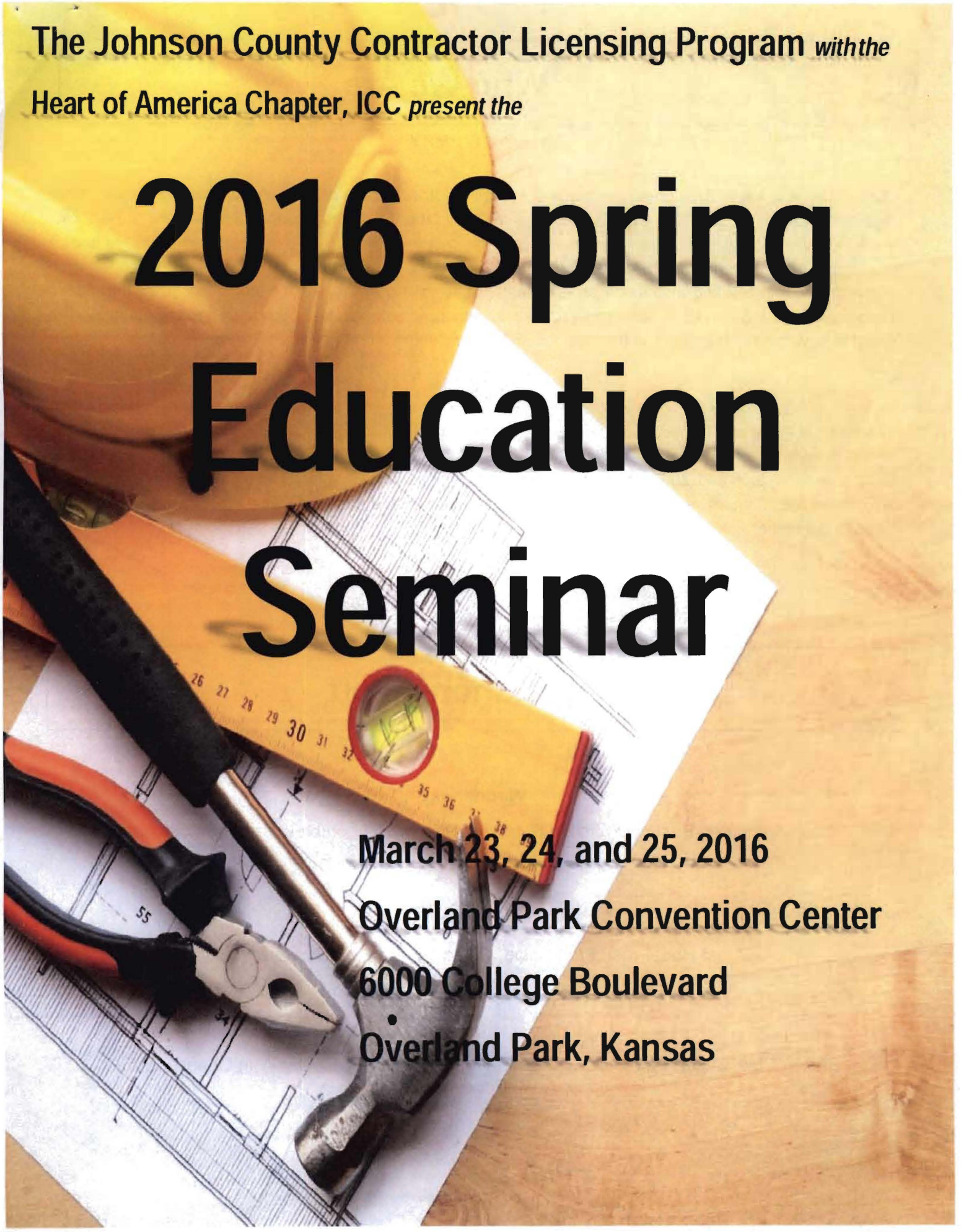
The Johnson County Contractor Licensing Program *with the*

Heart of America Chapter, ICC *present the*

2016 Spring Education Seminar



March 23, 24, and 25, 2016

Overland Park Convention Center

6000 College Boulevard

Overland Park, Kansas

Who We Are

JOHNSON COUNTY KANSAS
Contractor Licensing

Our mission is to foster the highest standards of integrity, skill, and trade practice in the construction disciplines regulated by the program. In so doing, we work to safeguard the life, health, property, and welfare of the public. We accomplish our mission by administering a uniform licensing program for participating jurisdictions and by producing quality construction-related continuing education seminars for licensed contractors, trade practitioners, and building inspection professionals. 2016 is a growth year for the program, having added Tonganoxie and Mission Hills. Now, representing 17 jurisdictions inside and outside Johnson County, we are proud to have been designated as the International Code Council's first Preferred Provider Program.

The Heart of America Chapter, ICC, has been the association representing building inspection professionals across Kansas for more than fifty years. The Heart of America Chapter, ICC, was awarded ICC Chapter of Merit awards in 2006 and 2007, then received the prestigious ICC Chapter of the Year Award in 2008. As the official ICC Chapter representing Kansas, we are proud to host their 2015 Annual Business Meeting and Education Seminar.

Lunch Menu

Wednesday

Caprese Platter, Pasta with Italian Sausage, Sautéed Vegetables, Bread Sticks, Apple Crisp

Thursday

Whole Roast Hog, Fresh Fruit Salad, Coleslaw, Mac and Cheese, House Chips, Cinnamon Rolls

Friday

Brisket Chili, Baked Potato Bar, Green Salad, Broccoli/Cauliflower With Cheese, Bread Pudding

Welcome to the 2016 Spring Seminar

Welcome to the Contractor Licensing Program 2016 Spring Education Seminar. The 2016 Spring Education Seminar will be held at the Overland Park Convention Center, 6000 College Boulevard, Overland Park, Kansas, 66210.

Pre-registration for Classes: Be sure to pre-register for classes. Because your class enrollment information is pre-printed, we will not be able to accommodate walk-in attendees. Popular classes fill early and registration closes at 5:00 pm, March 22, 2016.

Relicensing: We won't be able to relicense for 2016 at the seminar. You can relicense by mail, in person at the office, or online by using the Contractor Management System at http://cls.jocogov.org/CLSCOURSEREG/default.aspx.

Class Check In and Check Out: You must scan-in when you enter and scan-out at the end of your classes. Have the bar code on your license card or class schedule scanned at the entry to, and exit from, your class. Please be sure to have your bar code scanned when you enter and when you exit the class, or we will not be able to give you credit for your attendance.

Lunch: We will be serving lunch to attendees who are enrolled in both morning and afternoon classes. You will use your bar code for entry into the lunch line, so be sure to keep your bar code document. If you have special dietary needs, please make your request before March 18, 2016 by e-mailing Russell.Thornburg@jocogov.org or by calling (913) 715-2233.

Certificates: We do not distribute certificates at the conclusion of classes. At the Contractor Licensing web site you can use the Contractor Management System feature to retrieve and print a copy of your official transcript, or any of your certificates, from your home or office computer. The Contractor Management System can be found on-line at:

http://cls.jocogov.org/CLSCOURSEREG/default.aspx

Education Requirements

Each code session description will note all Johnson County contractor classes eligible to receive code credit for the session. The notations may not indicate the class will be of interest to all contractors eligible for code credit. Non-Code classes are in noted in blue.

