

# 2024 Education Programs Descriptions

**Tuesday, October 22, 2024**

## **ICC Talks: Inspiration and Innovation (all participant session)**

New this year, ICC Talks is a plenary session that inspires and reinvigorates. The session begins with keynote speaker Victoria Arlen, ESPN host and author. Ms. Arlen will share her experiences as a Paralympic Gold Medalist and motivate us to reach further and overcome our obstacles.

Following the keynote address, participants will listen to a panel of experts from across the building industry share their perspectives on off-site construction and the challenges and opportunities it presents. Communities are struggling to provide affordable housing at the same time the building industry is working to address growing workforce shortages, deliver higher quality buildings and materials, and support decarbonization efforts. Off-site construction is a key part of the innovative solutions that will address these societal challenges. The panelists are:

- Ryan Colker, Vice President, Innovation, International Code Council (Moderator)
- Jeff Brown, Director, State Building Codes Office, Division of Building and Fire Regulations, Virginia Department of Housing and Community Development
- Solomon Greene, Principal Deputy Assistant Secretary for Policy Development and Research, U.S. Department of Housing and Urban Development (invited)
- Helena Lidelöw, Chief Technical Officer, Volumetric Building Companies
- Ken Semler, Chair, Building Systems Councils, National Association of Homebuilders; President, Impresa Modular

## **Plumbing, Mechanical & Fuel Gas**

### **2024 IPC, IMC, IFGC Significant Changes**

*Instructors: Gary Gauthier, Lisa Reiheld*

This session introduces participants to the major changes from the 2021 IPC, IMC and IFGC to the 2024 IPC, IMC and IFGC. Discussions will assist code users in identifying the specific code changes that have occurred, and more importantly, understanding the reason behind the change. Finally, it explains those code changes selected due to their frequency of application, special significance or change in application.

### **A2L Refrigerants – What You Need to Know**

*Instructors: Jim Cika, Thomas Deary*

This presentation will explain the differences between A2L refrigerants and the refrigerants that are currently being phased out, and why this industry-wide change has been necessary. Topics addressed include regulations that are driving the transition to A2L refrigerants, how the latest codes and standards address A2Ls, how state and local jurisdictions are addressing A2Ls, and where to find additional resources and information to help you prepare for the transition to A2Ls.

### **ACCA's Improved HVAC Plan Review Form**

*Instructors: David Bixby, Gil Rossmiller*

ACCA Manuals J (residential load calculations), S (residential equipment selection), and D (residential duct design), are ANSI standards referenced and required in the International Residential Code - Mechanical. ACCA has recently improved its Residential Plans Examiner Review Form for HVAC System Design (Loads, Equipment, Ducts). This simple one-page form provides a quick and easy review of HVAC system design elements. ACCA is currently working with code bodies to encourage officials and HVAC plans examiners to use the ACCA form to verify compliance with the relevant codes that reference the above ACCA Manuals.

## **Fire and Life Safety**

### **Hazardous Materials and the GHS – An Overview**

*Instructors: Megan Hall, Lynne Kilpatrick*

This course offers an overview of the UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS); how to effectively use the GHS today to help classify chemicals under the Fire and Building Code; and how proposed changes to the IFC might impact material classification starting in 2027.

### **Energizing the Built Environment**

*Instructor: Michael O'Brian*

This 90-minute program will talk through how batteries are now part of our built environment. From Residential ESS (Energy Storage Systems) to Commercial cell manufacturing, code users are expecting to find solutions in our codes and standards. This program will dive into the current provisions found in the 2024 ICC Family of codes to understand the work completed by the ICC's adhoc committee on lithium-ion batteries.

### **2024 IFC Significant Changes**

*Instructor: Rob Neale*

This seminar covers the significant changes between the 2021 and 2024 editions of the International Fire Code, including those found in energy systems, hazardous materials exceptions, and fire protection system revisions. The 2024 IFC also updates requirements for means of egress, combustible dust controls, new compressed gas classifications and consolidated temporary heating and cooking regulations. This high-level overview will introduce attendees to fire code changes affecting these topics and more.

