



2025 EDUCATIONAL INSTITUTE





The 40th Annual Colorado Chapter Educational Institute will be held in person March 3rd through March 7th, 2025.

The annual Educational Institute will be returning to the Embassy Suites Hotel Conference Center in Loveland and will once again offer 65 full-day classes in 13 different course paths, with the "best of the best" instructors from all over the United States.

Class registration will be available online starting in November.

The CCICC Education Committee is excited to offer a very diverse curriculum that will include several new classes, as well as many revised and improved versions of our most popular offerings; most based on the 2024 International Codes and the 2023 National Electrical Code.

A sample of classes that will be offered this year include:

- NEW! A class on NPA 855 Energy Storage Systems
- **REVISED!** A class that looks at Tiny Homes from the State, AHJ, and Industry viewpoints...
- NEW! A class on Disaster Recovery. Learn from Boulder County about Flood & Fire Recovery.
- NEW! A class on Disaster Response & Crisis Communication. Learn what to do and expect before, during and after of Disaster.
- BACK! Disaster Mitigation Safety Assessment Program. Get your CalOES Damage Assessment Certification!
- NEW! A class on Picking your Battles and setting priorities to be successful.
- NEW! AWC, Simpson Strong-Tie, Boise Cascade, & Huber Engineered Wood teach 2024 Updates
- NEW! Everything you need to know about continuous insulation and foam plastics.
- BACK! You asked for a class on all things health care and we delivered! Check out "The Perils of Health Care Construction" by Patrick Conroy and Tami Holley.
- NEW! Over the Counter Plan Review with Hope Medina
- REVISED! Five classes based on the 2023 National Electrical Code which comply with the DORA continuing competency requirements for Colorado licensed electricians.
- REVISED! Many instructors have revised their classes based on your feedback, including Tiny Homes, Inspector Skills, Building Electrification, and some of the plumbing classes.
- HOT! Ten full-day classes to choose from on the most current fire-prevention topics, including a number of new courses
- NEW! New classes from new teachers
- **RETURNING!** Welcome back our great returning instructors
- NEW! Industry Social Meet and Greet with Exhibitors on Monday for all guests staying at the Hotel

LOCATION:

- Embassy Suites Loveland Hotel, Spa and Conference Center
- 4705 Clydesdale Parkway, Loveland, CO 80538, North of Denver at I-25 & Crossroads Blvd (Exit 259).
- Room rates are \$184/night and includes free made-to-order breakfast, complimentary appetizers, and beverages at the nightly Evening Reception. Reservations must be made by February 09,2025 to assure this rate.
- Reservations can be made by calling 1-800-EMBASSY. Hotel reservations can also be made on-line by using the link on www.coloradochaptericc.org, the Colorado Chapter ICC's website. Be sure to reference the ICC Colorado Chapter Educational Institute when making your reservations and be sure to obtain those reservations as soon as possible.

REGISTRATION:

- Registration costs are \$450 for the week or \$90 for individual days. Please note that group discounts will no longer be available.
- Your registration includes classroom instruction by some of the best instructors in their fields and handout materials, if provided.
- Check the web site at www.coloradochaptericc.org for any changes in class descriptions and other Educational Institute updates.

ONLINE REGISTRATION:

- Registration applications can be submitted online at www.coloradochaptericc.org. Online applications can be paid for by credit card or by mailing in a check, however, service fees will apply to payments made by credit card.
- Registration deadline is FRIDAY, FEBRUARY 14, 2025. Registrations or fees received after the registration deadlines will not be accepted.
- Register early! Class sizes will be reduced again this year, so it is important to register early. The most popular classes fill up quickly and often need to be closed. Individual classes will be filled on a first-come, first-serve basis. If a selected class is filled, you will be notified by the education committee and asked for your alternative choice(s).

PAYMENT BY MAIL

• All class registration is online, but you have the option of making payment by check. If paying by check, payment must be received prior the registration deadline for the selected class(s), or the online registration will be canceled. Payment can be mailed to CCICC Educational Committee, PO Box 961, Arvada, CO 80001.

REFUND POLICY:

If the request for a registration fee refund is received prior to the registration deadline of FRIDAY, FEBRUARY
 14, 2025, 100 percent of the fee will be refunded. Fees will not be refunded if the request is received after registration for the class has closed.

CONTINUING EDUCATION:

• The Colorado Chapter of ICC is an Approved Education Provider under the provisions of the ICC Preferred Provider Program. Continuing Education Units will be provided as well as Professional Development Units required by the State of Colorado Electrical and Plumbing Boards (DORA) and Learning Units as required by the American Institute of Architects (AIA). These continuing education credits will be issued to attendees shortly after the event has been completed. Additional information on Preferred Provider approved classes and continuing education credits is available at www.coloradochaptericc.org.

ICC CERTIFICATION TESTING:

- PRONTO certification exams are available through ICC at:
 https://www.iccsafe.org/professional-development/certifications-and-testing/certification-overview
- Classes in the curriculum are not designed specifically for passing the certification testing.

CLASSROOMS:

- All classes begin at 8:00 a.m. and end at 4:30 p.m. Lunch will be provided along with morning and afternoon breaks.
- All classes will be based upon the 2024 editions of the IBC, IECC, IFGC, IFC, IMC, IPC, IGCC, IRC, and the 2023 edition of the NEC, unless noted otherwise in the class description.
- The instructors listed in the brochure are scheduled to teach, however, substitutions may be made. Additional class information is available on the Educational Institute website.

MATERIALS:

• Class handouts, if applicable, will be made available to you electronically in February through the registration website. You will be responsible for the downloading or printing of your handouts to bring to your class. Check the Educational Institute website for additional information in February.

