**Utah Plumbing Continuing Education 2018 Codes (12 Hours)**

**Instructor:** Bradly Hodges

**Narrative Summary:** Utah Plumbers (Masters and Journeyman) are required to obtain 12 hours of continuing education for each renewal. This course satisfies 8 Core hours and 4 Professional hours. @HomePrep is a National Leader in online education. With over 100,000 satisfied students and a course catalog of over 1,000 classes, we are here to help you – Invest in Yourself.

Utah Pluming Continuing Education Course Outline

1. 2018 International Plumbing Code Part 1 (20 Minutes)
   1. Chapter 1 Scope and Administration
      1. 101.3 Intent
         1. Reasonable safety level
         2. Plumbing equipment and system regulation
      2. 102.2.1 Existing Buildings
         1. International Existing Building Code
      3. 106.1.1 Annual Permit
         1. Approved system or equipment installation
      4. 106.1.2 Annual Permit Records
         1. Detailed records of alterations
      5. 107.1 General
         1. Visible and able to be accessed
      6. 108.7.2 Authority to Disconnect Service Utilities
         1. Elimination of immediate danger to life or property
         2. Notification
   2. Chapter 2 Definitions
      1. Accessible
         1. Complies with International Building Code
      2. Alternate On-Site Nonpotable Water
         1. Other than public utilities, on-site surface sources and subsurface natural freshwater sources
      3. Approved Agency
         1. Regularly conduct tests and inspection services
      4. Backflow Preventer
         1. Potable water supply
      5. Building
         1. Utilized for sheltering
      6. Drinking Fountain
         1. Potable water distribution system
         2. Drainage system
      7. Full-Open Valve
         1. Control or Shutoff component
      8. Grease Interceptor
         1. Fats, oils, and greases disposal system
         2. Gravity
         3. Hydromechanical
      9. Mechanical Joint
         1. Connection and joint
         2. Part of coupling, fitting, or adapter
      10. Press-Connect Joint
          1. Permanent mechanical joint
      11. Public Swimming Pool
          1. Other than residential
      12. Registered Design Professional
          1. Registered or licensed to practice their design profession
      13. Toilet Facility
          1. One water closet and lavatory
      14. Waste receptor
          1. Discharge of indirect waste pipes
   3. Chapter 3 General Regulations
      1. 303.5 Cast iron soil pipe, fittings and components
         1. Third party
      2. 305.1 Protection against contact
         1. No direct contact with steel framing members
      3. 307.5 Protection of Footings
         1. Parallel installed trenching
      4. Table 308.5 Hanger Spacing
         1. Maximum Horizontal Spacing
         2. Maximum Vertical Spacing
      5. 308.10 Thermal Expansion Tank
         1. Supported in accordance with manufacturer’s instructions
      6. 314.2.2 Drain Pipe Materials and Sizes
         1. Condensate disposal systems
      7. Table 314.2.2 Condensate Drain Sizing
         1. Equipment Capacity
         2. Minimum Condensate Pipe Diameter
      8. 314.2.4.1 Ductless Mini-Split System Traps
         1. In-line check valve
      9. 314.2.5 Drain Line Maintenance
         1. Condensate drain lines
   4. Chapter 4 Fixtures, Faucets, and Fixture Fittings
      1. 403.1 Minimum Number of Required Plumbing Fixtures
         1. Fixture Requirements
      2. Table 403.1 MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES
         1. Classification
         2. Description
         3. Water Closets
         4. Lavatories
         5. Bathtubs/Showers
         6. Drinking Fountain
         7. Other
      3. 403.3 Employee and Public Toilet Facilities
         1. Intended for public utilizations
         2. Employee toilet facilities
         3. Exception
            1. parking garages without attendants
            2. Quick transaction spaces
      4. 403.4.1 Directional Signage
         1. Readily seen from main entrance
      5. 405.3.1 Water Closets, urinals, Lavatories and Bidets
         1. Minimum Distance to other fixtures
         2. Exception: Children’s water closets
      6. 405.5 Plumbing fixtures with a pumped waste
         1. ASME A112.3.4/CSA B45.9
      7. 406.1 Water Connections
         1. Water connection
         2. Integral air gap
      8. 409.2 Water Connection
         1. Dishwashing machine
         2. Integral air gap
         3. Backflow preventer
      9. 409.4 Residential Dishwasher Waste Connection
         1. Wye branch fitting
      10. 411.3 Water Supply
          1. Emergency shower or eyewash
      11. 412.10 Head Shampoo Sink Faucets
          1. Water-temperature-limiting device
      12. 413.1 Approval
          1. Floor Drains
          2. Trench Drains
      13. 421.4.1 Floor and Wall Area
          1. Smooth, corrosion-resistant and nonabsorbent waterproof materials
      14. 423.3 Footbaths and pedicure baths
          1. Specialty plumbing fixtures
          2. Water temperature limiting device
      15. 426.1 Approval
          1. Whirlpool bathtubs
      16. Review
          1. Approved Agency
          2. Full-Open Valve
          3. FOG Disposal System
          4. Ductless mini-split equipment
          5. Employee toilet facilities
          6. Restroom signage
          7. Dishwasher water supply
          8. Footbath water temperature
2. 2018 International Plumbing Code Part 2 (18 Minutes)
   1. Chapter 5 Water Heaters
      1. 501.3 Drain Valves
         1. Tank-type water heater
         2. Hot water storage tank
      2. 504.6 Requirements for discharge piping
         1. Drainage system
         2. Air gap discharge
         3. Outlet valve diameter
         4. Single relief device
         5. Floor discharge
         6. Personal injury or structural damage
         7. Observable
         8. Trapped
         9. Gravity flow
         10. Flood level rim
         11. Threaded connection
         12. Valves or tee fittings
         13. Tested, rated and approved materials
         14. Larger than the relief valve outlet
      3. 504.7.2 Pan drain termination
         1. Indirect waste receptor or floor drain
         2. Replacement water heater installation
   2. Chapter 6 Water Supply and Distribution
      1. 601.5 Rehabilitation of Piping Systems
         1. Epoxy lining system
      2. 603.2 Separation of Water Service and Building Sewer
         1. Horizontal separation distance
         2. Pipe materials
      3. 605.2.1 Lead Content of drinking water pipe and fittings
         1. Fittings
         2. Weighted average lead content
      4. Table 605.3 Water Service Pipe
         1. Material
         2. Standard
      5. Table 605.4 Water Distribution Pipe
         1. Material
         2. Standard
      6. 605.13.3 Grooved and Shouldered Mechanical Joints
         1. Approved elastomeric seal
         2. Exposed or concealed joints
      7. 605.13.5 Press-Connect Joints
         1. Cut tube ends
         2. Joint surfaces
         3. Pressconnect fitting
      8. 605.13.7 Push-Fit Joints
         1. Installation