Johnson County Class A, B, and C Licensed Contractors: All Class A, B, and C Johnson County Contractor License Program Qualifying Individuals must have a minimum of 8 hours of continuing education per year, per license, to be renewed. At least 4 of those 8 hours must be code or specialty code education. You may only apply 4 hours of non-code category education per year towards renewal.

Johnson County Class D Electrical, Plumbing, Mechanical, Fire Protection, Roofing, Swimming Pool, and Wood Framing Contractors: All Qualifying Individuals for Johnson County Contractor License Program Class D specialty licenses must have a minimum of 8 hours of continuing education, with at least 4 hours code education in your field of specialty. Class DE, DP, DM, DF, DR, DS, and DW contractors may apply no more than 4 hours of non-code category education per year toward renewal. Questions about education? Call (913) 715-2233.

City of Lawrence, Miami County, KCMO, and Unified Government Contractors

We are not able to answer questions about the requirements of jurisdictions outside of the Johnson County Contractor License Program. For questions about what is required by other programs, please contact the program staff directly at the numbers below:

City of Lawrence, Kansas: For license education requirement information, call (785) 832-7700.

Miami County, Kansas: For license education requirement information, call (913) 294-4145.

Kansas City, Missouri: For license education requirement information, call (816) 513-1500, select option 6.

Unified Government: For license education requirement information, call (913) 573-8620.

Wednesday March 23, 2016

23-1A Introduction to Solar Water Heaters and the International Solar Energy Provisions
8:00 AM to 12:00 PM 4 Hours A, B, C, DE, DM, DP Code Credits

This Solar course is designed to provide an introduction to solar water heaters and the International Solar Energy Provisions (ISEP). These systems collect solar energy to heat water. This course will focus on residential and small commercial domestic water heating, leaving the discussion of industrial, agricultural, and large commercial applications to a class in the future. It will address the basic system components, system types, and key inspection issues and relevant provisions in the I-Codes and Solar Rating and Certification Corporation (SRCC) Solar Thermal standards.

Upon completion of this course, participants will be able to:

- List the basic function and components of a solar water heater.
- Describe the main types of solar thermal systems.
- List the location of solar thermal provisions in the I-Codes and common inspection issues with these systems.
- Describe the SRCC standards and performance rating systems.

Instructor: Jerry Henderson

23-1B Introduction to Photovoltaic Systems in the International Solar Energy Provisions
1:00 PM to 5:00 PM 4 Hours A, B, C, DE, DM, DP Code Credits

This course is designed to provide an introduction to solar photovoltaic systems and the International Solar Energy Provisions (ISEP). These systems collect solar energy to generate electricity. This course will focus on residential and small commercial systems. It will address the basic system components, system types, and key inspection issues and relevant provisions in the I-Codes.

Upon completion of this course, participants will be able to:

- List the basic function and components of solar photovoltaic systems.
- Describe the main types of photovoltaic systems.
- List the location of solar photovoltaic systems in the I-Codes and common inspection issues with these systems.
- List the components of an expedited permitting process.

Instructor: Jerry Henderson

23-2A Roofing – (*Up on the Roof: Asphalt Shingles) 2012 IRC & Manufacturer*
8:00 AM to 12:00 PM 4 Hours A, B, C, DR, DW Code Credits

This course will focus on the anatomy of asphalt shingles, proper installation and troubleshooting. We'll take a look at some special challenges in the design and installation of asphalt-shingled roofing systems and we'll try to learn from the mistakes of others. Attic ventilation will also be discussed and we'll learn how to calculate the proper amount of intake and exhaust vents needed for a roofing system. Photovoltaic solar panel systems will also be addressed during this presentation.

Instructor: Steve Hern

23-2B Residential Roofing and Siding Installations: Code compliant installations avoid costly mistakes
1:00 PM to 5:00 PM 4 Hours A, B, C, DR, DW Code Credits

This seminar will cover installation/use provisions for various roofing and siding materials. Emphasis will be placed on the International Residential Code 2012 and manufacturer's installation requirements. To supplement code language, photos of actual site situations will be used to generate interactive discussions of correct application of the building code provisions.

Upon completion, participants will be better able to:

- Identify and apply key code sections provisions.
- Properly apply manufacturer's installation requirements.
- Determine if a given dwelling roofing or siding project complies with the IRC.
- Identify where minimum code requirements have not been met.

Instructor: Roger Axel

23-3A Quality HVAC Installation Practices Training
8:00 AM to 12:00 PM 4 Hours A, B, C, DM, DP Code Credits

- Course is designed to teach installers and technicians the requirements and expectations of the installation process for residential HVAC equipment.
- Course covers the installation of air conditioners, heat pumps, indoor coils, TXV use and matching, indoor air handlers and gas furnaces.
- Course is designed to make the installer aware of all necessary steps to quality installations especially fluing, water removal, refrigerant charging, copper welding, compressor protection, and evacuation.

Instructor: Paul Flora

23-3B Combustion Air and Gas Fire Appliances in the 2012 IMC
1:00 PM to 5:00 PM 4 Hours A, B, C, DM Code Credits

This class will cover the sizing, material, and location of combustion air with some actual working problems for you to solve. This class will address supplying adequate combustion air to fuel-burning appliances. Insufficient oxygen for combustion will result in the formation of carbon monoxide. Energy conservation regulation now requires that homes be more tightly sealed, weather-stripped, and insulated to avoid infiltration of outside air to the interior of the home.

Instructor: Sam Dardano

23-4A Troubleshooting and Prevention of Deterioration in Concrete Structures
8:00 AM to 12:00 PM 4 Hours A, B, C Code Credits

The class is designed to provide a primer on the causes of distress and deterioration in concrete elements and buildings, how to address and avoid those problems through proper design and construction, and how to repair them if they occur. The class will focus on recognizing and understanding common design and construction anomalies in concrete structures, corrosion damage, freeze thaw degradation, and aggregate reactivity, with particular focus on problems unique to the Kansas City area. Numerous real-world problems and case studies will be incorporated throughout the presentation. A discussion of the applicability of existing building code requirements to the repair and strengthening of existing concrete structures will be included. This class will be of particular value to Class A, B, and C contractors, concrete subcontractors and restoration contractors, engineers, architects, and inspectors.

Instructor: Thomas L. Rewerts, SE

23-4B Troubleshooting and Prevention of Water Infiltration in Exterior Masonry Walls
1:00 PM to 5:00 PM 4 Hours A, B, C Code Credits

This class will address the hot topic of water infiltration through brick, concrete masonry, and stone (natural and artificial) walls, and how to minimize or prevent it with proper design and construction techniques. This will be of particular interest to Class A, B, and C contractors, masonry subcontractors, engineers, architects, and building inspectors. Starting with a primer on why masonry walls leak, the discussion will include the proper selection of wall type to minimizing water infiltration and include detailed discussions of veneer walls, cavity walls, rain screen walls, and barrier wall construction. We will examine proper material selection, proper design, and detailing practices for masonry walls. Attendees will learn the basics necessary to recognize, understand, and mitigate the effect of distress and deterioration in masonry construction.

