



The
**Electrical
Board** of Missouri
and Illinois

EDUCATION COURSES

2020-21 SCHEDULE

SOME CHANGES: Due to Covid-19, a few of these classes/seminars will use a virtual platform (using Microsoft Teams). For these only, students will need computer with video capabilities. If it is being held online, it will be shown by that class/seminar. 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 of a class or seminar.

Providing Educational Value to the Industry for 43 years!

We hope that by making our class schedule accessible via email, you will forward easily to your co-workers, customers and industry associates who may be looking for these seminars/classes which offer pdh's (engineers), JC's and City (contractors) and general knowledge electrical classes for the industry, which are so important to the development of our careers.

PDH listed by a class - accepted hours for engineering community

JC's listed - for Jefferson County contractor license. They will accept 8 hours of code related classes only; no carryover of hours to next cycle. Current license renewal: January 1, 2019- December 31, 2021.

City listed - accepted hours for City of St. Louis license renewal. 8 hours of code related classes/seminars at time of YOUR license renewal EACH year effective Feb. 2019. Expo 2020 certificates are ONLY accepted at time of renewal. Cannot be used in future years if using it in one cycle. No carry over of hours to following year.

(If you would like a copy of our printed educational brochure, please email your name and address to annie@electricalboard.org or call 636/305-6434, though this booklet has updates not found in printed copy.)

****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 only.*

READING ELECTRICAL CONSTRUCTION DRAWINGS (SPRING only)	PAGE 13
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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
Electrical Safety Symposium	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 **43rd year** of providing educational courses on various electrical topics to the industry.*

Due to Covid-19, some of these classes/seminars may be turned into virtual sessions. Several classes are shown as ONLINE for this year. If other changes need to be made, we will inform students as they develop. 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 of a class or seminar.

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.

*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 by 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) Contact Hours requirements since 2019:** Students must have a **minimum of 8 code-related pre-approved real class time hours – per 3 year cycle... (Current licensing renewal cycle is January 1, 2019- December 2021).** They will **NO LONGER allow any contact hours 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** – Since Feb. 2019, license holders are required to show proof of this requirement when your license renewal comes due EACH YEAR.
- 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, provided they attend 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 they attend the classes, but do not pass the course, they will receive a certificate of attendance. If they are 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 Fall)*

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

TIME AND DATES:

Sept. Class*

Tuesday

6:00-8:30 p.m.

8 Sessions

Begins Sep. 15, 2020

and ends Nov. 3, 2020

Held in Fall only.

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

(Offered only in the Spring)*

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

TIME AND DATES:

Held in Spring only.

Feb. Class*

Tuesday

6:00-8:30 p.m.

10 sessions

Begins February 23, 2021

Ends on April 27, 2021

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 SPRING*)

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

Held in Spring only.

LOCATION:

Frost Supply
2429 Schuetz Road
Maryland Heights, MO 63043

Feb. Class*

Tuesday- 8 Sessions
6:00-8:00 p.m.

Begins Feb. 9, 2021
and ends March 30, 2021

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

VARIABLE FREQUENCY DRIVES

PDH: 16

INFORMATION: This course is designed to provide a practical knowledge of Variable Frequency Drives and of the Drive Applications. The intent of this course is to familiarize students with the features of different types of drives, active demo programming is included throughout the course.

1. Types of Variable Speed Drives
2. What is an Variable Frequency Drive
3. VFD functional drawings & macros
4. Power Switching Devices
5. Protective Devices & Circuits
6. Application Considerations, Interface Capabilities, Set-up Adjustments
7. Applications associated with HVAC and pumping industries
8. Programming, Troubleshooting and Preventive Maintenance

Feb. Class

Held in Spring only.

Tuesday – 8 Sessions

6:00-8:00 p.m.

Begins February 23, 2021

And ends April 13, 2021

LOCATION:

Control Technicians, Inc.
102 Trade Center Dr.,
St. Peters, MO 63376

INSTRUCTOR:

PAUL TUCKER
Control Technicians, Inc.

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

HARSH and HAZARDOUS AREA LOCATIONS

PDH: 2 / JC & City: 2- code

(2 HOUR Seminar)

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.

1. Importance of Properly Installed Explosion Proof Equipment
2. Components of Combustion
3. NEC Classifications of Hazardous areas
4. Equipment for Hazardous Areas
5. Seals, Code Changes for Articles 500-516

Oct. Seminar

Thursday, October 15, 2020

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

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

GROUNDING (ONLINE CLASS)

(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

Thursday

6:00-8:00 p.m.

5 Sessions

Begins Sept. 17, 2020

and ends Oct. 15, 2020

Feb. Class

Thursday

6:00 -8:00 p.m.

5 sessions

Begins Feb. 4, 2021

And ends on March 4, 2021

ONLINE 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

ELECTRICAL POWER SYSTEMS

*MINIMUM OF 8 STUDENTS NEEDED

PDH: 25 / JC & City: 8-code

(OFFERED ONLY IN THE SPRING*)

INFORMATION: This course is directed to maintenance personnel, electrical designers, electrical contractors, electrical distributors, but not geared to engineers. More for those interested in acquiring a BASIC knowledge regarding the design of electrical power systems. Focus is on commercial/industry low voltage systems, not residential. Some math background is involved for this class. Book will be used for reference only.