      9. 605.21.2 Grooved and Shouldered Mechanical Joints
         1. Approved elastomeric seal
         2. Exposed or concealed joints
      10. 607.2.1 Circulation systems and heat trace systems for maintaining heated water temperature in distribution systems
          1. Group R2, R3, R4
          2. Other Groups not listed
      11. 607.2.1.1 Pump controls for hot water storage systems
          1. Limit operation
      12. 607.3 Thermal Expansion Control
          1. Thermal expansion control device
          2. Thermal expansion tank
      13. 607.5 Insulation of Piping
          1. Water heater inlet
      14. 608.4 Potable Water Handling and Treatment Equipment
          1. Contamination
      15. 608.9.1 Signage Required
          1. Nonpotable water outlets
          2. Legible caution signage
      16. Figure 608.9.1 Pictograph – DO NOT DRINK
      17. 608.9.2 Distribution Pipe Labeling and Marking
          1. Purple identification tape or wrap
          2. Pipe identification
          3. Observable lettering
      18. 608.17.1 Beverage Dispensers
          1. Backflow protection
      19. 608.17.1.1 Carbonated beverage dispensers
          1. Backflow preventer
          2. Carbon dioxide gas
      20. 608.17.1.2 Coffee Machines and Noncarbonated Drink Dispensers
          1. Backflow preventer
      21. 608.17.9 Dental pumping equipment
          1. Backflow Protection
      22. 608.17.10 Humidifiers
          1. Backflow preventer
      23. Review
          1. Minimum size of drain valve inlet
          2. Water heater drain pans
          3. Lead content of drinking water
          4. Minimum pressure rating of hot water distribution pipe
          5. Nonpotable water signage
3. 2018 International Plumbing Code Part III (13 Minutes)
   1. Chapter 7 Sanitary Drainage
      1. 701.2 Connection to Sewer required
         1. Public sewer
      2. 702.5 Temperature Rating
         1. Sanitary drainage piping material
      3. 703.6 Combined Sanitary and Storm Public Sewer
         1. Independently connected
      4. 705.10.2 Solvent Cementing
         1. Purple primer
         2. Solvent cement joints
         3. Exception
            1. Third-party certified cement
            2. Nonpressure applications
      5. 705.15 Polypropylene Plastic
         1. Elastomeric Seal
      6. 705.18 Caulking Ferrules
         1. Copper alloy
         2. Table 705.18
      7. 708.1 Cleanouts Required
         1. Drainage piping
      8. 708.1.1 Horizontal Drains and Building Drains
         1. Interval length
         2. Exception: nonremovable trap
      9. 708.1.2 Building Sewers
         1. Interval length from cleanout or manhole opening
      10. 708.1.3 Building Drain and Building Sewer Junction
          1. Developed length of piping upstream
          2. Cleanout access
      11. 708.1.4 Changes of Direction
          1. Horizontal drainage pipe
      12. 708.1.5 Cleanout Size
          1. Same size as piping
          2. Exception
             1. Removable P-trap
             2. Located on stacks
             3. Cast-iron piping
      13. 708.1.6 Cleanout Plugs
          1. Approved materials
          2. Raised or countersunk square head
          3. Trim cover screw
      14. 708.1.7 Manholes
          1. Gas-tight covers
      15. 708.1.8 Installation Arrangement
          1. Cleaning of drainage piping
          2. Exception
             1. Test tees
             2. Two-way cleanout installation
      16. 708.1.9 Required Clearance
          1. Cleanouts
      17. 708.1.10 Cleanout Access
          1. Concealed locations
      18. 708.1.10.1 Cleanout Plug Trim Covers
          1. Approved designs
          2. Corrosion resistant
      19. 708.1.10.2 Floor Cleanout Assemblies
          1. Vehicular traffic
      20. 708.1.11 Prohibited Use
          1. Threaded cleanout opening
      21. 714.1 Sewage backflor
          1. Finished floor elevation
          2. Plumbing fixtures
          3. Exception: fixtures in existing buildings
      22. 716.1 General
          1. Replacement
      23. 716.2 Applicability
          1. Gravity drainage pipes
      24. 716.4 Pipe
          1. Standard dimension ratio
      25. Review
          1. Horizontal drainage pipes
          2. Cleanout plugs
          3. Manholes in buildings
          4. Concealed location cleanouts
          5. Cleanout plugs
4. 2018 International Plumbing Code Part 4 (7 Minutes)
   1. Chapter 8 Indirect/Special Waste
      1. 802.1 Where Required
         1. Food-handling equipment
      2. 802.1.1 Food Handling
         1. Indirect waste pipe
         2. Multiple-compartment sink
      3. 802.1.7 Food Utensils, Dishes, Pots and Pans Sinks
         1. Air gap or break to drainage system
      4. 802.2 Material, Joints, and Connections
         1. Indirect waste piping system
      5. 802.4 Waste Receptors
         1. Removable strainer or basket
         2. Ready access
      6. 802.3.2 Hub Drains
         1. Water-impervious floor
      7. 802.3.3 Standpipes
         1. Individually trapped
         2. Above trap weir
      8. 802.4.3.1 Connection of laundry tray to standpipe
         1. Without a fixture trap
   2. Chapter 9 Vents
      1. 903.1 Roof Extension
         1. Open vent pipes
      2. 903.2 Frost Closure
         1. Outside design temperature
         2. Building’s thermal envelope
      3. 915.1 Type of Fixtures
         1. Combination waste and vent system
      4. 918.8 Prohibited Installations
         1. Air admittance valves
      5. Review
         1. Standpipes Installed
         2. Assembly roof
         3. Air admittance valves
5. 2018 International Plumbing Code Part 5 (9 Minutes)
   1. Chapter 10 Traps, Interceptors and Separators
      1. 1002.1 Fixture traps
         1. Liquid-seal trap
         2. Vertical and horizontal distance
         3. Exceptions
            1. Integral traps fixtures
            2. Combination plumbing fixture
            3. Grease interceptor
            4. Multilevel parking structure floor drains
      2. 1002.4 Trap Seals
         1. Accessible fixtures
      3. 1002.4.1 Trap Seal Protection
         1. Emergency floor drain traps and trap seals
      4. 1002.4.1.1 Portable water-supplied trap seal primer valve
         1. Supply water to the trap
      5. 1002.4.1.2 Reclaimed or gray water-supplied trap seal primer valve
         1. Quality of reclaimed or gray water
      6. 1002.4.1.3Waste water-supplied trap primer device
         1. Discharge pipe
      7. 1002.4.1.4 Barrier-type trap seal protection device
         1. Floor drain trap seal evaporation protection
      8. 1003.3.2 Food Waste Disposers Restriction
         1. Grease interceptor
      9. 1003.3.3 Additives to Grease Interceptors
         1. Performance additives
      10. 1003.3.7 Gravity Grease Interceptors and gravity grease interceptors with fats, oils, and greases disposal systems
          1. Peak drain flow and interceptor multiplication
      11. 1003.3.8 Direct Connection
          1. Direct connection to sanity drainage system
      12. 1003.4 Oil Separators Required
          1. Floor or trench drains provided
          2. Exception: hydraulic elevator pits