Instructor: Thomas L. Rewerts, SE

23-5A Discover the Mechanical Energy Requirements of the 2012 IECC - Commercial
8:00 AM to 5:00 PM 8 Hours A, B, C, DM Code Credits

By covering simple systems, complex systems, control requirements, commissioning and the "Mandatory Options in C406" for more efficient equipment, this class will address all of the mechanical requirements found in the commercial chapter of the IECC.

Instructor: Gil Rossmiller

23-6A Reading and Understanding Construction Drawings - Basic
8:00 AM to 12:00 PM 4 Hours Non-Code Credit
The Basic Couse will show a layered approach to understanding construction drawings, typical symbols, abbreviations and methodology. Both a residential and commercial set of plans will be utilized focusing on architectural drawings. Attendees should have a basic understanding of how to readily understand building components from plans. *This is a non-code credit class. Johnson County contractors may not apply more than 4 hours of non-code credit to license renewal.*
Instructor: Terry Tevis

23-6B Reading and Understanding Building Construction Drawings and Specifications - Advanced
1:00 PM to 5:00 PM 4 Hours Non-Code Credit
The Advanced Course will review commercial contract forms and specifications. Building Code requirements for fire ratings, exiting, and ADA will be discussed. Engineering drawings including Civil, Structural, Mechanical, Electrical, and Plumbing drawings will be reviewed. Attendees will be shown how to locate and define detailed information for any building component from a standard set of commercial construction documents. *This is a non-code credit class. Johnson County contractors may not apply more than 4 hours of non-code credit to license renewal.*
Instructor: Terry Tevis

23-7A Healthcare Facility Electrical Provisions of the 2011 NEC
08:00 AM to 5:00 PM 8 Hours A, B, C, DE Code Credits
This course provides in-depth overview and instruction into the 2011 NEC requirements of Article 517, and related NEC Articles as they pertain to the electrical provisions for health care facilities. Attendees will gain exposure, valuable insight, and become familiar with the NEC's seven parts of Article 517 which include provisions for health care facility electrical general requirements, definitions, wiring and protection, essential electrical systems, inhalation anesthetizing locations (basic overview), X-Ray installations, communications, signaling and fire alarm systems, and isolated power systems. While utilizing PowerPoint presentation instruction material developed by the International Association of Electrical inspectors, attendees will have exposure to authoritative information on health care facility electrical installations and requirements. Health care facility electrical installations will generally require compliance with electrical provisions contained within NFPA's document 99-2005, the 'Health Care Facilities Code' recognized as establishing criteria (among others) to minimize hazards associated with electricity within health care facilities. While NFPA 99-2005 introduction and compliance will be addressed as appropriate during the day's training, instruction is centered on the in-depth overview of the NEC's Article 517 and other applicable NEC requirements. This training is well suited for electrical contractors, craftsmen, design professionals, enforcement, plan reviewers, and anyone in need of expanding their understanding and comprehension of healthcare facility electrical requirements.
Instructor: Mike Weaver

Thursday March 24, 2016

24-1A 2015 IBC Firestopping; Joint Systems, Penetrations, and Dampers
8:00 AM to 5:00 PM 8 Hours A, B, C, DF, DM, DW Code Credits
This course discusses the details and requirements for dampers, penetration firestops, and joint systems. Including a look at the concepts, testing, and installation and where each of the systems is required by the code. The IBC uses fire-resistive rated assemblies to protect the building's structural system, to separate adjacent spaces within the building that are not compatible, or to separate and protect adjacent buildings. In addition, the code uses smoke-resistant assemblies to limit the spread of smoke within a building and the dangers it would create for the occupants. Any opening or penetration within the rated assemblies has the potential to reduce the assembly's performance. This course will focus on the protection provided by dampers, penetration firestops, and joint systems to ensure the building and occupants are adequately protected.
Instructors: Roger Axel and Nick Sitzman

24-2A Wood Frame Construction
8:00 AM to 5:00 PM 8 Hours A, B, C, DE, DF, DM, DP. DR, DW Code Credits
Let's talk about wood! A course on the provisions contained in the 2012 IRC and IBC. On completion of this course, you will be knowledgeable about: 2012 IRC & IBC Chapter 23 format; what is conventional construction?
Learning Outcomes:

- Growth characteristics of wood, grade marks, and protection against termites and decay.
- Floor, roof/ceiling, and wall framing.
- Wall bracing and introduction to Wood Frame Construction Manual.
- Fireblocking and draftstopping.
- Who: Comprehensive program for general and sub-contractors, professional designers and building inspectors on wood frame construction basics.

Instructors: Dave Tyree and Matthew Hunter

24-3A Commercial Kitchen Exhaust System and Grease Ducts in the 2012 IMC
8:00 PM to 5:00 PM 8 Hours A, B, C, DM, DP Code Credits
This class is an in depth review of Type I and II hood system and grease ducts with an emphasis on correct hood installation and understanding what type of hood is required over what type of appliances. The proper installation and inspection of grease duct, make-up air, and exhaust systems under the 2012 IMC.
Instructor: Sam Dardano

24-4A Heat Pump Application and Service Training
8:00 AM to 12:00 PM 4 Hours A, B, C, DM, DP Code Credits
Complete installation and service information and requirements for heat pumps with an emphasis on the 2-stage heat pumps. Including thorough coverage on how to program and read the heat pump defrost control circuit board and the fan speed control cycle. Course also covers balance point and low temperature cutoff applications. This course will teach the synchronization of the outdoor unit control board with the ECM control board on the indoor unit. Thorough understanding of the sequence of operation is also taught.
Instructor: Paul Flora

24-4B "PEX" Fire Protection Sprinkler Systems
1:00 PM to 5:00 PM 4 Hours A, B, C, DF, DP Code Credits
Although residential sprinkler systems are not required in Kansas jurisdictions in new home construction, they are required in some critical situations. Jurisdictions which have adopted the 2012 International Residential Code, Section R101.2 Scope including exceptions, Section R501.3 fire protection of floors, or which have R-3 Care Facilities are increasingly seeing the use of fire protection systems in new and existing dwellings. Cross-linked Polyethylene (PEX) R2904 compliant systems are one of the most effective methods of providing fire protection, but how should they be installed and inspected? This class will provide an overview of the product use and installation requirements based in the 2012 International Residential Code and manufacturer's installation standards.
Instructor: Bobby Duran

24-5A Who Needs Manual J, S and D Anyway?
8:00 AM to 5:00 PM 8 Hours A, B, C, DM Code Credits
This one day class will focus on the 2012 IRC requirements for calculating building heating and cooling loads in accordance with ACCA Manual J, equipment selection in accordance with ACCA Manual S, and duct sizing in accordance with ACCA Manual D. Proper HVAC design is a critical piece of a home's design that is often overlooked. This class will be from the field inspector's and plans examiner's perspectives. What does a properly designed HVAC system look like on paper and in the field? The class will work through a typical house design to include, total heat gain, total heat loss, latent loads, sensible loads, equipment selection and duct design.
Instructor: Gil Rossmiller

24-6A Master the Framing Calculator: Intro and Specialty Topics
8:00 AM to 12:00 PM 4 Hours A, B, C, DW Code Credits
This course will provide many different aspects of residential construction. We will cover in detail floor framing (many do's and don'ts), wall construction, roof construction, both equal pitch and un-equal pitch roofs, and stairways. Many codes will be covered and how they affect the Building Construction Industry. The Construction Master Calculator will be used extensively and attendees will be taught how to use it efficiently.
Instructor: Loren Stara

