

Course Synopsis: Navigating Current Building Codes & Field Applications

Course Description This interactive course provides contractors, builders, and field personnel with a practical, scenario-based review of current building codes and state-specific amendments. Designed to bridge the gap between code text and real-world jobsite application, the curriculum utilizes field examples to test knowledge and correct common compliance misconceptions. Topics span structural framing, energy conservation, MEP (mechanical, electrical, plumbing) installations, and life safety requirements. Students will learn to navigate the International Code Council (ICC) family of codes, the National Electrical Code (NEC), and the Utah State Construction and Fire Codes Act (Title 15A), ensuring projects meet safety standards and pass inspections smoothly.

Learning Objectives

- Identify the current enforceable codes and access state-specific amendments via DOPL and other official resources.
- Evaluate common field installations against IRC, IBC, IPC, and NEC requirements to identify compliance failures.
- Understand critical updates regarding modern materials, including A2L refrigerants, engineered wood products, and spray foam insulation.
- Apply correct safety and accessibility standards to residential and commercial scenarios.

Course Outline

Module 1: Code Administration & Energy Standards

- **The Current Regulatory Landscape:** Navigating the IECC, state adoption cycles, and upcoming code task forces.
- **Resources for Compliance:** Accessing codes via ICC, NFPA, and the Utah Division of Professional Licensing (DOPL).
- **Mechanical Ventilation & Energy:** Blower door testing thresholds (ACH50), whole-house mechanical ventilation requirements, and the distinct applications of HRVs vs. ERVs in Utah.

Module 2: Structural Integrity & Exterior Envelopes

- **Deck Construction:** Proper ledger board attachment, sheathing thickness allowances, and direct contact requirements (IRC R507.9.1.3(1)).

- **Engineered Wood Products:** Manufacturer constraints and code limitations on cutting, notching, and drilling I-joists and structural composite lumber (IRC R502.8).
- **Fasteners & Anchors:** Special inspection requirements for horizontally installed adhesive anchors resisting sustained tension (IBC 1705.3).
- **Exterior Cladding:** Clearance minimums above finished earth grade and paved areas to ensure visible inspection gaps.

Module 3: Plumbing & Mechanical Systems (MEP)

- **Plumbing Code Jurisdiction:** Understanding the substitution of IRC plumbing chapters with the International Plumbing Code (IPC) under state amendments.
- **Exterior Water Supply:** Minimum requirements and location positioning for exterior hose bibbs and sill cocks.
- **HVAC & Ducting Materials:**
 - Prohibitions on using building framing cavities as return air plenums without proper lining.
 - Material restrictions for domestic range hood exhaust (rigid metal vs. flex duct) (IRC M1503.4).
- **A2L Refrigerants:** New pipe identification, equipment signage, and safety warning protocols for mildly flammable refrigerants (M1411.5).

Module 4: Electrical Safety & Modernization

- **Receptacle Placements:** Navigating NEC requirements and state exceptions for kitchen island and countertop receptacle locations (NEC 210.52(C)(3)).
- **High-Voltage GFCI Protection:** Updated GFCI requirements for 125V-250V receptacles in wet/laundry areas (NEC 210.8(A)(10)).
- **Service Disconnects:** Exterior emergency disconnect requirements, replacement protocols, and proper labeling standards for service and meter equipment (NEC 230.85).

Module 5: Life Safety, Accessibility, & Fire Protection

- **Egress & Accessibility:**
 - Commercial egress door swing directions based on occupant load and hazard classification (IBC 1010.1.2.1).

- Applying IBC Chapter 11 and ICC A117.1 standards for accessible restroom grab bar configurations.
- **Hazardous Glazing:** Identifying hazardous locations near wet surfaces (pools, tubs, spas) and the acceptable use of safety films and certificates of compliance in lieu of tempered glass replacement (IRC R324).
- **Fire Protection:**
 - Carbon Monoxide alarm requirements across different fuel types and dwelling configurations.
 - Thermal barrier requirements for separating foam plastic insulation (spray foam) from interior spaces (IBC 2603.4).