COLORADO CHAPTER EDUCATIONAL INSTITUTE AWARD PROGRAM:

- The Colorado Chapter of the ICC offers two Educational Institute Awards. These awards have been established in honor of two Chapter members instrumental in the creation and ongoing success of the Educational Institute. Gerry George and Dan Nickle were champions for providing quality code related education to code professionals, design professionals, and contractors and both made enormous and impactful contributions to the long term success of the event. The awards will include registration fees, lodging, meal allowance and bookstore credit, up to a \$2,000 value. Application information for the award can be found at: CCICC Award Information.
- AWARD DEADLINE IS DECEMBER 27, 2024.

MARCH 2025 CURRICULUM

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COURSE PATH	MAR 3 MONDAY	MAR 4 TUESDAY	MAR 5 WEDNESDAY	MAR 6 THURSDAY	MAR 7 FRIDAY
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INTERNATIONAL FIRE CODE	193 Fire Sprinkler Essentials For Plan Review Richard Maturino & Jaeger Luke	293 The Safer Buildings Coalition's In-Building ERCES Chief Alan Perdue	393 IFC Plan Review DFPC Sarah Carter	493 Design Comparisons between NFPA 13, 13R. 13D, and P2904 IFSA Mark Fessenden	593 Protection of Combustible Attic and Interstitial Concealed Spaces IFSA Mark Fessenden

Monday, March 3

181: The Complete Permit Technician (Day 1)	Steve Burger, Bureau Veritas: This two-day course is intended to provide essential information in the areas of code administration and history, legal aspects, customer service, basic construction, inspection process, zoning requirements, permit fee calculations, basic occupancy and construction types, and dealing with difficult customers. The course is recommended for front counter personnel, other Building Department staff and those who may be interested in preparing for the 2018 or 2021 ICC Permit Technician certification exam. *Please bring a calculator, highlighter, 2018 or 2021 International Building Code, 2018 or 2021 International Zoning Code, Legal Aspects of Code Administration and Basic Code Enforcement.
182: Tiny Homes, Tiny Houses and the 2024 Building Code	Eric Fried, Larimer County; Donnie Featherman, Colorado Division of Housing; and Mike Schmidt, Ensemble Ventures LLC: In this class we will distinguish between Tiny Homes, Tiny Houses and other prefab dwellings as it pertains to Colorado regulations. We will learn the basic history and construction techniques along with I-code requirements and Colorado administrative rules. We will also discuss appropriate Tiny Home rules for your jurisdiction.
183: The 2024 IECC - the good the bad and the ugly - what's the same, different, or significant	Robby Schwarz, BUILDTank Inc: There are all kinds of assumptions and expectations for the 2024 IECC. What actually made it into the code, how different is it from the 2021 or earlier versions of the code, and are the changes significant or not.
184: Construction Defects, Failures, and Repairs	Paul Bennett, Basecamp AEC: This class focuses on repairs to existing structures and the most common construction defects. Topics include civil site design, water resistive construction, cladding design, waterproofed construction, structural design, and soil/structure interaction. Numerous case studies and study of famous failures will also be discussed.
185: 2024 IRC Significant Changes	Steve Thomas, Shums Coda Associates, Inc: Review the changes from the 2021 edition to the 2024 edition of the International Residential Code. The background behind many of the changes will be discussed to provide the participant with an understanding of the intent of the changes and how to apply it to their everyday work. Discussion covered in the class will also include the code change process.

186: 2024 IBC Means of Egress	Doug Thornburg, ICC: This class addresses numerous provisions in the 2024 International Building Code (IBC) where the code contains requirements pertaining to establishing a means of egress in buildings. The course is intended to help plan reviewers or building code officials responsible for plan review identify those areas where plan review will include compliance with the IBC. During this training, participants will listen to lecture and view examples, as well as discuss sections of the IBC that pertain to means of egress. They will participate in activities that involve a set of plans. Participants will receive an overview of the fundamental requirements for means of egress as indicated in the 2024 International Building Code (IBC). They will be presented with specific problems related to means of egress and will be asked to solve each problem using a set of plans for a four story commercial building.
187: Disaster Mitigation Safety Assessment Program	Tom Pitchford, City of Castle Pines: Training personnel for quick assessment of damaged structures from natural disasters to help with the needs for housing and the community's needs. Ensuring that all structures have been evaluated and are properly placarded for use or repair.
188: Special Inspections of Installed Firestop Systems	DFPS Todd Jilbert and DFPS Mark Remy: This course is intended for building officials, inspectors, facility managers, building owners and contractors interested in the 2024 IBC requirements for special inspections of installed firestop systems. The goal of the course is to equip the participant with the knowledge essential to inspect Installed firestop Systems, evaluate the qualifications for special inspection agencies and inspectors and understand the reporting requirements of the IBC.
189: 2024 IPC Essentials	Rich Anderson, ICC: This full day seminar covers the concepts of the plumbing code. It familiarizes building officials, plans examiners, inspectors and design professionals with the structure of the International Plumbing Code. It assists code users in identifying the specific code concepts and how to better interpret the code. Finally, it focuses on those code concepts that will most impact the code professional on their jobs.
190: Furnaces & Water Heaters	Glenn Mathewson, Building Code College: Furnaces & Water Heaters. Furnace and water heater installations and replacements are ubiquitous in every house. Many new contractors and inspectors are often tasked with their installation and inspection, and many homeowners tackle these projects on their own. Not as simple as often believed, these appliances are connected to many systems of a house, including electrical, venting, gas, water, and air distribution. This class explores, in depth, all the various code provisions regarding their installation. - Understand the large list of requirements for a water heater temperature and pressure relief valve. - Learn the various venting methods: natural, induced, and forced. - Gain a greater respect for the various complications regarding their installation and inspection.