24-6B Carbon Monoxide Measurement; CO safety, at work, at home, at play, and away
1:00 PM to 5:00 PM 4 Hours A, B, C, DM, DP Code Credits
This class provides the attendee with carbon monoxide measurement techniques and a testing instrument to immediately begin the low level sampling of buildings and other places where carbon monoxide may be found. Also stressed is how CO becomes a hazard and harms us, the health effects of CO, alarms and detectors, tragic endings, proactive prevention strategies, and the communities we live and work in. Intended for Class DM, DP, and DS contractors seeking code credit, this class should also be of interest to home and building inspectors. (Attendees receive low level CO detector)
Instructor: Bob Dwyer

24-7A 2015 NFPA 70E – Workplace Electrical Safety Requirements
8:00 AM to 5:00 PM 8 Hours A, B, C, DE Code Credits
This introduction and in-depth overview provides insight into the workplace electrical safety requirements of NFPA® document 70E-2015. The training addresses document layout, content, history, terminology, and its integration for OSHA compliance. The document, as a standard, mandates minimum workplace electrical safety requirements for both qualified and unqualified workers employed in general industry as well as the construction industry. This course will address the hazards associated with electric arc flash, mitigating those hazards, personal protective equipment selection, and determining protection boundaries. The training addresses what is necessary for compliance, and what steps must be achieved to obtain compliance. This course is especially suited for master and journeyman electricians, design professionals, company compliance officers, enforcement personnel, and others with a need-to-know regarding mandated workplace electrical safety to ensure worker safety and OSHA compliance.
Instructors: Mike Panethiere and Mike Weaver (M&M)

Friday March 25, 2016

25-1A 2012 IBC Care Facilities Provisions
8:00 AM to 5:00 PM 8 Hours A, B, C, DF, DM, DW Code Credits
This seminar will address provisions in the 2012 International Building Code® and referenced standards relating to the design and construction of care facilities, such as medical care, custodial care, ambulatory care, and day care facilities. It will focus on the specific decision making needed to apply the provisions appropriately by highlighting the differences between the various types of care activities. The seminar will include a discussion on how the length of stay, number of care recipients, degree of care, and capability/incapability of self-preservation all relate to the occupancy classification and resultant code requirements. Smoke compartments, dwelling and sleeping unit separations, incidental use separations, and other special condition provisions are also addressed. Unique provisions will be highlighted in the areas of accessibility, type of construction, fire protection, means of egress, and interior finishes. During this seminar, participants discuss examples, and participate in activities that pertain to applying sections of the IBC to care facilities.
Instructor: John Gibson

25-2A What the Inspector Looks At
08:00 AM to 12:00 PM 4 Hours A, B, C, DM, DP, DW Code Credits
This seminar identifies the numerous construction elements that the municipal inspector must look at as part of the permit inspection process. Knowing what the building code requires helps minimize delays and expensive corrections. To supplement code language, photos of actual site situations will be used to generate interactive discussions of correct application of the building code provisions.
Objectives
Upon completion, participants will be better able to:
- Identify and apply key code sections provisions.
- Recognize code deficiencies and corrections required prior to inspection.
- Identify the applicability of design, plan review, and inspection requirements.
- Determine if a given one- or two-family dwelling building project complies with the IRC.
- Identify where minimum code requirements have not been met.

Instructor: Roger Axel

25-2B 10 Frequent Inspection Failures
1:00 PM to 5:00 PM 4 Hours A, B, C, DM, DP, DW Code Credits
This seminar will identify many of the common inspection failure items noted during routine site inspections. The intent of this seminar is to help the residential contractor identify corrections needed to minimize project delays and cost overruns. To supplement code language, photos of actual site situations will be used to generate interactive discussions of correct application of the building code provisions.
Objectives
Upon completion, participants will be better able to:
- Identify and apply key code sections and provisions.
- Recognize code deficiencies and corrections required prior to inspection.
- Identify where minimum code requirements have not been met.

Instructor: Roger Axel

25-3A Mechanical and Fuel Gas Provisions in the 2012 IRC
8:00 AM to 5:00 PM 8 Hours A, B, C, DM, DP Code Credits
Everything you want to know about Residential Mechanical and Fuel Gas Codes. This class will walk you through the mechanical do's and don'ts of the International Residential Code and the residential applications of the International Fuel Gas Code. It will cover topics including mechanical appliances and equipment, fuel gas supply, venting, and air ducts. Intended for Class B, C, DM, and DP contractors seeking code credit, this class should also be of interest to home and building inspectors.
Instructor: Sam Dardano

25-4A 2012 IRC Plumbing Provisions including Trenching and Backfilling
8:00 AM to 5:00 PM 8 Hours A, B, C, DP Code Credits
This course is based on the 2012 International Residential Code, Part VII Plumbing, along with Trenching and Backfilling, and is designed for plumbing contractors. Hands-on and visual presentations of fittings and materials found in a typical residential setting, as well as how the individual fittings are used for water piping, drainage, and venting will be included. Pictures and isometric drawings will be shown and discussed detailing multiple plumbing installation scenarios. Attendees will examine drawings of plumbing systems and installations for code violations in a cooperative and collaborative environment with their peers. Each drawing is designed to challenge attendees on parts of the code that are frequently misunderstood or in frequent violation. Increasingly, we are seeing damage to, and failures of, under slab plumbing drains, because they are not properly trenched, bedded, or when necessary, suspended. When a system fails, the cost for repair and mitigation can be extremely high for builders, plumbing contractors, and home or business owners. During this course, we will discuss the requirements of the International Plumbing Code and the International Residential Code for trenching and backfilling in an effort to end problems caused by failure.
Instructor: Bobby Doran

25-5A ADA For Contractors
8:00 AM to 12:00 PM 4 Hours A, B, C, DE, DM, DP, DS, DW Code Credits
This half-day program will study the prominent changes in the 2010 Americans with Disability Act and Architectural Barriers Act Accessibility Guidelines (ADAAG/ABAAG). Featuring many new interpretations since the presentation last spring, this class will focus on the guidelines adopted by the Department of Justice on July 26, 2010. This training will cover scoping and technical requirements for accessibility to buildings and facilities by individuals with disabilities under the Americans with Disabilities Act (ADA) of 1990. This highly interactive and concentrated course is intended to cover the most significant changes in the ADAAG. The training will explore the noteworthy harmonization and differences between the new federal regulations and ANSI A117.1, as well as the applicable provisions of the International Building Code. This training is not being provided by the International Code Council.
Instructor: Rich Sternadori

25-5B Beyond ADA Standards: Civil Rights Regulations That Impact Accessible Design
1:00 PM to 5:00 PM 4 Hours A, B, C, DE, DM, DP Code Credits

The first part of this program provides context regarding the national ADA network. The course then examines the regulatory setting in which the standards and modern building codes are developed, harmonized, and promulgated. Part three of the training studies the lesser known concepts of the ADA which are not found in the 2010 ADA Standards, but which have significant impact on accessible design, contract and project management. More specifically, this program is a concept and case study, examining the ADA requirements for State and Local government, as well as self-evaluation and transition plans that are not normally provided in design training. These requirements have enormous potential for errors and omissions when designing for schools, or other state and local government agencies.
Instructor: Rich Sternadori

