



8-Hour Core Hours - Utah Plumber Renewal Online CE

Course Outline

Core Hours (8)

Hour 1: Administration, Scope, and Definitions (1 Hour)

Subtopic 1 — Code Adoption & Authority: How Utah adopts the plumbing code and enforces statewide amendments. (IPC 2021 Ch. 1; Utah Code 15A-2 & 15A-3)

Subtopic 2 — Scope & Application: What work the plumbing code covers and when other codes govern. (IPC 2021 §101–§102)

Subtopic 3 — Permits & Inspections: When permits are required and how inspections are scheduled and approved. (IPC 2021 §106–§107)

Subtopic 4 — Duties of Permit Holders & Installers: Responsibilities for compliance, listings, and instructions. (IPC 2021 §108; §303)

Subtopic 5 — Key Definitions: Terms that drive compliance throughout the code. (IPC 2021 §202)

Subtopic 6 — Referenced Standards & Conflicts: How referenced standards are invoked and conflicts resolved. (IPC 2021 §102.3; Ch. 15)

Hour 2: General Regulations—Materials, Workmanship, Protection (1 Hour)

Subtopic 1 — Approved Materials & Identification: Listing/labeling, third-party certification, and markings. (IPC 2021 §303–§307)

Subtopic 2 — Structural Protection & Corrosion Control: Sleeves, wrapping, and separation from hazards. (IPC 2021 §305)

Subtopic 3 — Support & Anchorage: Spacing, hangers, and protection against movement. (IPC 2021 §308)

Subtopic 4 — Pressure Testing & Leaks: Tests, inspections, and acceptance criteria. (IPC 2021 §312)

Subtopic 5 — Prohibited Fittings & Connections: Arrangements the code does not permit. (IPC 2021 §706; §1002)

Subtopic 6 — Alternative Materials & Methods: Getting approval for innovative products or systems. (IPC 2021 §105)

Hour 3: Plumbing Fixtures, Faucets, and Clearances (1 Hour)

Subtopic 1 — Minimum Plumbing Facilities: Determining required fixture counts. (IPC 2021 §403)

Subtopic 2 — Installation, Spacing, and Accessibility: Mounting, clearances, and usability. (IPC 2021 §405)

Subtopic 3 — Fixture Fittings: Performance, flow rates, and valves. (IPC 2021 §424)

Subtopic 4 — Special Fixtures & Appliances: Food waste disposers, dishwashers, and similar. (IPC 2021 §413–§422)

Subtopic 5 — Public vs. Private Facilities: When public access fixtures are required. (IPC 2021 §403.1–§403.6)

Subtopic 6 — Protection of Surfaces & Sanitation: Smooth, nonabsorbent, and cleanable requirements. (IPC 2021 §405.4; §305.4)

Hour 4: Water Heaters—Safety, Installation, and Discharge (1 Hour)

Subtopic 1 — Equipment Types & Location: Tank-type, tankless, and placement constraints. (IPC 2021 §501–§502)

Subtopic 2 — Combustion Air & Venting Interfaces: Coordination with fuel-gas and mechanical requirements. (IPC 2021 §501.8; IFGC 2021 Ch. 3 & 5 referenced)

Subtopic 3 — T&P Relief Valves: Ratings, installation, and required discharge piping. (IPC 2021 §504.6–§504.7)

Subtopic 4 — Pan, Drains, and Protection: Preventing water damage from leaks and overflows. (IPC 2021 §504.7; §307)

Subtopic 5 — Circulation & Recirculation Controls: Return piping, pumps, and scald protection. (IPC 2021 §607)

Subtopic 6 — Commissioning & Maintenance Notes: Start-up checks and service documentation. (IPC 2021 §501.6; §613)

Hour 5: Water Supply & Distribution—Design and Sizing (1 Hour)

Subtopic 1 — Potable Water Quality & Separation: Keeping potable systems free from contamination. (IPC 2021 §601–§603)

Subtopic 2 — Pipe Sizing Fundamentals: Demand, velocity, pressure, and developed length. (IPC 2021 §604; App. E when adopted)

Subtopic 3 — Valves & Shutoffs: Required control locations and accessibility. (IPC 2021 §606)

Subtopic 4 — Thermal Expansion & Pressure Control: Expansion tanks and regulators. (IPC 2021 §607)