## **Building Code**

### **2024 IBC Significant Changes**

*Instructor: Doug Thornburg*

This seminar reviews select significant changes from the 2021 to the 2024 editions of the International Building Code® (IBC®). Although the focus of the presentation is on revisions to the IBC fire- and life-safety provisions, additional areas of discussion include accessibility, construction materials, and building services. This high-level review assists building officials, fire officials, plan examiners, inspectors, and design professionals in identifying the specific code changes that have occurred and understanding the reasoning behind the changes.

### **Fire-Resistance-Rated Building Elements/Assemblies**

*Instructor: Rich Walke*

This session provides a high-level overview of the requirements of Chapter 7 of the International Building Code, covering Fire and Smoke Protection Features. The purpose is to focus on important characteristics of structural fire-resistance and compartmentation fire-resistance – and smoke protection features. The overview includes a description of the referenced standards, the methods for showing code compliance, the methods for analyzing permitted substitutions, installation considerations and special inspection requirements. We'll also spend some time in Chapter 7 of the International Fire Code, covering the maintenance of Fire and Smoke Protection Features which has had big changes over the past three code development cycles.

### **Flood Provisions**

*Instructor: Bill Bracken*

This session will review and discuss the flood design requirements found within the IBC. The session begins with a review of the National Flood Insurance Plan (NFIP) basics and its corresponding provisions within the IBC. This session then presents a review and discussion of the various flood zones including recent changes. This session then provides an overview and discussion of each of the various flood zones and its respective design and plan review requirements found within the IBC.

## Residential Code

### **Residential Electric Overview**

*Instructor: Joseph Wages*

This 90-minute session will discuss new and existing requirements for residential dwelling units. New requirements for GFCI and AFCI installations will be explained. Also, the new requirement for receptacle placement for kitchen countertop locations will be reviewed and explained. The newly adopted 10-ampere branch circuit will be explained as to where and when it can be utilized. A finally a discuss about the various grounding and bonding requirements will ensure everyone has a full understanding of these installations.

### **2024 IRC Significant Changes**

*Instructor: Sandra Hyde*

This session analyzes selected significant changes from the 2021 IRC to the 2024 IRC. Building officials, plan examiners, inspectors and design professionals will become familiar with the most significant changes in loads, floors, cladding, energy storage systems and approving alternate methods. You will be able to identify specific code changes and understand the reason behind the change. Changes are selected due to their frequency of application, special significance or change in application.

### **What to Expect When Reviewing Residential Projects for Energy Code Compliance**

*Instructor: Josh Harmon*

This course will address the design components identified in the IECC that promote code compliance and occupant safety. The course identifies the critical safety and resilience considerations that are made in the project design and plan approval process that impact site safety and building resilience. We will review examples from the plans approval process; how plan details and code analysis support energy efficiency; and the various code compliance options for residential projects. We will take a look at how the code requirements of the 2024 International Energy Conservation Code address air barrier components, thermal envelope materials, assemblies, and system functionality; what design details for equipment efficiency and system design, provided at construction plan submittal, improve occupant health and site compliance; and how in-field construction decisions and inspections are impacted by the plan review process. Attendees can expect to review and discuss practical examples of plan details and submittal requirements of the 2024 IECC and how these details impact occupant safety, site efficiency, and community resilience.

## Energy Code

### **2024 IECC Residential Significant Changes**

*Instructor: Jerica Stacey*

This seminar covers the significant changes within the 2024 International Energy Conservation Code® (IECC®) as they relate to residential buildings. Attendees will examine the code's updated intent section, discuss code changes that increase energy efficiency in single-family homes and low-rise multifamily buildings, and explore optional appendices that offer greater energy and emission reductions. Topics will include improvements in the building envelope, the expansion of the additional efficiency requirements, and new requirements for existing residential buildings, among others. Opportunities for involvement in the 2027 IECC development process will also be discussed.

## **What to Expect When Reviewing Commercial Projects for Energy Code Compliance**

*Instructor: Josh Harmon*

This course will address the design components identified in the IECC that promote code compliance and occupant safety. The course identifies the critical safety and resilience considerations that are made in the project design and plan approval process that impact site safety and building resilience. We will review examples from the plans approval process; how plan details and code analysis support energy efficiency; and the various code compliance options for commercial projects. We will look at how the code requirements of the 2024 International Energy Conservation Code address air barrier components, thermal envelope materials, assemblies, and system functionality; what design details for equipment efficiency and system design, provided at construction plan submittal, improve occupant health and site compliance; and how in-field construction decisions and inspections are impacted by the plan review process. Attendees can expect to review and discuss practical examples of plan details and submittal requirements of the 2024 IECC and how these details impact occupant safety, site efficiency, and community resilience.