25-6A Plumbing and Pipefitting Applications of the Pipe Trades Pro Calculator
8:00 AM to 12:00 PM 4 Hours A, B, C Code Credit
During this class attendees will have an overview of the 2012 IFGC, providing a review of the general regulations, the requirements of gas piping installation, and an overview of the changes from the 2006 and 2009 editions of the code. This class is intended for Class DP plumbing and DM mechanical contractors, but it will be of value to building inspectors seeking to review their IFGC skills. Class A, B, and C contractors will also receive code credit.
Instructor: John Williams

25-6B Verifying HVAC Combustion Equipment Performance, Safety and Efficiency
1:00 PM to 5:00 PM 4 Hours A, B, C, DM, DP, DS Code Credits
This program promotes verification of manufacturer's data place performance criteria, as well as full performance testing procedures and interpretation of the results. This class discusses the controlling of fuel from the source through the burner orifices by means of gas pipe sizing, leak protection, combustion air verification, fuel pressure adjustments as referenced to flue gas oxygen levels, and conducting combustion analysis. This seminar will be useful for all technicians who are responsible for installation, maintenance, or servicing of combustion-type heating equipment. Intended for Class DM, DP and DS contractors seeking code credit, this class should also be of interest to home and building inspectors.
Instructor: Bob Dwyer

25-7A Variable Frequency Drive Technology
8:00 AM to 12:00 PM 4 Hours A, B, C, DE, DM, DP Code Credits
Variable frequency drives (VFDs) are a type of adjustable speed motor control that is applicable to 3-phase motors ranging in size from fractional to thousands of horsepower. Their principal advantages are with motor control versatility and energy savings. This class will focus on applications for motors of up to about 100 HP and is divided into four separate units of approximately one hour each. Unit I will cover VFD basics and present a general overview of the technology, Unit II will focus on pumping applications, Unit III will concentrate on fan and blower applications, and Unit IV will address more advanced topics including harmonics, dynamic braking, single-phase operation, wiring options, and code compliance.
Instructor: Joe Nelson

25-7B Demonstrating How the ElectriCalc Pro Updateable Electrical Code Calculator Improves Job Performance for Electrical Design and Installations

1:00 PM to 5:00 PM 4 Hours A, B, C, DE, DM, DP Code Credits

The capabilities of the ElectriCalc Pro Electrical calculator will be demonstrated to show how it can improve job productivity of the electrical designers, worker, and inspector. This device uses tables in the NEC to size the electrical installation requirements for: Motor HP and FLA, NEMA Starter Sizing, OL and OCP sizing, Wire Sizing(CU/AL) with derating, GEC and EGC Sizing, Power factor, Efficiency, Voltage Drop, KW-HR to BTU Conversion and Conduit Sizing. This calculator can switch between the 1999 to 2014 editions of the National Electrical Code for areas that require different code cycle enforcement. It is updateable as new codes are adopted.

Instructor: Paul Krmpotich

Meet the Instructors

Roger Axel

Building Official, City of New Hope, Minnesota; 35 years combined construction and inspection experience including single and multi-family residential, educational, industrial, business and mercantile occupancies including the Mall of America; State of Minnesota Certified Building Official; Multiple International Code Council Certifications; ICC contract instructor; Instructor for Housing and Building Inspection Institute at UW-Madison College of Engineering; Instructor for MN Licensed Residential Contractor continuing education seminars; Past Chairman, and current Executive Officer of the Association of MN Building Officials.

Sam Dardano

50 year experience in HVAC industry, teaches Mechanical Code and Fuel Gas classes for over twenty years, serves as technical consultant to county and city agencies for Mechanical/Fuel-Gas Codes; Mechanical Plan Reviewer for ICC. Twenty years as the chief Mechanical Inspector with the city of Boulder, Colorado.

Bobby Doran

Mr. Doran has been a master plumber for nearly 30 years and began his teaching career with Texas A&M University Engineering Extension Service. He has been involved in the Continuing Education program since the initial 1993-1994 program. He has taught with TEEX in the beginning and became and Individual Provider in 2000. In addition, he instructs at the Builders Professional Institute on subjects related to code, along with other conventions or sessions as requested. Bobby currently writes chapters for the CPE Books. Bobby is requested to offer Plumbing Continuing Education to customize his courses given to specialized groups throughout the state due to his ability to deliver a concise and highly informative presentation in a straightforward, business-like manner.

Bob Dwyer

Bob is a nationally recognized expert in the field of Carbon Monoxide safety. As a CSME certified Carbon Monoxide specialty instructor, he brings more than two decades experience as an instructor in the fields of combustion analysis, carbon monoxide safety, and the influence building pressure on the safe operation of combustion equipment to the Johnson County Seminar setting. Bob served as Director of the Bacharach Institute of Technical Training for 13 years, has worked for the Department of Energy, and has provided training to more than 100,000 technicians. Co-author of "Carbon Monoxide: A Clear and Present Danger" Bob is a graduate of Iowa State University.

Paul Flora

Brings over 41 years of experience in HVAC industry in service, installation, business ownership and Distributors Service. At this time he has been the Service Manager for cfm for 20 years and has taken over 80 York and other HVAC manufacturers training courses. Mr. Flora has written and taught over 166 cfm Distributors service training courses to over thousands of students along instruction continuing education Johnson County, Kansas. He also has received several awards: York Service Manager of the Year 6 times; and York Distinguished Trainer Award.

John Gibson, Jr., M.C.P., C.B.O., C.P.C.A., C.F.M.

John is a Technical Advisor and Instructor for the International Code Council (ICC). A certified Master Code Professional and Certified Fire Marshal; he has forty (40) other certifications, including thirty- three (33) from the ICC. Having earned a B.S. in Engineering from the University of Delaware, he has also studied Architecture at Georgia Tech and completed courses in Emergency Management and Fire Prevention at the National Emergency Training Center. Formerly the Director of the Department of Permits and Inspections for Frederick County Maryland, he is an ICC Honorary Member, has served on the ICC- Evaluations Services (ICC- ES) Board of Directors, the ICC Code Correlating Committee, the Board of Directors for BOCA International, Inc., Maryland's Governor's Smart Code Strategy Group, Chaired the ICC Board for International Professional

Standards and is an Honorary Member and Past President of the Maryland Building Officials Association. He currently teaches ICC administrative, building, residential, existing building, property maintenance, zoning, green building, wildland/urban interface, energy courses, and is a contract instructor at the Dept. of Homeland Security, United States Fire Administration, National Fire Academy, and Emmitsburg, Maryland. He received the ICC Educator of the Year award in 2014.

Jerry Henderson
Jerry Henderson has written advisories, authored code change proposals, worked developing installation standards and permitting processes, served as a technical advisor and industry representative on codes and standards committees, and developed and delivered trainings since 1992. His 25+ years of experience as an installation contactor provides a platform from which to discuss code, design, and installation requirements at several different levels, and adds a great depth of experience in real world applications. Jerry's solar experience has also spanned more than 25 years, starting with the rehab of residential and commercial solar water heating systems installed in the 1970s and '80s, up to today, with the design of new systems, the integration of solar thermal and PV systems into existing buildings and processes, and installations on new structures. A professional solar inspector since 2007, he has reviewed system designs and completed on-site inspections of thousands of solar PV and thermal systems ranging from small residential to mega-watt and mega-BTU in size.