      13. 1003.6 Clothes Washer Discharge Interceptor
          1. Removable wire basket
          2. Exceptions
             1. Clothes washers
             2. Single clothes washer
      14. 1003.9 Venting of Interceptors and Separators
          1. Air bound
      15. Review
          1. Fixture trap liquid seal
          2. Barrier-type seal protection
          3. Gravity grease interceptors capacity
          4. Grease interceptor connection
6. 2018 International Plumbing Code Part 6 ( 22 Minutes)
   1. Chapter 11 Storm Drainage
      1. 1101.7 Roof Design
         1. Maximum possible depth of water
      2. 1105.2 Roof Drain Flow Rate
         1. Maximum anticipated ponding
      3. 1106.3 Vertical Leader Sizing
         1. Flow rate from horizontal gutters
      4. Table 1106.3 Vertical leader sizing
         1. Size of leader
         2. Capacity
      5. 1106.5 Parapet Wall Scuppers
         1. Primary roof drainage
         2. Secondary emergency overflow
      6. 1106.6 Size of Roof Gutters
         1. Roof surface flow rate
      7. Table 1106.6 Horizontal gutter sizing
         1. Gutter dimensions
         2. Slope
         3. capacity
      8. 1109.1 General
         1. Independently connected
   2. Chapter 12 Special Piping and Storage Systems
      1. 1202.1 Nonflammable Medical Gases
         1. Exceptions
            1. Portable systems or cylinder storage
            2. Exhaust terminations
      2. 1203.1 Design and Installation
         1. Nonmedical oxygen systems
   3. Chapter 13 Nonpotable Water Systems
      1. 1301.1 Scope
         1. Nonpotable water
      2. 1301.2 Water Quality
         1. Minimum water quality requirements
      3. 1301.2.1 Residential Disinfectants
         1. Chlorine and ozone
      4. 1301.2.2 Filtration Required
         1. Water closet and urinal flushing
      5. 1301.3 Signage Required
         1. Nonpotable water outlets
         2. Legible required signage
      6. Figure 1301.3 Pictograph- do not drink
      7. 1301.4 Permits
         1. Required for nonpotable water systems
         2. Data submission
      8. 1301.5 Potable Water Connections
         1. Backflow protection
      9. 1301.6 Components and Materials
         1. Manufacturer intended application
      10. 1301.7 Insect and Vermin Control
          1. Storage tanks and piping systems
          2. Screen materials
      11. 1301.8 Freeze Protection
      12. 1301.9 Nonpotable Water Storage Tanks
      13. 1301.9.1 Location
          1. Tank Construction
          2. Sun Barriers
          3. Installation
      14. 1301.9.2 Materials
          1. Durable, nonabsorbent and corrosion-resistant materials
      15. 1301.9.3 Foundation and Supports
          1. Withstanding weight of storage tank
      16. 1301.9.3.1 Ballast
          1. Underground storage tank
          2. Buoyancy force of tank
          3. Flat foundation
      17. 1301.9.3.2 Structural Support
          1. Withstand earth and surface structural loads
      18. 1301.9.4 Makeup Water
          1. Required uninterrupted supply
          2. Full-open valve
      19. 1301.9.5 Overflow
          1. Storage tank
          2. Drainage and cleanout
      20. 1301.9.6 Access
          1. Inspection and cleaning of tank interior
          2. Approved locking device
          3. Manhole and service port
             1. Exception: Treated-water storage tanks
      21. 1301.9.7 Venting
          1. Aggregate diameter
      22. 1301.9.8 Draining of Tanks
          1. Tank drain pipe
      23. 1301.9.9 Marking and Signage
          1. Rated capacity
      24. 1301.9.10 Storage Tank Tests
          1. Overflow line
          2. Supplemental water
          3. Tank drain
          4. Makeup water system
      25. 1301.10 System Abandonment
          1. Remove or disable connection
          2. Distribution piping system
          3. Accidental access
      26. 1301.11 Trenching Requirements for Nonpotable Water Piping
          1. Undisturbed or compacted earth
          2. Exceptions
             1. Required separation distance
             2. Building sewer
             3. Irrigation piping
      27. 1301.12 Outdoor Outlet Access
          1. Located in locked vault
          2. Means of removable key
      28. Review
          1. Vertical leader size
          2. Combined with sanitary sewer
          3. Residual disinfectants
          4. Storage tank inspection
          5. Outdoor outlet access
7. 2018 International Plumbing Code Part 7 (11 Minutes)
   * 1. 1302.1 General
        1. Nonpotable water reuse
     2. 1302.2 Sources
        1. Bathtubs, showers, lavatories, clothes washers and laundry trays
     3. 1302.2.1 Prohibited Sources
        1. Waste water
        2. Reverse osmosis system
     4. 1302.3 Traps
        1. Fixtures and devices discharging waste water
     5. 1302.4 Collection Pipe
        1. Convey untreated water for reuse
        2. Vent piping
     6. 1302.4.1 Installation
        1. Collection piping
     7. 1302.4.2 Joints
        1. Distribution piping
     8. 1302.4.3 Size
        1. Drainage sizing requirements
     9. 1302.4.4 Labeling and Marking
        1. Collection piping conveying untreated water
     10. 1302.5 Filtration
         1. Untreated collected water
         2. Pressure gauge
     11. 1302.6 Disinfection and Treatment
         1. Application of nonpotable water
     12. 1302.6.1 Gray Water Used for Fixture Flushing
         1. Water closets and urinals
         2. Water reuse treatment system
     13. 1302.7 Storage Tanks
         1. On-site nonpotable water reuse systems
     14. 1302.7.1 Location
         1. Minimum horizontal distance
         2. Table 1302.7.1 Location of nonpotable water reuse storage tanks
     15. 1302.7.2 Outlets
         1. Bottom of storage tank
     16. 1302.8 Valves
         1. On-site nonpotable water reuse systems
     17. 1302.8.1 Bypass Valve
         1. One three-way diverter valve
     18. 1302.8.2 Backwater Valve
         1. Overflow and tank drain pipe
     19. 1302.9 Pumping and Control System
         1. Mechanical equipment
         2. Minimum flow arte and flow pressure
     20. 1302.10 Water Pressure-Reducing Valve or Regulator
         1. Water pressure supplied by pumping system
     21. 1302.11 Distribution Pipe
         1. Exception: irrigation piping
     22. 1302.11.1 Materials, Joints, and Connections
         1. Distribution piping
     23. 1302.11.2 Design
         1. For intended application
     24. 1302.11.3 Marking
         1. Water distribution piping
     25. 1302.12 Tests and Inspections
         1. Performance
     26. 1302.12.1 Collection Pipe and Vent Test
         1. Drain, waste and vent piping
     27. 1302.12.2 Storage Tank Test
     28. 1302.12.3 Water Supply System Test
         1. Makeup water supply piping and distribution piping
     29. 1302.12.4 Inspection and Testing of Backflow Prevention Assemblies
     30. 1302.12.5 Inspection of Vermin and Insect Protection
         1. Inlets and vents to the system
     31. 1302.12.6 Water Quality Test
         1. Verified at point of use
     32. 1302.13 Operation and Maintenance Manuals
     33. 1302.13.1 Manual
         1. Hardcopy form