191: Electrical Worker Safety; A NEC & NFPA 70E Love Story	Chris Foland, National Renewable Energy Laboratory & Chris Papp, Commerce City: This course will provide an introduction of NFPA 70E, with focus on limited, restricted and arc flash boundaries. What are they and what are their restrictions, as well as highlight some of the 70E requirements that have made their way into the NEC. Specifically arc energy reduction, barriers for specific equipment & applications, suitable interrupting ratings for OCPD and having suitable equipment short-circuit current ratings.
192: 2024 IFC Overview and Significant Changes	Rachel Rush: Just like the class title states, we will be covering the new changes to the 2024 IFC and significant changes for the 2024 International Fire Code.
193: Fire Sprinkler Essentials For Plan Review	Richard Maturino, Colorado DFPC and Jaeger Luke- South Adams County Fire Dept: This class is intended to provide instruction on the basics of fire sprinkler plan review for water-based fire sprinkler systems designed under NFPA 13, NFPA 13R and NFPA 13d. The class will include example projects, along with checklists and other tools to help students practice the skills being taught. After taking this class, students will be able to explain why sprinkler system design starts in development review, identify a complete fire sprinkler system submittal, correctly identify occupancy hazard classification, verify design area & densities match the hazard and properly use codes, standards, specs and checklists to evaluate designs for compliance.

Tuesday, March 4

281: The Complete Permit Technician (Day 2)	See Description Under Class #181.
282: Disaster Recovery - Lessons Learned on the Front Range	Robby Schwarz, BUILDTank Inc: This class will be taught with representatives from Boulder County, and me the Marshall Fire New Homes Building Advisor. Disaster recovery requires a unique reflection on preparedness, code adoption and Enforcement, as well as tremendous inter departmental and jurisdictional communication. This was tested in Boulder County in 2013 during the unprecedented floods and then again recently by the Marshall fire. We have learned a lot that should be shared before the next severe weather event hits a jurisdiction. From planning and communication, insurance, wildfire resistance, to multiple choice in codes to rebuild to, to the impacts of incentives on construction this class will give an overview of what happened in the aftermath of the fire and what jurisdictions should be planning for now.

283: ASHRAE 90.1 For the Everyday Life

Hope Medina, Shums Coda Associates Inc: What do you mean this project will use ASHRAE 90.1 instead of the IECC? WHile both of these books contain basically the same requirements, how to navigate it may not be familiar to everyone, and because of this it may not feel like the same requirements. This class will take a look at the requirements found in 90.1 and finding a way to take those words on the page and implement them into how they would work everyday at any job site.

284: Lateral Loads and Expansive Soils

Ed Fronapfel, Charles Taylor Engineering Technical Services: Mr. Fronapfel will present on expansive soils and geotechnical considerations in regard to foundation design systems. Discussion topics will include evaluation of geotechnical reports in regard to the requirements of the building codes, determination of foundation type for serviceability and performance, proper evaluation of on-site soils conditions, and the potential need for reconditioning of the soils to reduce problems associated with the selection of foundation and floor systems. Evaluation of the lateral and vertical load capacity systems will be included as a necessary means to determine interior framing, façade, and egress issues. Lateral load systems will be examined primarily as they relate to single- and multi-family wood-frame structures. Post-tension design considerations for serviceability and performance criteria will also be discussed. Mr. Fronapfel will discuss these systems based on years of forensic evaluation experience and peer review of current projects. Additionally, the needs of the design, construction, and building officials' input to properly design, review, and construct these building systems will be considered.

285: Vapor Control in the IRC

Glenn Mathewson, Building Code College: Over the last century, vapor control methods in residential building codes have evolved considerably but are only finally becoming a popular subject in home design. The latest IRC provisions provide extensive options in vapor control methods, depending on the climate zone, materials chosen, and the preference of assembly design. Ventilation and vapor barriers are the methods of the last century, but the future looks a lot more like insulation, dehumidification, and vapor diffusion materials. Learn how the science of air temperature, air humidity and temperature of surfaces are embedded in so many design choices provided in the code.

- Understand the variables of condensation and how to keep it from occurring.
- Learn the variety of methods for controlling vapor in walls, attics and crawl spaces provided in the IRC.
- Discover the variety of vapor permeability of different materials and how they can work together to create assemblies that can dry out.

286: Advanced Means of Egress

Steve Thomas, Shums Coda Associates Inc: An advanced look at the means of egress requirements included in Chapter 10 of the 2024 International Building Code. The presentation will include detailed discussions on the design and review of the means of egress in unusual occupancies. Subjects included in the class are assembly occupancies, special egress components, smoke proof enclosures, horizontal exits and exit passageways. Practical examples will be used to illustrate code requirements. This class is designed for those students that have a basic understanding of how the means of egress is designed and reviewed.

