Lighting Professionals

March/April 3 day Seminar

Thursday & Friday.

March 30 and 31, 2023

8:00 a.m. – 5:00 p.m. **AND**

Saturday, April 1st —

8:00 a.m. -12:00 noon

Coordinator: Dave Meglio

| | <u>Advanced</u> | <u>Late</u> |
|--|-----------------|-------------|
| COST: Employees of non-member firms | \$335 | \$385 |
| Employees of Electrical Board/IES member firms | \$ 285 | \$335 |

TRANSFORMERS

(Offered only in the SPRING)

PDH: 4 / JC & City: 4-code (Half Day Seminar)

INFORMATION: This seminar will provide a basic understanding of transformer operation, calculations, installation, and NEC requirements.

1. Transformer selection, application and basic calculations.
2. Unit Substation and pad mount transformers.
3. Energy efficient and harmonic mitigation transformers.
4. Installation and application considerations for Transformers

May Seminar

Thursday

May 4, 2023

8:00 am - 12:00 noon

LOCATION: EBMI Office

900 S Highway Dr.-Ste. 203

Fenton, MO 63026

INSTRUCTOR:

Melissa Meywes

Eaton Corp.

| | <u>Advanced</u> | <u>Late</u> |
|--|-----------------|-------------|
| Employees of non-member firms | \$160 | \$ 210 |
| Employees of Electrical Board member firms | \$100 | \$ 150 |

READING ELECTRICAL CONSTRUCTION DRAWINGS

3 evening seminar – (Offered Only in the SPRING)

INFORMATION: This course is designed as an introductory level understanding of electrical construction plans and drawings. This group could include but not be limited to Manufacturers Agents, Utility Personnel, Plant Maintenance, Building Design Professionals, Electrical Estimators and anyone else using electrical drawings.

1. Reading Scales; Floor Plans; Site Plans; Elevations; Symbols
2. Electrical Floor Plans; Wiring; One Line Diagrams; Schedules
3. Relaying; Controls; Details; Auxiliary Systems; Specifications

Feb. Class

INSTRUCTOR:

Warren Kohm

Ross & Baruzzini

Wednesday, Feb. 15th, 22nd &

March 1, 2023

6:00-8:30 p.m.

LOCATION:

Ross & Baruzzini

#6 South Old Orchard Ave., 63119

| | <u>Advanced</u> | <u>Late</u> |
|--|-----------------|-------------|
| Employees of non-member firms | \$ 230 | \$ 280 |
| Employees of Electrical Board member firms | \$ 170 | \$ 220 |

COST: Advanced - registrations must be received 2-weeks prior to class start.

Includes study guide, certificate of completion and registration fee of \$50 which is non-refundable.

ARC FLASH & ELECTRICAL SAFETY

PDH: 4 / JC: 4-elective (Half Day Seminar)

INFORMATION: In this half day seminar, Dave will discuss Arc Flash & Shock Hazards and the most critical requirements of the new 2021 Edition of NFPA 70E, Standard for Electrical Safety in the Workplace.

Topics include:

Overview and explanation of Arc Flash and Shock Hazards.

Real-world, practical examples that illustrate the need and effectiveness of NFPA 70E.

Relationship and differences between NFPA70E, NFPA70B, NFPA 70 & OSHA.

OSHA and NFPA 70E Justification for Energized Work.

Arc Flash Labeling Requirements including Explanation and Proper Interpretation.

Shock Hazard Risk Assessments.

Limited and Restricted Approach Boundaries for Shock.

Detailed instruction regarding the use and care of, rubber insulated, voltage-rated gloves.

Insulated tools and other voltage-rated materials.

Arc Flash Hazards and Boundaries.

Arc Flash Hazards with covers on and/or doors closed vs. covers off and/or doors open

Arc Flash Risk Assessment Procedures

PPE Selection for when the Incident Energy Analysis has been performed.

PPE Selection for when the PPE Category Method must be used.

Proper care and maintenance of Arc Flash PPE

New Job Safety Plan & Job Briefing Requirements – recommendations for implementation.

Energized Electrical Work Permits (EEWP)

Host Employer & Contract Employer Responsibilities.

Nov. Seminar

Tuesday, Nov. 22, 2022

8:00 a.m.- 12:00 noon

Feb. Seminar

Tuesday, Feb. 21, 2023

8:00 a.m.– 12:00 noon

LOCATION: EBMI office

900 S. Highway Dr.-Ste. 203

Fenton, MO 63026

INSTRUCTOR:

DAVE RITTER

Ritter Safety & Facility Support

| | <u>Advanced</u> | <u>Late</u> |
|--|------------------------|--------------------|
| Employees of non-member firms | \$170 | \$ 220 |
| Employees of Electrical Board member firms | \$ 110 | \$ 160 |

Due to covid, some of these classes/seminars may need to be turned into virtual sessions. We will let students know of any other changes at a later date concerning classes or seminars. This will depend on the guidelines set by the City of St. Louis and St. Louis County. These guidelines can change between now and the start/during our classes or seminars.