     34. 1302.13.2 Schematics
         1. Detailed system and locations
     35. 1302.13.3 Maintenance Procedures
         1. Components requiring periodic maintenance
     36. 1302.13.4 Operations Procedures
         1. System startup and shutdown
     37. Review
         1. Sources for nonporable water reuse systems
         2. Schematics
         3. Operations procedures
8. 2018 International Plumbing Code Part 8 (13 minutes)
   * 1. 1303.1 General
        1. Construction, installation, alteration, and repair
     2. 1303.1.1 Fire Protection Systems
        1. Storage, treatment, and distribution
     3. 1303.2 Collection Surface
        1. Above-ground impervious roofing surfaces
     4. 1303.4 First-flush Diverter
        1. Automatically operated
        2. Storm water runoff
     5. 1303.5 Roof Gutters and Downspouts
        1. Compatible with collection surface and rainwater quality
     6. 1303.5.1 Slope
        1. Roof gutters, leaders, and rainwater collection piping
        2. Gutters and downspouts
        3. Exception: siphonic drainage systems
     7. 1303.5.2 Size
        1. Gutters and downspouts
     8. 1303.6 Drainage
        1. Roof washer or debris excluder
     9. 1303.7 Collection Pipe
        1. Rainwater collection and conveyance systems
     10. 1303.7.1 Installation
         1. Collection piping
     11. 1303.7.2 Joints
         1. With distribution piping
     12. 1303.7.3 Size
         1. Drainage sizing requirements
     13. 1303.7.4 Marking
         1. Required for sanitary drainage, waste and vent piping
     14. 1303.8 Filtration
         1. Collected rainwater
         2. Accessible for inspection and maintenance
         3. Shutoff valves
     15. 1303.9 Disinfection
         1. Residual chlorine levels
     16. 1303.10 Storage Tanks
     17. 1303.10.1 Location
         1. Minimum horizontal distance
         2. Table 1303.10.1 Location of rainwater storage tanks
            1. Element
            2. Minimum horizontal distance from storage tank
     18. 1303.10.2 Inlets
         1. Minimum turbulence
     19. 1303.10.3 Outlets
         1. 4 inches above
     20. 1303.11 Valves
         1. Rainwater collection and conveyance systems
     21. 1303.11.1 Backwater Valve
         1. Overflow and tank drain pipe
     22. 1303.12 Pumping and Control System
         1. Easily accessible and removable
     23. 1303.13 Water Pressure-Reducing Valve or Regulator
         1. Water pressure supplied by pumping system
     24. 1303.14 Distribution Pipe
         1. Rainwater collection
     25. 1303.14.1 Materials, Joints and Connections
     26. 1303.14.2 Design
         1. Distribution piping systems
     27. 1303.14.3 Marking
     28. 1303.15 Tests and Inspections
     29. 1303.15.1 Roof Gutter Inspection and Test
         1. Gutter opposite the collection point
     30. 1303.15.2 First-flush Diverter Test
         1. Proper diversion of first amount of water
     31. 1303.15.8 Water Quality Test
         1. Jurisdiction requirements
     32. 1303.15.9 Collected Raw Rainwater Quality
         1. Impacted quality
   1. Chapter 14 Subsurface Landscape Irrigation Systems
      1. 1401.1 Scope
         1. Materials, design, construction, and installation
      2. 1401.2 Materials
         1. Above-ground drain, waste and vent piping
         2. Subsurface landscape irrigation
      3. 1402.1 Sizing
         1. Sum of output
         2. Gray water collection piping
         3. Gallon-per-day-per-occupant number
         4. Number of occupants
            1. Residential
            2. Commercial
         5. Estimated flow demands
         6. Estimated gray water discharge
      4. Table 1403.2 Distribution Pipe
         1. Polyethylene PE plastic pipe
         2. Polyvinyl chloride PVC plastic pipe
         3. Polyvinyl chloride PVC plastic pipe
            1. 3.5 inch O.D
            2. Solid cellular core wall
      5. Review
         1. Collection Surfaces
9. 2018 International Fuel Gas Code
   1. Chapter 1 Scope and Administration
      1. 105.2 Alternative Materials Design, and Merhods of Construction and Equipment
      2. 106.1.1 Annual Permit
         1. Approved system or equipment installation
      3. 106.1.2 Annual Permit Records
         1. Detailed record of alterations
      4. 108.7.2 Authority to Disconnect Service Utilities
         1. Eliminate immediate hazard to life or property
   2. Chapter 2 Definitions
      1. Air, Makeup
         1. Outdoor and transfer air
      2. Appliance
      3. Approved
         1. Code official
      4. Design Flood Elevation
         1. Legally designated flood hazard map
         2. Zone AO
      5. Labeled
      6. Piping
      7. Regulator, Monitoring
      8. Regulator, Series
      9. Toilet, Gas-Fired
      10. Unit Heater
   3. Chapter 3 General Regulations
      1. 303.3 Prohibited Locations
      2. 304.1 General
         1. Application of air for combustion, ventilation, and dilution of fuel gases
         2. Direct-vent appliances
         3. Appliances equipped with power burners
      3. 306.6 Guards
         1. Components requiring service and roof hatch openings
         2. Exception: permanent fall arrest/restraint anchorage devices
      4. 307.6 Condensate Pumps
         1. Uninhabitable spaces
         2. Manufacturer’s instructions
      5. 310.2 CSST
         * 1. Corrugated stainless steel tubing gas piping systems
         1. Electrical service grounding electrode system
      6. 310.2.3 Bonding Jumper Length
         1. Gas piping system and grounding electrode system
      7. 310.3 Arc-Resistant CSST
   4. Chapter 4 Gas Piping Installations
      1. 402.2 Maximum Gas Demand
         1. Sum of maximum input
         2. Total connected hourly load
         3. Volumetric flow rate of gas
      2. 403.6 Plastic Pipe, Tubing and Fittings
         1. Polyethylene plastic pipe, tubing, and fittings
         2. Polyvinyl chloride and chlorinated polyvinyl chloride
      3. 403.10.4 Metallic Fittings
         1. Threaded fittings
         2. Steel or wrought-iron pipe fittings
         3. Copper or copper alloy pipe fittings
         4. Aluminum pipe fittings
         5. Cast-iron fittings
            1. Flanges
            2. Bushings
            3. Flammable gas-air mixtures
            4. 4 inch or larger fittings
            5. 6 inch or larger fittings
         6. Aluminum-alloy fittings
         7. Zinc aluminum-alloy fittings
         8. Special fittings
         9. Drilled and tapped pipe fittings
            1. Operating pressures
            2. Gas supplier or representative
            3. Drilling and tapping operation
            4. Outdoors
            5. Free of leakage
      4. 404.5 Fittings in Concealed Locations
         1. Types
            1. Threaded elbows
            2. Brazed
            3. Welded
            4. ANSI LC-1/CSA 6.26 or ANSI LC-4
      5. 404.7 Protection against Physical Damage
         1. Light-frame construction assemblies
         2. Exception: black steel piping and galvanized steel piping
      6. 404.7.1 Piping through Bored Holes or Notches
         1. Shield plates protection
         2. Framing member
      7. 404.7.2 Piping Installed in Other Locations