Steve Hern
Steve Hern is the Field Technical Manager for CertainTeed's Roofing Products Group. For the past nineteen years, he has investigated roofing systems relative to material, installation or other factors that can affect the effective life of roofs. He is also associated with CertainTeed Solar, involved in training, installation and troubleshooting of rooftop PV systems. Mr. Hern has a strong background in residential construction and renovation and has served as a facilities manager in commercial/industrial real estate.

Matthew Hunter, B.C.O., S.E.O.
Matthew M. Hunter, BCO, SEO is the Northeast Regional Manager for the American Wood Council (AWC), which produces internationally recognized design standards for wood construction. His work experience includes all phases of commercial and residential land development, building inspection, plan review, municipal engineering, and consulting. Prior to joining the AWC, Matt was a Building Code Official, Sewage Enforcement Officer, and civil engineering designer, draftsman, and field inspector with Pennoni Associates, Inc. Consulting Engineers for fifteen (15) years. Matt has served various townships and boroughs throughout eastern Pennsylvania and has also worked in the trades as a residential framing carpenter and custom deck builder.

Paul Krmpotich
Paul has worked in the electrical industry over 35 years. He started his electrical career in Minnesota, and from there has worked in many states at various times. He has worked for Saudi Aramco in Saudi Arabia and in Indonesia for a mining operation, for the Minnesota Electrical Association in development and presentation of material for the electrical industry. He graduated from Dunwoody Institute, one of the leading electrical trade schools in the world, completed apprenticeship through the IBEW and is a graduate of the University of Minnesota. He has been teaching electrical classes for 30+ years to a variety of clients, from third world students, pre-apprentice, apprentice, electrician and engineers. He presently presents seminars and classes for the electrical industry.

Joe Nelson
Joe brings a diversified engineering background in both the consulting and industrial sectors. He earned undergraduate and advanced degrees from the University of Illinois and is registered in several engineering disciplines in the Midwest and Alaska. As an engineering program manager with international consulting firms, Joe has led project teams performing environmental remediation from hydrocarbon and mercury contamination. Other assignments have included various phases of design and operation of water and wastewater treatment systems and hazardous waste disposal facilities, design of industrial instrumentation and control systems, and environmental compliance and investigations at state and EPA Superfund sites. In the industrial sector, Joe was engineering manager at a large Midwestern company involved with asphalt manufacturing and hazardous waste treatment, storage, and disposal. He also has worked as the environmental compliance engineer at refineries in Kansas and interior Alaska, and taught wastewater treatment plant operation at the community college level.

Mike Panethiere
Mike is the Principal of M. Panethiere & Associates, P.A. Consulting Engineers and has over 35 years of experience in the electrical engineering and construction fields. He attended UMKC and Taylor University and holds a Bachelor's Degree in Electrical Engineering. He also earned a Master's Degree in Electrical Engineering from Kansas State University. He is a Registered Engineer in 22 states, is a Licensed Master Electrician, a Certified Electrical Inspector, a member of IAEI, IEEE, and NFPA. He is an Adjunct Professor of Electrical Technology at Johnson County Community Colleges Center for Business and Technology. Mike also serves as a Board Member for the Johnson County Board of Code Review. He is well known as an expert witness and electrical forensic Investigator, and has written papers on the subjects of electrocution and electrical shock hazards associated with grounding issues. His firm provides Electrical Design-Build Services, Arc-Flash Analysis, and Electrical Plan Review.

Thomas L. Rewerts, SE
Mr. Rewerts has a traditional structural engineering practice dedicated to solving construction problems of a particularly troublesome and difficult nature. He has nearly 40 years of experience in forensic structural and architectural engineering, and restoration engineering. Twenty-nine of those years were spent in private practice in Chicago, with the remainder in Kansas City. His main areas of practice are investigation and design of repairs for problems in residential and commercial concrete and masonry structures.

Gil Rossmiller
Having been in the construction industry for over 30 years, Gil brings a hands on perspective to building code enforcement. Gil is currently the Chief Building Official for Parker, Colorado and has been active in building code and 'green' code development. He has served on code development committees for the International Residential Code / Plumbing and Mechanical for the 2009 and 2012 editions of the IRC and the Commercial Energy Code for the 2015 IECC. Gil was also one of the 52 member consensus committee to develop the National Green Building Standard; the first ANSI accredited Green Building Standard. He also served on the International Code Council Green Building Technologies Exam Development Committee.

Loran Stara
Loran Stara has been and instructor at Southeast Community College located in Milford NE for over 25 years. He has used the Construction Master Calculator for many years in the classroom and will demonstrate its many uses and computations it can perform. It is an awesome tool that will increase your speed and also your accuracy.

Rich Sternadori
Rich is the State of Nebraska Coordinator with the University of Missouri, Great Plains ADA Center. He holds a BA in Psychology from Columbia College and a Masters of Education in Counseling Psychology from MU with a specialty in rehabilitation and trauma psychology. Rich's career in psychology follows 16 years as a Chief Building Official and Zoning administrator for cities in Kansas and Missouri. Richard attended the Architectural Degree and Urban Planning Program at the University of Kansas. He holds 14 national and international Code Certifications and licenses in related subjects. Richard was honored in 1992 and 1993 by the International Conference of Building Officials (ICBO) for leadership as the President and Vice President of the ICBO Kansas Chapter. He served on international Code panels and chaired the Kansas committee that developed the first nationwide examinations for contractor licensing. Richard was appointed in 1993 by Governor Joan Finney to the Kansas State Board of Technical Professions - Architects and Engineers. He taught Codes administration at Johnson County Community College in 1996 and 1997. Rich serves on the board of Directors with the International Medical and Educational Trust, which is the umbrella organization of the University of Missouri Trauma Team. Rich is a Certified Rehabilitation Counselor.

Terry Tevis
Mr. Tevis has been engaged in the practice of architecture since graduating from the University of Kansas in 1977. He is a licensed architect in both Kansas and Missouri. Tevis Architectural Group was founded in 1993 with offices in Lenexa and Topeka, Kansas. Mr. Tevis has extensive experience with both commercial and residential projects utilizing a variety of construction systems with an emphasis is on sustainable, energy efficient design.

David P. Tyree, P.E., C.B.O.
David P. Tyree, P.E., C.B.O is the Central Regional Manager for the American Wood Council (AWC), which produces internationally recognized design standards for wood construction. His work experience includes building inspection, plan review, code development, and code consulting. Prior to joining AWC, Dave was a structural engineer and code consultant with Colorado Code Consulting based in Denver, Colorado and was the Director of Codes and Standards for the Building Owners and Managers Association in Washington D.C. Dave, when with BOMA, also served as the staff liaison for the Standard Method of Floor Measurement Committee, Codes and Standards Committee and various additional work groups, which developed BOMA's series of floor measurement standards.