287: 2024 IBC Significant Nonstructural Changes	Doug Thornburg, ICC: This seminar reviews and analyzes selected significant changes from the 2021 to the 2024 edition 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. The seminar assists building officials, fire officials, plans examiners, inspectors and design professionals in identifying the specific code changes that have occurred and understanding the reasoning behind the changes.
288: Multi-Family Building Inspection	Bill Clayton, Shums Coda Associates, Inc: Overview of the Inspection requirements for multi-family dwellings in the International Building Code. Type V-A and IIIA construction may be the most difficult type of construction to build a structure by. This seminar discusses the construction and inspections of Group R-2 occupancies including, fire-resistive rated construction, fire protection requirements and means of egress requirements.
289: IRC P2904 – Residential Fire Sprinkler Systems	Tom Meyers, Building Intuition, LLC: This class is intended to discuss and illustrate the use of IRC Section P2904 to design and install a fire sprinkler system for a one or two family residence. The class will include discussion on the pressure and flow reducing components that affect the system and the demands of typical sprinkler head configurations. It will also speak to performance issues with normally configured utility networks and solutions to correct them. Design of the system will be illustrated to allow the student to understand how fire sprinklers are configured and what is considered when reviewing and inspecting the system. The presenter has self-installed a system in his own home and will use it and that experience to further illustrate the seminar.
290: Venting of gas fired appliances	Nancy Swearengin, Pikes Peak Regional Building Department: A class designed to aid the inspector and installer in properly applying the Fuel Gas Vent Sections found in the 2024 IRC. This class will focus on properly sizing B-vent and masonry chimney vent systems for Category I appliances using the vent tables and associated codes. We will also discuss the inspection of Category IV vents. The day will conclude by looking at other important sections of code that relate to the proper installation and inspection of vents. Please bring the 2024 IRC, a 2024 IFGC will also work, with you as we will be doing several vent sizing problems.
291: Cannabis, Transformers, & Motors, oh My!	Tom Blevins, City of Aurora and Chris Papp, Commerce City: Transformers and motors are a huge part of the electrical industry, but often misunderstood. This class will cover the basics of conducting inspections and reviews where transformers and motors are involved, while minimizing and keeping the math simple. Class will also introduce people to the all new 2023 NEC Article 512 and the extraction process.
292: Battery Storage & Emergency Response	Reinhard Hanselka : We will thoroughly discuss all stored energy systems and their impact on Building Safety. The energy systems to be discussed are compressed gasses, all types of batteries including Lithium.

293: The Safer Buildings Coalition's In-Building ERCES Code Training

Chief Alan Perdue: The Safer Buildings Coalition's In-Building Emergency Responder Communication Enhancement System (ERCES) Code Training course is designed to provide attendees with an understanding of the application of model fire codes and standards (IFC /NFPA Standards) related to In-Building Public Safety ERCES RF Systems as required by the IFC Section 510. This interactive course will provide content related to the following learning objectives:

- The ability to locate, interpret and apply local and model code requirements on the job.
- Understand and apply requirements for circuits, pathways, backup power, redundancy, and signal strength/quality.
- Understand basic radio frequency (RF) and the function of Public Safety RF Signal Booster System Components and other RF Solutions.
- Ability to review actual Public Safety ERCES design plans and specifications and identify common design errors and other non-compliance issues.
- Ability to understand system acceptance and annual testing requirements.
- Actively participate in round table discussions covering best practices and lessons learned.
- Ability to identify the components of a Public Safety In-Building ERCES.
- Ability to identify future trends and issues related to Public Safety ERCES and other communications technologies identified within codes and standards.

Wednesday, March 5

381: So You Want To Be a CBO

Steve Burger, Bureau Veritas: This class is designed for any Building Department employees who would like more information on just what it takes to be a successful Building Official OR Manager/Supervisor. The class will discuss basic decision-making, legal and ethical topics, customer service, image of the Building Department and its employees, political issues, professional development, dealing with the media, adopting codes and fees, staffing and budgeting. The discussion will be kept at a level that can be understood by all attendees and will encourage an abundance of input and discussion. Who should attend: Building Officials, Plans Examiners, Building Inspectors, Permit Technicians, Code Enforcement Officers or Department Directors.

382: Code Enforcement 101 - The Who, What, Where, When and Why of Municipal Compliance!	Rachel Patterson, City of Westminster: This class will offer a deep dive into the world of Code Enforcement Compliance. This course is designed for new-age building and zoning code enforcement departments, which collaborate to create the common goal of lasting compliance through education, process, and procedures. Participants will gain knowledge in: What Code Enforcement is. Who code enforcement matters to and affects. Where and how through enforcement of minimum standards, we can make a difference in the community and organization. When and how to apply, interpret and enforce codes and legal processes. And last but most important Why codes matter. Code Enforcement Departments are crucial to the success of any organization!
383: Residential IECC inspection half day classroom half day in the field	Robby Schwarz, BUILDTank Inc: This popular class is back. Learn the requirements of field inspection in the morning and see them live in the afternoon. In addition we will have a blower door, duct leakage, and ventilation testing demonstration so you can become familiar with these required tests. BRING YOUR HARD HAT TO CLASS!
384: Structural Plans and Practices for Non-Engineers	Andrew Seidman PE and John Peterson MS, PE, Rivet Engineering Group: This course is intended to enhance your understanding of structural drawings and fundamental structural concepts for non-professional engineers. It is designed to equip you with the knowledge and skills needed to interpret structural drawings, review essential concepts and gain insights into structural engineering practices.
385: Over the Counter Plan Review	Hope Medina, Shums Coda Inc: This class will focus on the types of plans that are often permitted to be reviewed as over the counter. These types of plans would include basement finishes, small alterations, decks, and other small plans. Not everyone has had the opportunity to walk through these types of plans, or have someone explain what components make up these plans. This class will walk through code requirements as a class along with group work. Bring you IRC and your work experience.
386: Accessibility for Commercial Buildings	Tom Meyers, Building Intuition, LLC: This course is intended to provide basic concepts of disabled accessible design and construction using the International Building Code and ICC A117.1 as it relates to non residential structures. The class format is first discussed when accessible features are required (scoped) by the IBC. Then the requirements of ICC A117.1 are illustrated to show how a building and its site is made accessible. This class is intended for the code user who is either new to accessible design or is in need of a refresher on the ever changing requirements. Application of accessibility requirements for existing buildings will be discussed.