         1. Attached celling or floor membranes
      8. 404.7.3 Shield Plates
         1. Steel material
      9. 404.18 Pipe Cleaning
         1. Prohibition of cleaning with flammable gas
      10. 410.2 MP Regulators
          1. Inlet and outlet gas pressures
          2. Lock-up conditions
          3. Capacity of MP regulator
          4. Leak limiting device
          5. Tee fitting
          6. Connection of a pressure-measuring instrument
          7. Rigid piping connection
      11. 411.1 Connecting Appliances
          1. Rigid metallic pipe and fittings
          2. Corrugated stainless steel tubing
          3. Semi rigid metallic tubing and metallic fittings
          4. Appliance connectors
          5. Quick-disconnect devices
          6. Convenience outlets outdoor appliance connectors
      12. 411.1.1 Commercial Cooking Appliances
          1. Installed on caster and appliances
          2. Restraining device
      13. 412.6 Location
          1. Point of transfer
             1. Fire-resistance-rated assembly
             2. Combustible overhangs
             3. Property lot line
             4. Mainline railroad track
             5. Public streets, sidewalks, and driveways
             6. 1 hour or greater rating
          2. Exception: separation of canopies
          3. Liquefied petroleum gas containers
      14. 416.2.1 Pressure under 14 Inches W.C
          1. Overpressure protection equipment
          2. Limit gas pressure
      15. 416.2.2 Pressure over 14 Inches W.C
          1. Overpressure protection equipment
          2. Limit gas pressure
      16. 416.3 Overpressure Protection Devices
          1. Pressure relief valve
          2. Monitoring regulator
          3. Series regulator
          4. Automatic shutoff device
      17. 416.3.3 Setting
          1. Pressure-reliving device
          2. Gas pressure
   5. Chapter 5 Chimneys and Vents
      1. 502.7.1 Door Swing
         1. Appliance and equipment vent terminals
         2. Door stops or closers
      2. 503.4.1 Plastic Piping
         1. Venting materials and appliance manufacturer’s installation instructions
      3. 503.6.9.3 Category II, III, and IV Appliances
         1. Accordance with manufacturer’s instructions
      4. 503.8 Venting System Termination Location
         1. Mechanical draft venting system
            1. Exception: combustion air intake
            2. Exception: integral outdoor air inlet and flue gas discharge
         2. Bottom of vent terminal
         3. Air opening into a building
         4. Through-the-wall vents
         5. Category IV vent systems
   6. Chapter 6 Specific Appliances
      1. 614.5 Dryer Exhaust Duct Power Ventilators
         1. Dryer exhaust duct systems
      2. 614.8.4.3 dryer Exhaust Duct Power Ventilator Length
         1. Maximum length
      3. 623.2 Prohibited Location
         1. Cooking appliances
         2. Exception: domestic cooking appliances
   7. Chapter 7 Gaseous Hydrogen Systems
      1. 704.1.2 Piping Systems
         1. Piping, tubing, valves and fittings
      2. 704.1.2.4 Joints
         1. Piping and tubing
         2. Gaskets and sealants
         3. Threaded and flanged connections
      3. 705.2 Inspections
         1. Visual examination
         2. Inspection methods
10. 2018 International Mechanial Code
    1. Chapter 1 Scope and Administration
       1. 106.1.1 Annual Permit
          1. Approved system or equipment installation
       2. 106.1.2 Annual Permit Records
          1. Detailed records of alterations
    2. Chapter 2 Definitions
       1. Air, Makeup
          1. Outdoor and transfer air
       2. Air, Outdoor
          1. Ventilations system, intentional openings, or infiltration
       3. Air, Transfer
          1. Indoor space
       4. Conditioned Space
          1. Area, room, or space
          2. Thermal envelope
          3. Heated or cooled
       5. Discreet Product
          1. Noncontinuous, individual, distinct pieces
          2. Electrical, plumbing, and mechanical products
    3. Chapter 3 General Regulations
       1. 340.11 Fall-Arresting Restraint Systems
          1. Guards
          2. Service and roof hatch openings
       2. 306.1 Access
          1. Utilize energy
          2. Without disabling fire-resistance-rated assembly
          3. Level working space
       3. 307.2.5 Condensate Drain Line Maintenance
          1. Configured
          2. Clearing of blockages
       4. 307.3 Condensate Pumps in Uninhabitable Spaces
          1. Prevented form operating
          2. Installed according to manufacturer’s instructions
    4. Chapter 4
       1. 401.2 Ventilation Required
          1. Occupied space
          2. Natural means
          3. Mechanical means
       2. 403.2.1, Table 403.3.1.1 Recirculation of Air
          1. Excess air
          2. Ventilation air
          3. Supply air to swimming pool and associated deck areas
          4. Mechanical exhaust – Note b
          5. Mechanical exhaust – Note g
       3. 403.3. Outdoor Air and Local Exhaust Airflow Rates
          1. Group R-2, R-3, and R-4 occupancies
       4. 403.3.1 Other Buildings Intended to be Occupied
          1. Three stories and less above grade plane
       5. 403.3.2 Group R-2, R-3, and R-4 Occupancies, Three Stories and Less
          1. Local exhaust systems and ventilation systems
       6. 403.3.2.1 Outdoor Air for Dwelling Units
          1. Outdoor air ventilation system
          2. Minimum continuous outdoor airflow rate
       7. 403.3.2.2 Outdoor Air for Other Spaces
          1. Conditioned space
          2. Rate of less than 0.06 cfm
       8. 403.3.2.3 Local Exhaust
          1. Exhaust minimum airflow rate
       9. Tables 403.3.2.3 Minimum Required Local Exhaust Rates for R-2, R-3, and R-4 Occupancies
          1. Kitchens
          2. Bathrooms and toilet rooms
       10. Table 403.3.1.1 Manicure and Pedicure Station Exhaust Rate
       11. 404.1 Enclosed Parking Garages
           1. Carbon monoxide detectors
           2. Nitrogen dioxide detectors
       12. 407.1 General
           1. Ambulatory care facilities
           2. Group I-2 occupancies
    5. Chapter 5 Exhaust Systems
       1. 501.3 Mechanical Exhaust System Discharge
          1. Public nuisance
          2. Exceptions
             1. Whole house ventilation-type attic fans
             2. Commercial cooking recirculating systems
             3. Domestic ductless range hoods
       2. 502.20 Manicure and Pedicure Station Exhaust System
          1. Factory-installed exhaust inlets
       3. 504.5 Dryer Exhaust Duct Power Ventilators
          1. Dryer exhaust duct systems
          2. Manufacturer’s instructions
       4. 504.8.4.3 Dryer Exhaust Duct Power Ventilator Length
          1. Determined maximum length
       5. 504.8.2 Dryer Exhaust Duct Installation
          1. 4-foot intervals
          2. Secure din place
          3. Direction of airflow
       6. 505.2 Domestic Cooking Exhaust
          1. Downdraft exhaust
          2. Sheet metal ducts
          3. Exceptions
             1. Ductless range hoods
             2. Domestic kitchen cooking appliances