1. Introduction & Fundamentals
2. System Configuration & Sizing
3. System & Equipment Grounding
4. Conductors & Transformers
5. AC Motors, Starters & Drives
6. Voltage Drop & Power Factor Correction
7. Short Circuits, Breakers & Fuses
8. Power System Protection
9. Overcurrent Coordination
10. Power Quality Considerations

HELD IN SPRING ONLY

LOCATION:
To Be Determined

FEB. CLASS*
THURSDAY – 10 sessions
6:00 – 8:30 p.m.
Begins Feb. 4, 2021 and
Ends on April 8, 2021

INSTRUCTOR:
RANDY SCHLAKE
Ameren

	<u>Advanced</u>	<u>Late</u>
Employees of non-member firms	\$ 360	\$ 410
Employees of Electrical Board member firms	\$ 300	\$ 350

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.

REGISTRATION FORM ON PAGE 16

UNDERSTANDING THE NATIONAL ELECTRICAL CODE

(Based on 2020 N.E.C.) **ONLINE CLASS ONLY**

(Will be using Microsoft Teams and you will need computer with video capabilities.)

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 and will be mailed out to students in advance.

Must have a 2020 Code Book. **If you need a 2020 Code Book, add \$114 to the class fees below. Tabs for code books (optional) are \$19.**

TIME AND DATES:

Sept. Class

Monday - 20 Sessions

6:00-9:00 p.m.

Begins Sep. 14, 2020

and ends Feb. 8, 2021

(Class will not be held on

Dec. 21st and 28th)

**Sept. 2020 class FOR ONLINE ONLY
MAY have a few openings. Please
call for this online class to see if any
spots are still available.**

**ONLINE CLASS ONLY FOR
THIS YEAR DUE TO SOCIAL
DISTANCING SAFETY.**

INSTRUCTOR:

Rick Heyman
City of St. Louis

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

	<u>Advanced</u>	<u>Late</u>
Employees of non-member firms	\$ 530	\$ 580
Employees of Electrical Board member firms	\$ 470	\$ 520

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

*** (A 2020 Code book is also required. If you need one, please add \$114 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 \$114 to the class fees below.

Held in Spring only.

TIME AND DATES:

Feb. Class*

LOCATION:

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

Wednesday
6:00-9:00 p.m.
12 Sessions
Begins Feb. 24, 2021
And ends May 12, 2021

INSTRUCTOR:

MICHAEL SMITH – Heideman & Associates

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 and registration fee of \$100 which is non-refundable

*** (A 2020 Code book is also required. If you need one, please add \$114 to the above class fees.)

PROTECTION OF ELECTRICAL SYSTEMS

(4 week online seminar-7:30 – 9:30 a.m.) 2020 code book may be used for reference.
Will be using Microsoft Teams and you will need computer with video capabilities.)

PDH: 8 / JC & City: 8-code

Conductors: The installation of cables in wood and metal framing, shallow grooves, 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:

4 sessions

September 29, October 1, 6 and 8, 2020

7:30 a.m. – 9:30 a.m.

TUESDAY AND THURSDAY

ONLINE SEMINAR

INSTRUCTOR:

Michael Smith- Heideman &
Associates

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

LIGHTING CONTROLS FOR NONRESIDENTIAL BUILDINGS

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

PDH: 4

(Half Day Seminar)

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

Tuesday, November 10, 2020

8:00 am - 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>
COST: Employees of non-member firms	\$ 210	\$ 260
Employees of Electrical Board/IES member firms	\$ 150	\$ 200

TRANSFORMERS

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

Sept. Seminar

Wednesday

September 16, 2020

8:00 am -12:00 noon

LOCATION: EBMI Office

900 S. Highway Dr.-Ste. 203

Fenton, MO 63026

April Seminar

Thursday

April 8, 2021

8:00 am -12:00 noon

INSTRUCTOR:

Greg Haub

Eaton

	<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. 14th, 24th &

March 1st, 2021

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.

ELECTRICAL SHOCK & ARC FLASH PROTECTION

PDH: 4 (Half Day Seminar)

INFORMATION: In this half day seminar, Ed will discuss Shock Hazard and Arc Flash Analysis (NFPA 70E-2018 and IEEE 1584) and how Arc Flash is a serious workplace hazard.

What is arc flash?	Mitigation techniques – De-energize;
Discuss arc flash terminology.	Energized work permit
Overview of various codes and standards.	How to reduce arc energy; Warning signage; PPE for flash protection.
Discuss how an arc flash affects daily work activities.	Shock Hazard Analysis: Safe Work Practices; Exposure voltage; Boundaries; PPE for shock protection; Energized work permit
Compare arc flash evaluation methods. NFPA Tables & IEEE Calculations.	

Held in Spring only.

Feb. Seminar
Thursday, February 11, 2021
8:00 – 12:00 noon
LOCATION: EBMI Office

Instructor: ED SCHERRY, Scherry Engineering

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

Due to Covid-19, some of these classes/seminars may be turned into virtual sessions and several were switched to spring semester. 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 of a class or seminar.

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 2020

JANUARY – MAY 2021

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

<u>CLASS NAME</u>	<u>REGISTRANT'S NAME</u>	<u>COST</u>
_____	_____	\$ _____
_____	_____	\$ _____
_____	_____	\$ _____

(Please make copies of this form ...if more than 3 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 and CDC guidelines changing in-person programs this 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

(Formerly our Renewable Energy Summit)
(CANCELLED FOR THIS YEAR)

ELECTRICAL SAFETY SYMPOSIUM

(Potential online program in October)

ILLINOIS ELECTRIC POWER ISSUES

THESE FALL PROGRAMS NORMALLY HELD IN SPRINGFIELD AND MT. VERNON HAVE BEEN CANCELLED

ENERGY EFFICIENCY WORKSHOP

(Potential online program in January)

EMERGING ILLINOIS ENERGY TOPICS

*DATES FOR THE SPRING PROGRAMS
HAVE NOT BEEN DETERMINED*