387: Commercial Building Inspection	Bill Clayton, Shums Coda Associates, Inc: This class is designed for inspectors that are moving into the area of commercial inspections. The class will briefly discuss the preparation and tools needed to conduct an inspection and the interaction between the inspector and contractor. The majority of the class will focus on the technique and technical aspects of commercial building inspections. Subjects discussed in the class will include foundations, wood framing, light-gauge steel framing, fire-resistive rated construction, means of egress and accessibility.
388: The Installation and Inspection of Opening Protectives Based on the IBC, IFC and NFPA 80/105	Rich Walke, Creative Technology Inc: This program provides a detailed look at the requirements of Chapter 7 of the 2024 International Building Code for fire door and fire window assemblies. For each topic, the program includes a discussion of code requirements for new construction, the referenced standards, the testing process, and the available methods of demonstrating code compliance. From there, the program will cover the installation, commissioning and maintenance provisions of NFPA 80, as required by both the International Building Code and the International Fire Code.
389: Residential Plumbing Inspections based on the 2024 IRC	John Magee, Colorado State Plumbing Inspector Supervisor: Hands on and visual presentation of typical residential plumbing systems including water, drainage, and venting.
390: A Mechanical Inspector's Guide to Navigating Multi-family Plans	Nancy Swearengin, Pikes Peak Regional Building Department: This class is for anyone doing mechanical inspections on new multi-family projects. We will work our way through a multi-family set of plans and discuss how the architectural, structural, mechanical, gas, and plumbing pages all provide information the mechanical inspector needs to know for doing their on-site inspections. Time will be spent understanding how sections of the building code affect the mechanical code and how the two books interact. There will be an introduction to UL Product IQ, a necessary tool for determining if a ceiling radiation damper can be installed in a rated floor/ceiling or roof/ceiling assembly. We will also look at different ceiling radiation damper installation instructions to help everyone understand how to make sure the damper you are looking at is properly installed.
391: PV Code Requirements of the 2023 NEC as well as the 2021 IRC, IBC, and IFC	Jeff Fecteau, UL Solutions: The installation of photovoltaic systems is increasing due to State and Local regulations. Learn about the installation of PV from a systems approach addressing the requirements from the 2023 NEC, 2021 IFC, 2021 IBC and 2021 IRC. This presentation is designed to address the requirements from all the applicable codes for the installation of solar photovoltaic systems. Learn how to use the codes to conduct a field inspection more effectively and to identify frequently encountered PV installation misapplications. Learn how to identify as well as apply the applicable codes and safety standards to assist in plan checking and inspections. This course is designed for electrical inspectors as well as combination inspectors and plans examiners. This course will also be beneficial for PV designers, engineers, fire code officials and others interested in PV system installation.

392: Fire Alarm Framework	Tami Holley, TLH Fire: This class is focused on fire alarm infrastructure (wire), frequently asked questions noted in the NFPA 72 (2022) handbook, and the complexity of testing and when to apply NFPA 3 and NFPA 4. Furthermore, the class will be packed with different occupancy classifications as well as addressing §14 of NFPA 72. The class will also include elevator expertise from the State of Colorado Chief Conveyance Inspector David Hutchcraft, Ft Lupton's Randy Cleveland and Strasburg's Pat Conroy.
393: IFC Plan Review DFPC	Sarah Carter, DFCP: Fire Plans Examiners play a critical role in ensuring building construction meets the rigorous requirements of the building and fire codes. This class will cover the basics of conducting plan review for compliance with the International Fire Code. Topics covered will include conducting initial code analysis, evaluating site design, determining building construction requirements, identifying required fire and life safety systems, understanding mechanical and electrical provisions, and navigating requirements for special uses and occupancies.

Thursday, March 6

481: NFPA 855,
Standard for the
Installation of Energy
Storage Systems

Nicholas Bartlett, PE, FPE, Atar Fire, LLC: This class will teach participants to confidently navigate NFPA 855. It will provide the 'why' behind many of the code requirements, and provide context for risk and mitigation measures. This course is targeted for AHJs, engineers (all types), contractors, and energy storage system manufacturers and integrators. The course will provide a deep dive into topics such as:

- UL 9540, UL 9540A, UL 1973
- Explosion Control
- Fire Suppression, Detection, & Barriers
- Hazard Mitigation Analysis
- ESS Siting & Clearances
- Battery Collection & Storage
- Battery Management Systems
- Overall design/installation
- Emergency Preparedness
- Residential Units
- Battery Basics
- Related Standards (IFC, NFPA 13/68/69/70/72)

482: 2024 IBC Appendix Chapters

Steve Thomas, Shums Coda Associates, Inc: This class will discuss some of the appendix chapters in the back of the IBC and whether you should consider adopting them in your jurisdiction. Appendix chapters are only applicable if they are specifically adopted by the jurisdiction. However, can you use them as a guide for alternate design? We will be discussing Employee Qualifications, Board of Appeals, Group U- Agricultural Buildings, Supplementary Accessibility Requirements, Flood-Resistant Construction, Patio Covers, Grading, Administrative Provisions and Replicable Buildings. Join us to see how these chapters can be used in your jurisdiction.

483: Continuous Insulation & Foam Plastics in the Building Envelope

Jay Crandell, Applied Building Technology Group (ABTG)/ ARES Consulting, Marcin Pazera- Polyisocyanurate Insulation Manufacturers Association (PIMA) and Eric Banks, EW Banks Consulting LLC: Foam plastic insulation and continuous insulation (ci) are commonly- specified insulation materials and methods with proven history of achieving compliance with the energy code and providing conservation of energy over the life of a building. Code-compliant use of ci and foam plastic insulations, as with many materials, requires coordination across multiple building code requirements integrating fire safety, structure, durability, moisture/vapor control, water-resistive barrier, cladding installation, window installation, and many others. Foam plastic insulation materials have multi-functional capabilities that provide design flexibility and opportunities to optimize compliance with multiple code requirements. This workshop will provide an in-depth review of applicable code requirements and include discussion of examples of ci and foam plastic insulation use in building foundation, exterior wall, and roof assemblies. The workshop will be supplemented with handouts and on-line resources that can assist with effective plan review and design for code compliance.