## **2024 IECC Commercial Significant Changes**

*Instructors: Jerica Stacey, Kristopher Stenger*

This seminar covers the significant changes within the 2024 International Energy Conservation Code® (IECC®) as they relate to newly constructed commercial buildings. Attendees will examine the code's updated intent section, discuss code changes that increase energy efficiency in commercial and high-rise multifamily buildings, and explore optional appendices that offer greater energy and emission reductions. Topics will include new concepts introduced in the 2024 IECC, such as thermal bridging and Total System Performance Ratio. Opportunities for involvement in the 2027 IECC development process will also be discussed.

## **Existing Building Code**

### **Adaptive Reuse of Existing Buildings**

*Instructor: Bill Bracken*

This session will review and discuss the adaptive reuse of existing buildings. The session begins with a review of the various methods and approaches which include complete reuse, adaptive reuse, and façade preservation. This session then discusses the benefits and challenges to adaptive reuse. Key among the challenges are wind and seismic upgrades not to mention meeting LEED requirements. This session then provides historical and current examples of adaptive reuse of existing buildings.

## **2024 IEBC Significant Changes**

*Instructor: John Gibson*

This seminar explores select significant changes from the 2021 to the 2024 editions of the International Existing Building Code® (IEBC®). Topics of discussion include historic buildings, additions, fire protection systems, accessibility and the new appendix "E" Temporary Emergency Uses. This high-level overview will assist attendees in identifying the specific changes and the reasons for the changes.

## **2024 IEBC Compliance Options & 2024 IECC Chapter 5**

*Instructors: John Gibson, Jerica Stacey*

This seminar explores the three options for complying with the 2024 International Existing Building Code® (IEBC®): Performance Compliance Method, Work Area Method, and Performance Compliance Method. The course will also examine the provisions of Chapter 5 (Existing Buildings) of the 2024 International Energy Conservation Code® (IECC®), including the new requirement for additional energy efficiency credits for additions and alterations. Attendees will analyze and discuss case studies to better understand the application of both the IEBC and IECC code provisions.

## **Off-Site Construction**

### **Even More Insight into Off-Site**

*Instructor: Ryan Colker*

Curious about off-site construction but unsure who to ask? Leaders from across the off-site construction process will be discussing misconceptions about off-site construction, identifying challenges in implementation, opportunities to overcome those challenges and will be available to answer your questions. The first part of the session will include a more intimate conversation with panelists from the “Insights on Off-Site” plenary session. The second part of the session will feature leaders from state level modular building regulatory programs to share details on how the programs operate and how they intersect with local building departments and manufacturers. Hear the latest developments in off-site regulatory practices and opportunities to address building industry and community needs by effectively leveraging off-site construction.

### **Intro to Off-Site Construction, Responsibilities and Requirements**

*Instructor: Joseph Sollod*

Off-site construction is being touted as a solution to the workforce crisis, housing availability and so much more. But what is it and how does it impact the building safety community? This session will explore the diverse types of off-site construction from tiny homes to volumetric modules and everything in between. Learn the different methods for approval of each and the roles and responsibilities of third-party agencies, and local and state officials.

### **Approving Small Residential Dwelling Units: ADUs and Tiny Homes**

*Instructor: Ryan Colker*

Some homeowners and renters are looking to go small to enhance affordability or generate additional income. What does that mean for state and local jurisdictions that need to review and approve such structures? This session will review several emerging small dwelling units including accessory dwelling units (ADUs) and tiny houses, what provisions apply and how various jurisdictions are applying multiple strategies including building codes, zoning codes and other strategies to help support their use.

## **Management**

### **Management Best Practices: From Your Grandfather to Today**

*Instructor: Rachel Parrish*

Many professionals are thrown into supervisory or management roles without any formal training on how to effectively manage teams. In order to find a management style that works, we must look at the history of how management evolved over time and what practices are in place today. The discussion will end with tips for new and experienced managers to help them develop teams and effectively get work accomplished.