Under concrete slab

Underfloor trench

PVC duct

Outside of building

Solvent cemented

* + 1. 505.3 Exhaust Ducts
       1. Fire-resistance rated
       2. Dampers prohibited
       3. Rigid metal ductwork
       4. Without offsets
       5. Exhaust fan motor design
       6. Outside of airstream
       7. Standby power source
       8. Audible or visual signal
       9. Makeup air
       10. Cleanout opening
       11. Screens
       12. Multistory duct system
    2. 505.6 Other than Group R
       1. Domestic cooking appliances
       2. Hoods and exhaust systems
    3. 506.3.7.1 Grease Duct Reservoirs
       1. Required construction
       2. Bottom of horizontal duct
       3. Full width
       4. Depth
       5. Slopes to a drain
       6. Cleanout opening
       7. Manufacturer’s instructions
    4. 506.3.8 Grease Duct Cleanouts and Openings
       1. Operation and maintenance of system
       2. Inaccessible sections
       3. Tight-fitting doors
       4. Cleanout doors
       5. Door assemblies
       6. Gasket and sealing materials
       7. Listed door assemblies
    5. 506.3.11 Grease Duct Enclosures
       1. Commercial kitchen grease duct
       2. In-line exhaust fans
       3. Fire and smoke dampers
    6. 506.5.1.2 In-Line Fan Location in Exhaust Ducts Serving Commercial Kitchen Hoods
       1. Same fire-resistance rating
       2. Access for servicing fan components
    7. 506.5.3 Hinged Up-Blast Fans for Type I Hoods
       1. Vertical or horizontal position
       2. Flexible weatherproof electrical cable
    8. 507.1 Type I Hood Installation
       1. Cooking vapor and residues
       2. Type 1 and II hoods
    9. 507.1.1 Commercial Kitchen Exhaust Hood System Operation
       1. Cooking operation
       2. Hood exhaust rate
       3. Radiant energy sensors
       4. Net exhaust volumes
    10. 507.1.1.1 Heat Sensors for Multiple Commercial Kitchen Hoods
        1. Accessed from hood outlet or cleanout location
    11. 507.2.8 Type I Hood Grease Filters
        1. cleaning or replacement access
    12. 507.2.8.1 Criteria
        1. Removable filter units
        2. Drip-intercepting devices
    13. 508.1.2 Air Balance for Commercial Kitchen Ventilation Systems
        1. Design outdoor air balance
        2. Net exfiltration
        3. Total replacement airflow rate
    14. 510.4 Independent System
        1. Hazardous exhaust systems
    15. 510.5 Incompatible Materials and Common Shafts
        1. Same hazardous exhaust system
        2. Exceptions
           1. Negative operating pressure
           2. Within occupied space
           3. Common shaft
           4. Flow regulating device
           5. Perchloric acid hoods
           6. Radioisotope hoods
           7. Biological safety cabinets
           8. Redundant exhaust fans