484: Mass Timber and Conventional Wood Frame Construction: Building Code Update

1 Course with 6 Sessions taught by Industry Professionals, from AWC, Boise Cascade, Simpson Strong Tie, and Huber Engineered WoodsLLC

SESSION 1: An Introduction to Mass Timber Buildings in the IBC - AWC Staff

SESSION 2: Fire-Resistance and Sound Ratings for Wood Frame Assemblies - AWC Staff

SESSION 3: Specification and Inspection of Engineered Wood Products - Boise Cascade Staff

SESSION 4: Code Compliant Exterior Systems for Wood-Framed Building Envelopes - **Huber Engineered Woods Staff**

SESSION 5: Selection and Inspection of Connectors and Fasteners. - Simpson Strong-Tie Staff

SESSION 6: 2021 IRC Deck Codes. - AWC Staff

485: Single Family Homes, from Application to Occupancy

Glenn Mathewson, Building Code College: Single Family Homes, from Application to Occupancy Construction of single-family, detached homes is quite a process. From planning to application to execution to inspection, there are many steps along the way. Like a dance, a beautiful performance comes from smooth steps timed by everyone in the group. Mutual understanding and respect for each professional involved and a good grasp of the choreography helps ensure no one trips up. Learn the steps of building a new home in this brand-new class. No formal wear required!

- Have been immersed in a photographic journey through all parts of new home construction
- Better understand the inspections required for new home construction.
- Understand the complexity of coordinating over 100 individual tradesmen involved in house construction.

486: Having fun in Health Care. Navigating the health care construction maze in Colorado

Tami Holley, TLH Fire, Sarah Carter, CDFPC and Morgan Matthew CDFPC: Health

Care construction in Colorado is complicated. This course will equip AHJ's, architects and contractors with the tools to successfully navigate plan review, inspection and construction in health care facilities. Topics covered include:

- -Local, state and federal agencies with jurisdiction
- -The safety codes that apply to health care projects
- -Changes to the 2024 I-Codes that impact health care sites

	-Tips to navigate plan review and construction inspections -The I-code and NFPA requirements that impact major topics in health care construction, including building use, fire suppression, fire alarm, passive construction and egress (including locking arrangements). Presenters will include AHJ, 3rd party SMEs and facility safety staff.
487: Residential Energy Inspections w/ Pics and Video	Hope Medina, Shums Coda Associates, Inc: Energy efficiency can not just exist in a code book or a set of plans. It needs to be implemented in the structure for the efficiency to be actuated. The reality is the energy code is not a code that we have all had the opportunity to have someone walk us through how to perform these types of inspections. do not fear, we will take the day to not only look at what the code is requiring, but really how these requirements would look like in a house. We will do that by using pictures and videos. Some may be good, and some, well let's just say they will have a great opportunity to improve.
488: Assessment of Existing Buildings for Building and Fire Safety Professionals	Tom Meyers, Building Intuition, LLC- Assessment of Existing Buildings for Building and Fire Safety Professionals: This course targets the most difficult role posed on a building safety professional: Accurate assessment of existing buildings. The class will present techniques used to understand an existing building's potential safety performance, focusing on major life safety deficiencies and strategies to mitigate them. The legal and political aspects of the safety evaluation will be emphasized. The course helps an evaluator "see" through the clutter of possible deficiencies to find the most important problems that can be addressed with limited available resources. The final portion of the course will discuss the various mandatory requirements for an existing building provided in the International Fire Code.
489: Sanitary Drainage and Indirect/Special Waste	Donnie Perkinson, State of Colorado- DORA : The class will be on explaining the codes out of the IPC chapters 7 & 8, IRC Chapters 30 &31 and the Colorado Revised Statute of the Colorado Plumbing Code.
490: 2024 IMC Essentials	Rich Anderson, ICC: This full day seminar covers the concepts of the mechanical code. It familiarizes building officials, plans examiners, inspectors and design professionals with the structure of the International Mechanical Code. It assists code users in identifying the specific code concepts and how to better interpret the code. Finally, it focuses on those code concepts that will most impact the code professional on their jobs.
491: Grounding and Bonding	Diane Lynch, Electrical Consulting and Education, LLC: Discussion of what the multiple definitions and code requirements really are for most electrical grounding and bonding systems.

492: Snapshots &
Signatures:Mastering
Fire Scene
Documentation

DFPC Chief Todd Hedglin: This class is a comprehensive presentation designed to elevate your fire scene investigation skills. This session will explore the key aspects of documenting fire scenes, including photography, effective note-taking, and interviewing techniques, all while applying fire science principles and the scientific method. You'll learn how to capture crucial evidence, preserve scene integrity, and integrate this information into clear, cohesive reports. We will also discuss the importance of smooth transitions in documentation to ensure your reports flow logically and are easily understood by all audiences. Through case studies and real-world examples, you will see how systematic documentation can profoundly influence the outcomes of investigations. Whether you're an experienced investigator or new to the field, this presentation offers practical strategies to enhance your efficiency, attention to detail, and overall conclusions.

493: Design Comparisons between NFPA 13, 13R. 13D, and P2904 **Mark Fessenden, IFSA:** This program will look at the use and application of residential sprinklers in NFPA 13, 13R occupancies as well as incentives included in modern building and fire codes for their use. We will also compare systems designed in accordance with NFPA 13D and the IRC. We will also look at changes to current NFPA standards impacting residential occupancies.