VALUE FOR YOUR COMPANY...

MEMBERSHIP

*Why not save YOUR COMPANY money by joining the Electrical Board. If your company is putting in several students, it may make sense for your company to join EBMI as a corporate member. **Take advantage of the member rates, which are then available for fall/spring semesters for all of your employees.** Check out membership information on our website as well as viewing all current members of EBMI...www.electricalboard.org, email bill@electricalboard.org or annie@electricalboard.org or call us at 636/305-6434 to learn more.*

KNOWLEDGE IS POWER

**We know that everyone's schedules are different, so we have offered half-day and full-day seminars as well as evening weekly courses on a variety of electrical topics to ensure everyone in industry can take advantage of classes/seminars. In addition this year, a few of them are being held online.*

**Our instructors are part of the electrical industry and give you not only the basics for their class, but also invaluable personal experiences.*

OUTLYING AREAS

Are you in an outlying area, but in need of relevant courses in your area? We have several half-day seminars such as Arc Flash, Grounding (provided we can get enough students) that we can work with you to provide in these areas (or others):

ILLINOIS – Springfield, Mt. Vernon,

CENTRAL/ SOUTHERN MISSOURI – Columbia, Cape Girardeau

For more information on EBMI events/education programs, please call the EBMI Office at 636-305-6434 or e-mail bill@electricalboard.org or check our website at www.electricalboard.org.

REGISTRATION FORM (Please PRINT CLEARLY)

☐ SEPTEMBER - DECEMBER 2022

☐ JANUARY – MAY 2023

****FOR IN-PERSON CLASSES, EACH STUDENT WILL NEED TO SIGN A WAIVER OF LIABILITY BEFORE ATTENDING DUE TO COVID.**

Advanced registrations must be received 2-weeks prior to first night to receive advanced rates!

Many classes require minimum # of students so the earlier you enroll, the more it helps to determine if a class will be held. We must determine if class can be held ONE WEEK prior to start date. (This form can be mailed or scan/email to annie@electricalboard.org.)

A STUDENT SHOULD UNDERSTAND THESE COURSES DO NOT ADDRESS WIRING SKILLS AND PROFICIENCIES, AND THAT THE ELECTRICAL BOARD, ITS OFFICERS AND INSTRUCTORS ARE NOT RESPONSIBLE FOR ANY LIABILITY ARISING FROM ANY USE OR APPLICATION OF THE KNOWLEDGE GAINED FROM THESE COURSES.

TO REGISTER for class or seminar....

PLEASE COMPLETE ALL INFO BELOW AND SEND IN USING BEST OPTION BELOW ...

SCAN/ E-MAIL FORM: annie@electricalboard.org

MAIL FORM: The Electrical Board, 900 S. Highway Dr.-Ste. 203, Fenton, MO 63026

CLASS NAME

REGISTRANT'S NAME

COST

_____ \$ _____

_____ \$ _____

(Please make copies of this form ...if more than 2 enrollments.)

Students attending over 80% of classes and completing recommended course work will receive a CERTIFICATE OF COMPLETION at the end of class. For most, this is all that is required after the class. Students needing Jefferson County hours (JC's), please see Page 3 – Section 7. However, for reimbursement, some companies require other information. If so, please check:

Do you need attendance record and grade for reimbursement? ☐ Yes ☐ No

Authorized by (Please print) _____

Company _____

Address _____

City/State/Zip _____

Work Phone: _____ or Cell#: _____

E-mail _____

Any questions regarding registration or to pay by credit card, please call 636/305-6434.

WE ACCEPT



CHANGES FOR SEVERAL ANNUAL PROGRAMS....

CO-SPONSORED WITH AMEREN

Due to Covid, we will continue with virtual classes/seminars for this upcoming year. We will not hold several of these programs at various facilities as we have in the past.

However, if you are interested in learning about potential online programs below for this year, please email annie@electricalboard.org and we will put you on the list to forward information when it becomes available.

Committee is working on details for seminars.

CLEAN ENERGY SUMMIT - VIRTUAL SEMINAR- 4 pdh

(Formerly our Renewable Energy Summit)

August 9, 2022 – 8:00 a.m. -12:00 noon

ELECTRIC POWER TOPICS

(Potential virtual program in October)

ILLINOIS ELECTRIC POWER TOPICS –

VIRTUAL SEMINAR- 4 pdh

September 27 and 28, 2022 – 7:30 – 9:30 a.m. each day

ENERGY EFFICIENCY WORKSHOP

(Potential virtual program in January)

EMERGING ILLINOIS ENERGY TOPICS

(Potential virtual program in the spring)