### **Disaster Planning for the Building Department**

*Instructor: Bill Bracken*

The Disaster Planning for the Building Department training introduces and focuses on the various phases of a disaster, the role of emergency management and the post-disaster roles and responsibilities typically assigned to building departments. This 3-hour course is recommended for Code Officials and others engaged with the building department interested in developing a disaster plan and understanding how to identify and request resources to better respond to the needs of their community and jump-start its recovery.

## **Legal Aspects – Essential Topics**

*Instructor: Linda Pieczynski*

Take a quick trip through the essential topics of the legal aspects of code administration in this mini sampler of the most important concepts inspectors must master to effectively do their jobs. The subjects covered will include the source of the building inspector's powers and limitations on that power, why knowing what person or which legal entity the inspector is dealing with when issuing or revoking permits and pursuing violators is critical, how a basic knowledge of the right of entry can prevent devastating lawsuits, and tips on being a great witness in court.

## **Hot Topics**

### **Special Inspections Overview**

*Instructor: Sandra Hyde*

Special inspection is an additional inspection required for more complex assemblies and complicated building materials. Completed by a third party, the inspection results go to the building department to help approve completion of a stage of construction. This session will focus on the duties of the special inspector, contractor, building official and designer.

### **Assessing the Safety of Existing Concrete Buildings**

*Instructor: Stephen Szoke*

Authorities are developing requirements for the evaluation of existing buildings. There are challenges to conducting assessments ranging to gaining access to structural members, costs and frequency of testing, limitations of nondestructive testing, and availability of documentation necessary for in depth analysis. However, assessments not only assist in ensuring a reasonable level of life safety for can also identify potential problems early – typically keeping costs of repairs to a minimum and extending the service life of the building.

### **Demystifying Structural Loads**

*Instructor: Buddy Showalter*

This presentation will provide information to assist code officials during the plan review process on the proper evaluation of structural loads per the 2024 *International Building Code*® (IBC®) and the IBC-referenced 2022 *ASCE/SEI 7 Minimum Design Loads and Associated Criteria for Buildings and Other Structures* (ASCE 7-22). An overview of each topic along with changes that occurred to the 2024 IBC and ASCE 7-22 will be provided and examples to show their application. The following topics will be presented:

- Risk Categories
- Live and Rain Loads
- Snow and Ice Loads
- Wind and Tornado Loads
- Earthquake Loads
- Flood and Tsunami Loads
- Temporary Structures

## **Leveraging the ICC Family of Solutions**

### **Demystifying Conformity Assessments**

*Instructor: David Tompos*

The demand for safer building products resonates strongly with consumers, necessitating a comprehensive evaluation of essential characteristics like quality, safety, reliability, compatibility, efficiency, and effectiveness. This session sheds light on the pivotal role of conformity assessment in meeting consumer demand for safety and emphasizes the importance of these standards in evaluating innovative building materials. Discover how product certification, third-party conformity assessment, and qualified testing laboratories work together to ensure safety, compliance, and instill confidence in the products we use.

### **Leveraging the ICC Family of Solutions Globally (Go Global with ICC), Part 1**

### **Leveraging the ICC Family of Solutions Globally (Go Global with ICC), Part 2**

*Instructors: Mohamed Amer, Judy Zakreski*

The combined sessions will offer an overview of the International Code Council family of solutions and explore real-world examples of how the various solutions, particularly the I-Codes, standards, conformity assessment solutions, training and credentialing, and digital solutions, are leveraged differently in jurisdictions throughout the world. Attendees will be exposed to a wide range of applications for the various solutions shared directly by users and regulators from jurisdictions outside the United States. The session will be interactive, with presenters and attendees all given ample time to ask questions of each other. The session will offer valuable information for existing users of one or more ICC solutions, as well as for people just being introduced to ICC. For manufacturers and designers who are interested in growing their businesses outside the United States, this session will offer valuable insight about how to successfully pursue business in new overseas markets. Attendees may attend one or both sessions; Part Two will begin with a brief recap of Part One.