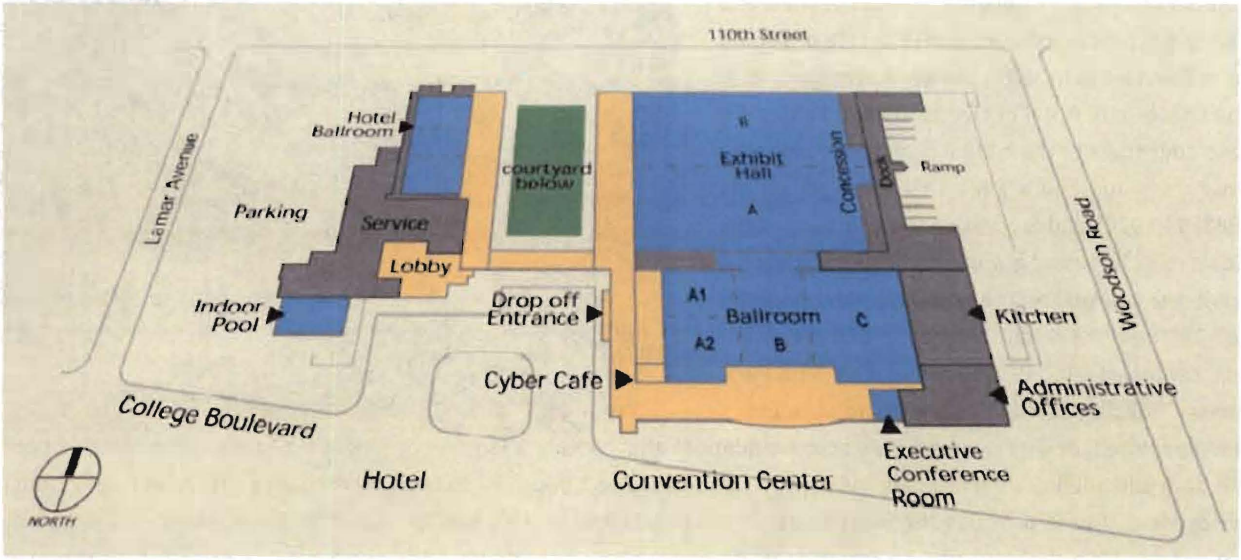
Mike Weaver
Mike began his career as an apprentice electrician with a local private contractor. After ten years, he became a Block-Certified Master Electrician and with his wife, started their own contracting business, which they have operated for more than 20 years. Mike is a Principal of C&M Enterprises in Salina, Kansas, through which he develops and presents electrical and safety based training programs for contractors, tradespeople, and code officials. As a nationally recognized instructor and trainer, he is routinely entrusted with the responsibility of providing education for the International Code Council (ICC), the International Association of Electrical Inspectors (IAEI), various municipal and government jurisdictions across the nation, as well as private industry. In addition to his membership in the ICC and IAEI, he is also member of the International Association of Building Officials, the National Fire Protection Association, and is the ICC subject matter expert for the International Residential Code and the National Electric Code®. Mike is the author of *Dwelling Service and Feeder Calculations, Commercial Service and Feeder Calculations*, and *NEC Calculations*. He is currently developing a series of study guides based on the latest edition of the National Electric Code®.

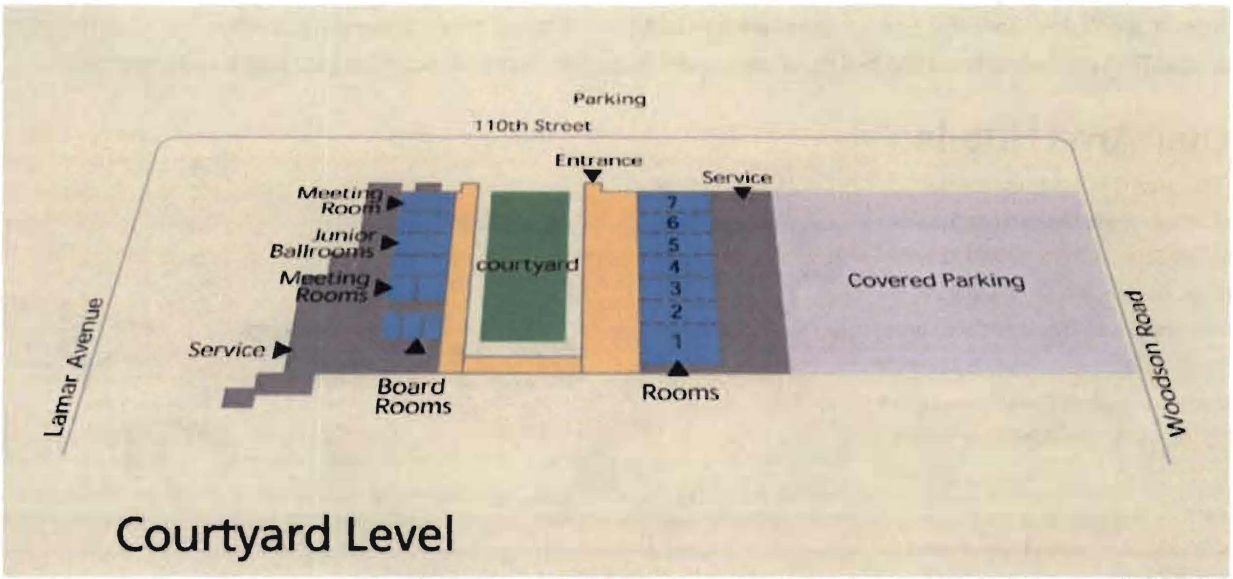
John Williams
John has been teaching about the plumbing industry for over twenty years. He was taught in apprenticeship programs and post-secondary programs as well as continuing education programs. John is currently teaching a full time Plumbing Technology Program at Kirkwood Community College and development and delivering an on-line apprenticeship training program. John is with us courtesy of Calculated Industries, the construction industry's leader in innovative hand held specialty calculators and precision measuring devices.