Parallel

Controlled

* + 1. 510.7.1.1 Hazardous Exhaust Duct Penetrations of Shafts
       1. Fire-resistance-rated shafts
    2. 514.2 Energy Recovery Ventilation Systems
       1. Hazardous exhaust systems
       2. Dust, stock and refuse systems
       3. Smoke control systems
       4. Commercial kitchen exhaust systems
       5. Clothes dryer exhaust systems
       6. Exception: ERV equipment
  1. Chapter 6 Duct Systems
     1. 601.5 Return Air Openings
        1. Openings
        2. Return air
        3. Flow rate of supply air
        4. Return and transfer openings
        5. Dwelling unit return air
        6. Crawl space return air
        7. Unconditioned attic, furnace room, garage, kitchen return air
        8. Exception
           1. Cooking appliances
           2. Dedicated forced air systems
     2. 602.1 General
     3. 602.2 Plenum Construction
        1. Airflow exposure
        2. Flame spread index
        3. Gypsum boards
     4. 602.2.1.1 – Wiring
     5. 602.2.1.2 – Fire Sprinkler Piping
     6. 602.2.1.3 – Pneumatic Tubing
     7. 602.2.1.5 Discrete Plumbing and Mechanical Products in Plenums
        1. Exposed combustible material
     8. 602.2.1.6 – Foam Plastic in Plenums as Interior Finish or Interior Trim
     9. 602.2.1.8 – Pipe and Duct Insulation within Plenums
     10. Table 603.4 duct Construction Minimum Sheet Metal Thickness for Single-Dwelling Units
     11. 603.9 Joints, Seams and Connections
         1. Longitudinal and transverse joints
         2. Tapes and mastics – fibrous glass
         3. Tapes and mastics – metallic and flexible air ducts
  2. Chapter 7 Combustion Air
     1. 701.2 Dampered Openings
        1. Volume, smoke, or fire dampers
        2. Manual dampers
  3. Chapter 8 Chimneys and Vents
     1. 802.9 Door Clearance to Vent Terminals
        1. Appliance and equipment vent terminals
     2. 805.7 Insulation Shield
  4. Chapter 9 Specific Appliances, Fireplaces, and Solid-Fuel-Burning
     1. 903.4 Gasketed Fireplace Doors
        1. Factory-built fireplace
  5. Chapter 10 Boilers, Water Heaters and Pressure Vessels
     1. 1002.1 – General
     2. 1006.6 – Safety and Relief and Valve Discharge
     3. 1009.1 – Where Required
  6. Chapter 11 Refrigeration
     1. 1102.3 Refrigerant Access Port Protection
        1. Refrigeration or air-conditioned systems
     2. 1104.2.2 – Industrial Occupancies and Refrigerated Rooms
     3. 1105.6.1 – Discharge Location
     4. 1105.6.1.1 – Indoor Exhaust Opening Location
     5. 1106.4 – Flammable Refrigerants
     6. 1106.5 – Special Requirements for Group A2L Refrigerant Machinery Rooms
     7. 1106.5.1 – Refrigerant Detection System
     8. 1106.5.2 – Emergency Ventilation System
     9. Table 1106.5.2 – Minimum Exhaust Rates
     10. 1107.2 – Piping Location
     11. 1107.5.2 – Copper and Copper-Alloy Pipe
     12. 1107.5.3 – Copper Tube

1. Environmental Factors
   1. Environmental Considerations
      1. Energy Conservation
      2. Recycling
      3. Pollution Control
      4. Environmental Risks Assessment
         1. Environmental Impacts on Site
         2. Possible Off-Site Effects
      5. Project Phases
   2. U.S. Environmental Protection Agency
      1. Enforce Environmental Laws
   3. Benefits of a Safe Workplace
      1. Direct Benefits
         1. Lower Workers’ Compensation Cost
         2. Reduced Medical Disbursement
         3. Smaller Return-to-Work Programs
         4. Fewer Faulty Products
         5. Lower Job Accommodations Cost
         6. Less Overtime Benefits
      2. Indirect Benefits
         1. Increased Productivity
         2. Higher Quality Product
         3. Increased Morale
         4. Better Labor/Management Relations
         5. Reduced Turnover
         6. Better Use of Human Resources
   4. Environmental Law
      1. Asbestos
      2. Lead
      3. Erosion
      4. Hazardous Materials
      5. Waste Disposal
      6. Underground Utilities
      7. Air-quality
   5. Asbestos
      1. Friable Material
      2. Health Risks
      3. Possible Asbestos-Containing Material
      4. Removal and Disposal
   6. Lead
      1. Naturally Occurring Element
      2. Toxic and Causes Health Defects
      3. Renovation Notices
      4. Certified Renovators
         1. Minimize Lead Contamination
         2. Minimize Dust
         3. Cleaning Up Work Area
   7. Erosion and Sediment Control
      1. Minimizing Erosion and Sedimentation
         1. Silt Fence/Hay Bales
         2. Mulch and Vegetation
         3. Water Misting System
      2. Local Building Department of the Jurisdiction
   8. Hazardous Materials
      1. Non-Hazardous Waste
         1. Regulated at State and Local Level
      2. Hazardous Waste
         1. Regulated at Federal Level
      3. Material Safety Data Sheet (MSDS) On-Site Requirement
   9. Waste Disposal
      1. Resource Conservation and Recovery Act (RCRA)
         1. Conserve Energy and Natural Resources
      2. Solid Waste
         1. Discarded Materials
         2. Hazardous and Non-Hazardous
      3. Construction Waste
   10. Underground Utilities
       1. Change in Landscape
       2. Utility Companies
          1. Mark Location
       3. Cutting a Utility
          1. Financial and Environmental Consequences
   11. Air Quality
       1. Air Pollution Caused by Construction Activities
       2. Air Regulations
       3. Indoor Air Quality
       4. Air Permitting Requirements
   12. Clean Water Act
       1. Water Pollution
       2. EPA Federal Clean Water and Safe Drinking Water Laws
       3. Pollution Control Programs
          1. Setting Industry Wastewater Standards
          2. Setting Water Quality Standards for Contaminants
          3. Unlawful to Discharge Pollutants into Navigable Waters
2. Financial Management
   1. Financial Management Part 1
      1. Where to Begin?
         1. Business Financial Records and Documents Management
         2. Software Accounting Programs
         3. In-House Accounting
         4. Accurate and Timely Bookkeeping
      2. The Accounting Cycle
         1. Analyze Data
            1. Source Documents
            2. Journals

Cash Receipts and Sales

Purchases

Cash Disbursements

Payroll

General

* + - 1. Enter Transactions into Journal
         1. Double-Entry Accounting
      2. Post Entries to Ledger
         1. Asset
         2. Liability
         3. Equity
         4. Income
         5. Expense
      3. Prepare Unadjusted Trial Balance
      4. Adjust Entries
      5. Prepare Adjusted Trial Balance
      6. Organize Accounts
         1. Financial Statements Order