Subtopic 5 — Insulation, Protection, and Freeze Safeguards: Temperature maintenance and freeze protection. (IPC 2021 §305; §607.5)

Subtopic 6 — Materials & Joints: Approved materials and joining methods for water distribution. (IPC 2021 §605)

Hour 6: Cross-Connection Control & Backflow Prevention (1 Hour)

Subtopic 1 — Air Gaps & Backflow Devices: Selecting the correct method for the hazard. (IPC 2021 §608.1–§608.6)

Subtopic 2 — Assemblies, Devices, and Methods: RPZ, DCVA, PVB, and application limits. (IPC 2021 §608.14)

Subtopic 3 — Location, Access, and Drainage: Placement for testing, protection, and discharge. (IPC 2021 §608.14.1–§608.14.2)

Subtopic 4 — Thermal Expansion Interaction: Ensuring backflow protection does not create overpressure. (IPC 2021 §607.3; §608.3)

Subtopic 5 — Inspection, Testing, and Maintenance: Initial and periodic verification of protection. (IPC 2021 §312; §608.16)

Subtopic 6 — Special Hazards & Isolation: Process equipment, boilers, and auxiliary water sources. (IPC 2021 §608.16–§608.17)

Hour 7: Sanitary Drainage—Layout, Slopes, and Cleanouts (1 Hour)

Subtopic 1 — Piping Fundamentals & Materials: Approved piping and sizing for sanitary drainage. (IPC 2021 §701–§703)

Subtopic 2 — Fittings, Direction Changes, and Junctions: Flow-friendly arrangements and exceptions. (IPC 2021 §704–§706)

Subtopic 3 — Slope & Velocity: Minimum slopes to maintain self-scouring velocities. (IPC 2021 §704.1; §710)

Subtopic 4 — Cleanouts & Access: Required locations and clearances. (IPC 2021 §708)

Subtopic 5 — Building Sewer Connections: Transition to public or private sewage systems. (IPC 2021 §718–§722)

Subtopic 6 — Testing & Leakage: Water/air tests and acceptance criteria. (IPC 2021 §312.2–§312.4)

Hour 8: Venting, Traps, and Utah Amendments (1 Hour)

Subtopic 1 — Vent System Purpose & Types: Individual, common, wet, circuit, and relief vents. (IPC 2021 §901–§915)

Subtopic 2 — AAVs & Limitations: Where air admittance valves are permitted and restricted. (IPC 2021 §918)

Subtopic 3 — Trap Seal Protection: Design, trap arms, and trap seal maintenance. (IPC 2021 §1002)

Subtopic 4 — Interceptors & Separators: When grease, oil, and other interceptors are required. (IPC 2021 §1003)

Subtopic 5 — Vent Termination & Clearances: Heights, distances, and protection at the roof. (IPC 2021 §903)

Subtopic 6 — Utah Statewide Amendments Overview: Key state amendments affecting IPC application. (Utah Code 15A-3 Part 3; Utah Admin. Code R156-55c)

Course Objectives

1. **Interpret and apply administrative provisions** to real-world jobs, including scope, permitting, inspections, alternative materials/methods, and due-process paths with the authority having jurisdiction.
2. **Select and install approved materials and joints** by reading listings/labels, following manufacturer instructions, and meeting standards for support, protection, pressure/leak testing, and corrosion control.
3. **Lay out and verify plumbing fixtures and fittings**—counts, clearances, accessibility, and performance—so installations meet code for both residential and commercial occupancies.
4. **Install water heaters and hot-water systems safely**, including T&P relief and discharge, pans/drains, combustion air/venting interfaces, scald protection, recirculation controls, and commissioning documentation.
5. **Design and size potable water distribution systems** (service through branches) using code tables/methods for pressure, demand, valves, thermal expansion, insulation, and freeze protection.
6. **Provide cross-connection control** by choosing the correct air gaps and listed assemblies (RPZ, DCVA, PVB), placing them for access/drainage, and coordinating testing and maintenance requirements.
7. **Design gravity sanitary drainage and venting** (DWV) that maintains slopes, uses permitted fittings, provides cleanouts, protects trap seals, and employs code-compliant venting strategies (individual, common, wet, circuit).
8. **Apply Utah statewide amendments and referenced standards** wherever they modify the IPC, resolving conflicts correctly and documenting code sections on plans, submittals, and inspection checklists.