2016 Spring Class Matrix

	Wednesday March 23, 2016	Thursday March 24, 2016	Friday March 25, 2016
Room 1	Introduction to Solar Water Heaters and the International Solar Energy Provisions 8:00 AM to 12:00 PM Introduction to Photovoltaic Systems and in the International Solar Energy Provisions 1:00 PM to 5:00 PM	2015 IBC Firestopping; Joint Systems, Penetrations, and Dampers 8:00 AM to 5:00 PM	2012 IBC Care Facilities Provisions 8:00 AM to 5:00 PM
Room 2	Roofing – (Up on the Roof: Asphalt Shingles) *2012 IRC and Manufacturer* 8:00 AM to 12:00 PM Residential Roofing and Siding Installations: Code compliant installations avoid costly mistakes 1:00 PM to 5:00 PM	Wood Frame Construction 8:00 AM to 5:00 PM	What the Inspector Looks At 8:00 AM to 12:00 PM 10 Frequent Inspection Failures 1:00 PM to 5:00 PM
Room 3	Quality HVAC Installation Practices Training 8:00 AM to 12:00 PM Combustion Air and Gas Fire Appliances in the 2012 IMC 1:00 PM to 5:00 PM	Commercial Kitchen Exhaust System and Grease Ducts in the 2012 IMC 8:00 AM to 5:00 PM	Mechanical and Fuel Gas Provisions in the 2012 IRC 8:00 AM to 5:00 PM
Room 4	Troubleshooting and Prevention of Deterioration in Concrete Structures 8:00 AM to 12:00 PM Troubleshooting and Prevention of Water Infiltration in Exterior Masonry Walls 1:00 PM to 5:00 PM	Heat Pump Application and Service Training 8:00 AM to 12:00 PM "PEX" Fire Protection Sprinkler Systems 1:00 PM to 5:00 PM	2012 IRC Plumbing Provisions including Trenching and Backfilling 8:00 AM to 5:00 PM
Room 5	Discover the Mechanical Energy Requirements of the 2012 IECC – Commercial 8:00 AM to 5:00 PM	Who Needs Manual J, S and D Anyway? 8:00 AM to 5:00 PM	ADA For Contractors 8:00 AM to 12:00 PM Beyond ADA Standards: Civil Rights Regulations That Impact Accessible Design 1:00 PM to 5:00 PM
Room 6	Reading and Understanding Construction Drawings – Basic 8:00 AM to 12:00 PM Reading and Understanding Building Construction Drawings and Specifications – Advanced 1:00 PM to 5:00 PM	Master the Framing Calculator: Intro and Specialty Topics 8:00 AM to 12:00 PM Carbon Monoxide Measurement; CO safety, at work, at home, at play, and away 1:00 PM to 5:00 PM	Plumbing and Pipefitting Applications of the Pipe Trades Pro Calculator 8:00 AM to 12:00 PM Verifying HVAC Combustion Equipment Performance, Safety and Efficiency 1:00 PM to 5:00 PM
Room 7	Healthcare Facility Electrical Provisions of the 2011 NEC 8:00 AM to 5:00 PM	2015 NFPA 70E – Workplace Electrical Safety Requirements 8:00 AM to 5:00 PM	Variable Frequency Drive Technology 8:00 AM to 12:00 PM Demonstrating How the ElectriCalc Pro Updateable Electrical Code Calculator Improves Job Performance for Electrical Design and Installations 1:00 PM to 5:00 PM

Seminar Site Information



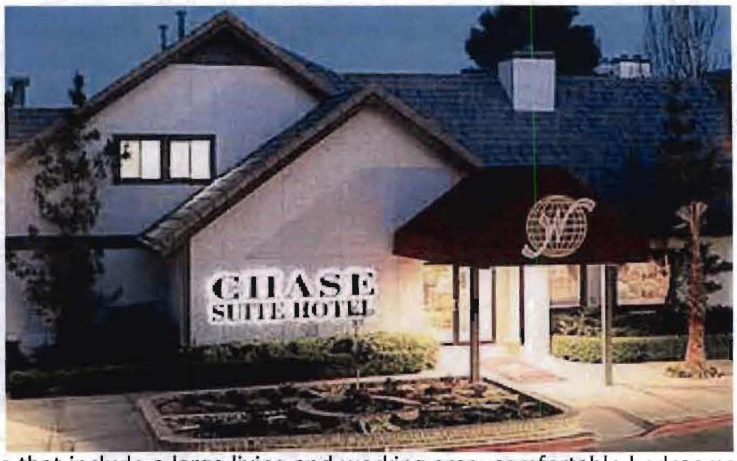


overland park convention center

Overland Park Convention Center 6000 College Boulevard Overland Park, Kansas

Located on the south side of I-435 between Metcalf and Nall off ramps

Accommodations



To accommodate overnight attendees of the 2015 Spring Education Seminar, a special rate of $89.00 for a one-bedroom suite, has been arranged, with the Chase Suite Hotel of Overland Park, Kansas. To take advantage of the special rate, you must make your reservation before March 1, 2015, by calling (888) 433-9765 and requesting the **Johnson County Contractor Licensing** group rate. The special rate is subject to availability. The hotel is located adjacent to I-435, near the north-west corner of the convention center, at 6300 W. 110 Street, Overland Park, Kansas, 66210. Chase Suites are spacious, bright, well-appointed, one or two-bedroom accommodations that include a large living and working area, comfortable bedrooms, full-bath equipped kitchen facilities and private entrances. The 1 bedroom suites truly exemplify the "home away from home" atmosphere. Chase provides the most spacious suites you'll find, with fully equipped kitchens, separate living and dining areas, cable TV including premium comfortable beds, luxurious bathrooms and a workspace area with high speed Internet access. It won't take long for you to experience difference the range of complimentary services makes to the usual hotel package. The continental breakfast buffet will satisfy the hungriest. Make Chase Suites your home away fromhome.

Other Area Hotels

1. Sheraton OP Convention Center
6100 College Blvd., Overland Park, Kansas
(913) 234-2100 (800) 325-3535

2. Hilton Garden Inn Overland Park
5800 College Blvd., Overland Park, Kansas
(913) 345-2661 (877) 782-9444

3. Courtyard Marriott Convention Center
11001 Woodson, Overland Park, Kansas
(913) 317-8500 (888) 236-2427

4. Chase Suite Hotel
6300 W. 110 St, Overland Park, Kansas
(913) 317-9321 (888) 433-9765

5. Holiday Inn Suites Convention Center
10920 Nall, Overland Park, Kansas
(913) 312-0900 (800) 957-4654

6. Homestead Studio Suites Hotel
5401 W. 110th St., Overland Park, Kansas
(913) 661-4440 (800) 804-3724

7. Super 8 Motel
5001 W. 110 St, Overland Park, Kansas
(913) 341-7771 (800) 800-8000

8. Red Roof Inn Overland Park
6800 W. 108 St., Overland Park, Kansas
(913) 341-0100 (800) 733-7663

9. AmeriSuites OP Convention Center
10750 Barkley St., Overland Park, Kansas
(913) 491-9002 (800) 833-1516

10. Hyatt Place Kansas City/Overland Park Convention Center
5001 W. 110 St., Overland Park, Kansas
(913) 491-9002 (866) 599-6674

Registration Information

Registration: Because bar-coded schedule documents are preprinted, you must pre-register for classes and lunch. All registration forms must be received in the Contractor Licensing Program office, not later than 5:00 PM, March 22, 2016. Please call (913) 715-2233 if you have any questions.

Fees: The *Qualifying Individual* for Johnson County Program Companies licensed for 2015 or 2016 and building inspection employees employed by participating jurisdictions may attend the Education Seminar at no cost. Active Heart of America Chapter members who attended all three days of the Heart of America 2015 Annual Business Meeting or who are registered for the 2016 Annual Business Meeting are entitled to three days of education at no extra charge. City of Lawrence *Qualifying Person's* fees are not paid by the City of Lawrence. Lawrence program attendants and all other out-of-program attendees must pay $30 per classroom hour. Please make checks payable to Johnson County Contractor Licensing. No refunds or credits issued for cancelations made after 5:00 pm, March 16, 2016.

Fee enclosed ☐

Name _____

Company Name _____

Address _____

City/State/Zip _____

Telephone _____ **Date of Birth** _____

E-mail Address _____

Staff	Course Number	Course Title

Register on line at http://www.jocogov.org/dept/planning-and-codes/cls/home
and instantly see if there are available seats in a class!
Johnson County contractors may only apply 4 hours of non-code to renewal.

Johnson County Contractor Licensing Program

111 S. Cherry Street, Suite 1000

Olathe, KS 66061