Friday, March 7

581: Lessons from the Courtroom

Tom Meyers, Building Intuition, LLC: Is a code official really liable for the work they approve? Does approval absolve the designer in any way? Are there laws that protect government officials from personal liability? Do they actually hold up in the real world? This new course will discuss the surprising outcomes of multiple court cases for which the instructor has been a participant. These will include illegal drug labs, unsafe conditions, window falls, fire resistance rated assemblies, disabled accessibility, slip falls, and inspection and due process errors. Emphasis will be placed on why these came to litigate and how code practitioners can help avoid being adversely affected. Practical advice will be given for an individual that is named in a lawsuit or is called to serve as a witness.

582: Picking Your Battles in the Midst of the War

Shaunna Mozingo, Mozingo Code Group LLC: We often feel like the world around us is a war zone, making it hard to maneuver the battlegrounds each day and come out feeling like a victor. Let's take a look at how we can break the "war" up into smaller "battles" to determine which ones are worth dying on our swords over.

We'll look at how to direct our focus to the things that matter and let go of the things that we have absolutely no control over. Some battles just aren't ours but we find ourselves trying to fight them anyway. We end up exhausted, frustrated and burnt out. it doesn't have to be that way. Come, let's have fun learning a little about navigating the battle fields.

583: Commercial Thermal Envelopes in the 2024 IECC

Jay Crandell, ARES Consulting Services and Tom Culp, Birch Point Consulting:

The building envelope is on duty 24/7/365. Many of its components will be in service for the life of the building. It plays a significant role in the energy efficiency of a building and the building stock as a whole and this is evident by the fact that buildings account for 40% of total US energy use annually. The building envelope is usually the primary factor in proper sizing of HVAC systems for efficient and effective service. It also determines how well an occupied building will support its intended function in terms of operational costs, aesthetics, durability and occupant health, safety and comfort. Therefore, it is important to have a practical knowledge of the IECC requirements for building envelopes for both plan review and inspection. This session will dive into commercial code requirements for opaque assemblies, fenestration, air leakage and other matters, updated for the 2024 IECC. It will conclude with a look at the "Top 10" building envelope compliance and enforcement concerns.

584: ASCE7-22 Seismic, Snow and Wind Loads and the 2024 I Codes including a module on Plated Trusses

David Sparks, PE, SE, Felton Group & SEAC Members: This class will consist of multiple modules presented by the Structural Engineers Association of Colorado (SEAC) subject matter committees, including: Wind, Wood, Snow, and Seismic. Will include updates on the special wind region and progress that we are making along with some recommendations in the form of a white paper that we are working on with further guidance for building departments along the front range and particularly within the special wind region. We will also address snow drift calculations along with some guidance regarding correct usage of the winter windiness factor and the impacts that changes in the codes have had at specific locations throughout the mountains and the front range. There would be discussion on both of these topics and the ASCE 7-22 online hazard tool and discussing some of the known pitfalls that can be avoided when using it. The Wood Committee will present on inspections and on Truss Calculations .

585: Building Codes for Basement Finish

Glenn Mathewson, Building Code College: Finishing a basement requires nearly all the trades and construction required for a new house, short of foundations and roofs. However, many applications are unique when transforming the former guts below a home into finished living space. Building, plumbing, mechanical, fuel-gas and electrical provisions involved with these projects will be reviewed in detail.

- Understand and identify the building components in the basement that need evaluation and consideration prior to concealment.
- Be introduced to code provisions that regulate the overall design of the finished space.
- Learn how emergency escape and rescue openings must be handled.

586: Hazardous Occupancies for Building Departments

Steve Thomas, Shums Coda Associates, Inc: This is a full day class that covers the subject of hazardous materials to assist the Building Official in properly dealing with the more dangerous occupancies. The pertinent sections of the IBC regarding Hazardous Materials will be covered, including each type of H occupancy, as well as additional sections of some other codes. The class covers how to correctly classify materials, correctly determine when a label of "H" occupancy is appropriate, and determines various manners of protection required to reduce risk. Control areas, storage, open and closed systems will all be discussed in depth.

587: Disaster Response & Crisis Communication	Josh Harmon, Shums Coda Associates: This course is a comprehensive, all-day training program designed for building/code enforcement management professionals, disaster response teams, inspectors, and public information officers or staff assigned to communicate with the public and media in times of disaster/crisis. This course focuses on enhancing participants' abilities in three critical areas: effective disaster planning, ensuring inspector and public safety during response operations while understanding the organizational impacts associated with disasters. Through interactive lectures, scenario-based exercises, and group discussions, participants will gain practical skills in developing robust disaster response plans, implementing in-field training and safety protocols to protect inspectors, volunteers, and the general public during and after emergencies. Additionally, the course will cover strategies for effective crisis communication to ensure accurate and timely information dissemination to stakeholders and the public.
588: IBC Life Safety Plan / Design	Eirene Knott MCP, BRR Architecture: This course will review the steps provided for in the International Building Code to develop a life safety plan. We will look at occupancy groups, construction types, occupant loads, number of exits and size of egress. We will also cover exit vs exit access, common path of travel and exit access travel, exit and exit access doorway configuration, intervening rooms, corridors and exit passageways and exit discharge. We will develop and review a life safety plan together.
589: International Plumbing Code Venting - Chapter 9	James Fernandez, State of Colorado: This class will cover the requirements for plumbing venting in Chapter 9 of the 2024 International Plumbing Code. Included in this course will be theory, application, design, and installation of venting systems. Discussion and visual aids (including isometric drawings, photographs, and plumbing fittings) will be included in this course to illustrate code-compliant venting.
590: SMACNA Standards: HVAC Dust Construction, Grease Duct, Air Leakage and Inspection	William Farrel and Eli Howard, SMACNA National: 1st Session: HVAC Duct Construction Standards A. Basic Requirements for Duct Construction B. TDC/TDF Duct, Internal Tie Rods, Duct over 120" Wide C. Round and Flat Oval Duct Construction + Hangers 2nd Session: Kitchen Grease Duct 3rd Session: HVAC Air Duct Leakage 4th Session: Fire, Smoke and Radiation Dampers 5th Session: Duct Systems Inspection Guide
591: Wiring Methods	Diane Lynch, Electrical Consulting and Education, LLC: Discussion of the most common installation requirements for electrical equipment used within an electrical

system. Covering the general information each NEC user should know from Chapters 1-4.

592: Who the Hell's Job)
Is It Anyway?	

DFPC Chief Hedglin: An interactive presentation focused on improving communication between fire departments, fire investigators, and law enforcement. This is not about preaching department policy—whether you're from a volunteer or professional department, poor coordination can lead to uninvestigated fires, missing reports, and frustration between agencies. Through real-world case studies, you'll see how miscommunication can result in lost evidence and incomplete investigations. We'll offer practical solutions to improve interagency cooperation and strengthen fire investigations, with actionable insights to take back to your team. Don't miss this chance to improve your investigative efforts!

593: Protection of Combustible Attic and Interstitial Concealed Spaces

Mark Fessenden, IFSA Global: Fire protection within combustible attic and concealed spaces represents a particular challenge to automatic sprinkler protection. In many cases, specific application sprinklers specifically designed for the hazard are required. This presentation will examine the requirements within NFPA 13 for the protection of these spaces and review the fire testing that led to current protection options.

2025 Colorado Chapter Educational Institute COURSE SELECTION FORM

Register Online at: https://coloradochaptericc.org/education/education-institute

REGISTRATION DEADLINE is FRIDAY, FEBRUARY 14, 2025

NAME: (PRINT CLEARLY PLEASE!)				
REPRESENTING: PHONE: () EMAIL	.:			
MAILING ADDRESS:				
FEE CALCULATION AND COURSE SELECTION	ON – MARK THE APPLICABLE BOXES			
Attendance: Full Week (5 days) ▲ \$ 450	Per Day • \$ 90 \$			
All Classes Are Full Day - Choose Only One Class Per Day				
DAY ONE - MONDAY , MARCH 3, 2025- 8:00 AM				
181 The Complete Permit Technician (Day 1 of 2) 182 Tiny Homes, Tiny Houses and the 2024 Building Code 183 The 2024 IECC- the good, bad and the ugly 184 Construction defects, failures and repairs 185 2024 IRC significant changes 186 2024 IBC Means of Egress	 187 Disaster Mitigation Safety Assessment Program 188 Special Inspections of Installed Firestop Systems 189 2024 IPC Essentials 190 Furnaces and Water Heaters 191 Electrical worker safety; A NEC & NFPA 70E love story 192 2024 IFC overview and significant changes 193 Fire sprinkler essentials for plan review 			
DAY TWO - TUESDAY , MARCH 4, 2025 - 8:00 AM				
 281 The Complete Permit Technician (Day 2 of 2) 282 Disaster recovery-lessons learned on the Front Range 283 ASHRAE 90.1 For the Everyday Life 284 Lateral loads and expansive soils 285 Vapor control in the IRC 286 Advanced means of egress 	 287 2024 IBC significant nonstructural changes 288 Multi-Family building inspection 289 IRC P2904 - Residential fire sprinkler systems 290 Venting of gas fired appliances 291 Cannabis, transformers and motors, oh my! 292 Battery Storage and emergency response 293 The safer buildings coalitions In-building 			
DAY THREE - WEDNESDAY , MARCH 5, 2025 - 8:00 AM				
381 So you want to be a CBO 382 Code enforcement 101- The 5 W's of Municipal Compliance! 383 Residential IECC ½ day field inspection & ½ day classroom 384 Structural plans and practices for non-engineers 385 Over the counter plan review 386 Accessibility for commercial buildings	 387 Commercial building inspections 388 Install and inspection of opening protectives IBC,IFC,NFPA 389 Residential plumbing inspections based on the 2024 IRC 390 A mechanical inspectors guide to multi-family plans 391 PV code requirements if the 2023 NEC, 2021 IRC and IFC 392 Fire Alarm 393 IFC Plan Review 			
DAY FOUR - Thursday , march 6, 2025 – 8:00 am				
481 NFPA 855, standard for the install of energy storage systems 482 2024 IBC Appendix chapters 483 Continuous insulation & foam plastics in the bldg envelope 484 Mass Timber and Conventional Wood Frame Construction: Building code Update 485 Single family, from application to occupancy 486 Having fun in health care, navigating health care construction naze in colorado	 487 Residential energy inspections w/ pics and video 488 Assessment of existing buildings for bldg/fire professionals 489 Sanitary drainage and indirect/special waste 490 2024 IMC essentials 491 Grounding and bonding 492 Snapshot & signatures: mastering fire scene documentation 493 Design comparisons between NFPA13, 13R, 13D and P2904 			
DAY FIVE - FRIDAY , MARCH 7, 2025 - 8:00 AM				
 581 Lessons from the courtroom 582 Picking your battles in the midst of the war 583 Commercial thermal envelopes in the 2024 IECC 584 ASCE 7-22 Seismic, Snow and Wind Loads and the 2024 I Codes and the 2024 I Codes are supported by the second sec	 587 Disaster response and crisis communication 588 IBC life safety plan/design 589 International plumbing code venting chapter 9 590 SMACNA standards: HVAC dust construction, grease duct, air leakage and inspection 591 Wiring methods 592 Who the hell's job is it anyway 593 Protection of combustible attic an interstitial concealed spaces 			

Email: ccicc.institute@gmail.com for program information