Income Statement

Statement of Retained Earnings

Balance Sheet

Statement of Cash Flows

* + - 1. Close Books
      2. Prepare Post-Closing Trial Balance
         1. Debit and Credit Balance
    1. Balance Sheet
       1. Assets
          1. Fund Daily Operations
          2. Easily Liquidated
          3. Property and Equipment
          4. Pre-Paid Expenses
       2. Liabilities
          1. Debt and Obligations
          2. Current Liabilities
          3. Long-Term Liabilities
       3. Owner’s Equity
          1. Working Capital
          2. Liquid Assets
    2. Income Statement
       1. Profit Equation
       2. Revenue
       3. Expenses
       4. Direct Costs of Construction
       5. Operating Expenses
          1. Selling Expenses
          2. Fixed Overhead
       6. Fixed Costs
       7. Tax Provision Expenses
       8. Net Income
          1. Net Loss
       9. Business Managers
       10. Reporting Financial Information
           1. Sales/Revenue
           2. Cost of Production
           3. Operating Expenses
           4. Interest Expense
           5. Tax payment
  1. Financial Management Part 2
     1. Cash Flow Statement
        1. Summary
           1. Current Cash
           2. Cash sources
           3. Use of Funds
        2. Operating Activities
           1. Positive or Negative Cash Flow
        3. Investing Activities
           1. Revenue Producing Assets
        4. Financing Activities
           1. Cash Flow Between Owners and Creditors
        5. Lenders
     2. Financial Ratios
        1. Company Internal Performance Benchmark
        2. Comparison of Industry Averages
     3. Liquidity Ratio
        1. Company Current Liabilities
     4. Quick Ratio
        1. Short-Term Obligations
        2. Acid Test
     5. Activity Ratio
        1. Converting Different Accounts into Cash or Sales
        2. Sales Per Day
        3. Average Collection Period
     6. Debit Ratio
        1. Total Debt and Total Assets
     7. Profitability Ratio
        1. Profit Margin
     8. Return on Total Assets Ratio
        1. Rate of Return
     9. Methods of Accounting
        1. Cash Method
        2. Accrual Method
     10. The Cash Method
         1. Income Counted When Cash is Received
     11. The Accrual Method
         1. Transactions Counted When Order is Received
     12. Contract Accounting
         1. Tax Accounting Methods
            1. Long-Term Contracts Method
            2. Overall Method
     13. Completed Contract Method
         1. Completed Project Revenue and Profit
         2. Revenue Recognition Timing
         3. Times It is Used
            1. Difficult Estimating Costs
            2. Many Ongoing Small Jobs
            3. Short Duration Projects
     14. Percentage of Completion Method
         1. Project Costs Incurred
         2. Total Estimated Costs
         3. Cumulative Earnings
            1. Percentage of Completion
            2. Contract Amount
         4. Adjustments
            1. Billing Overage/Deficiency
         5. Current Liability
         6. Current Asset
     15. Cash Flow
         1. Positive Cash Flow
            1. Collecting Account Receivable

Send Bills

Follow-Up Invoices

Stern Letter Outlining Consequences

Professional Collection Agency

* + - * 1. Billing Current Projects
    1. Petty Cash Fund
       1. Safeguarded and Documented
       2. Custodian of Funds
       3. Balanced and Replenished Monthly
    2. Equipment Records
       1. Use Rate
       2. Use Time
       3. Maintenance Costs
       4. Repair Costs
       5. Operating Costs
       6. Depreciation
          1. Reasons

Wear and Tear

Obsolescence

* + - * 1. Straight Line Depreciation
        2. Accelerated Depreciation
    1. Accounting Process for Materials
       1. Shipping and Delivery Expenses
       2. Shipping Terms
          1. FOB Freight Prepaid
          2. FOB Freight Allowed
       3. Payment Terms
          1. Net 10
          2. Net 30
          3. Net 60
          4. COD
          5. EOM
    2. Payroll Accounting
       1. Calculate Gross Pay for Each Employee
       2. Calculate and Deduct Applicable Taxes
       3. Calculate Net Pay and Issue Checks
       4. Update Payroll Journal
    3. Calculate Gross Pay
       1. Regular Pay
       2. Overtime Pay
       3. Other Taxable Earnings
       4. Hourly Employees
          1. Time Cards
       5. Calculate and Deduct Applicable Taxes and Deductions
       6. Calculate Net Pay and Issue Checks
    4. Technology
       1. Accounting Software
          1. Posts Transactions
          2. Creates Financial Statements
          3. Invoices Customers
          4. Creates Purchase Orders
       2. Internet Websites

1. Employee Management
   1. Employee Management Part 1
      1. Where to Begin?
         1. Qualified Applicants
            1. Hardworking Employees
            2. Sources
            3. Fundamental Qualities
      2. Interviewing and Hiring Employees
         1. Interviews
            1. Wrong Questions Could Lead to Legal Action
            2. Questions to Cover During an Interview
      3. New Hire Reporting
         1. Information for Mandatory Records/Forms
         2. Purpose
            1. Establishes Child Support Orders
            2. Detects Unemployment Benefits Fraud
            3. Detects Workers’ Compensation Fraud
            4. Detects Other Government Programs Fraud
      4. Hiring Minors
         1. Federal and State Laws
            1. Child Labor Laws
         2. Hazardous Construction Work
         3. Regulations for 14 and 15 Year Old Construction Workers
         4. Prohibited Tasks for 16 and 17 Year Old Construction Workers
      5. Employee Documentation
         1. I-9
            1. Employee Information
            2. Attestation
            3. Preparer and/or Translator
            4. Employer Review and Verification
            5. Certification
         2. W-4
            1. Personal Allowances
            2. Employee’s Withholding Allowance Certificate
         3. State Tax Form
            1. State Tax Withholding
         4. Employment Application
            1. Employee Information
         5. Policy Signoffs
            1. Written Company Policies
         6. Emergency Notification Form
         7. Emergency Contact
      6. Key Employment Laws
         1. Equal Employment Opportunities Laws
      7. Fair Labor Standards Act (FLSA)
         1. Minimum Wage
         2. Overtime Pay
         3. Recordkeeping
         4. Youth Employment Standards
         5. Employees Exempt from Minimum Wage and Overtime Pay Requirements
         6. Employment Practices Not Covered
         7. State Labor Departments
      8. Recordkeeping Under the FLSA
         1. Covered, Non-Exempt Worker Records
         2. Basic Payroll Records
      9. Penalties
         1. Wage and Hour Division Investigators
         2. Willful Violators
      10. Immigration and Nationality Act
          1. Employment Eligibility and Verification
             1. Form I-9
      11. Americans with Disabilities Act (ADA)
          1. Disability Job Discrimination Protection
             1. Reasonable Accommodations
   2. Employee Management Part 2
      1. Other Labor Laws
         1. Walsh-Healy Public Contract Act
         2. Davis-Bacon Act
         3. Service Contract Act
         4. Contract Work Hours and Safety Standards Act
         5. Family and Medical Leave Act
         6. Wage Garnishment and the Consumer Protection Act
         7. Employee Polygraph Protection Act
         8. Title VII of the Civil Rights Act of 1964
         9. Equal Pay Act
         10. Age Discrimination in Employment Act (ADEA)
         11. Worker Adjustment and Reading Notification Act
         12. Employee Retirement Income Security Act
         13. Uniformed Services Employment and Reemployment Rights Act
         14. Right-to-Work Laws
      2. Workplace Posters
         1. Job Safety and Health Protection
         2. Equal Employment Opportunity is the Law
         3. Fair Labor Standards Act
         4. Your Rights Under the Family and Medical Leave Act
         5. Notice to All Employees Working on Federal or Federally Financed Construction Projects
         6. Notice: Employee Polygraph Protection Act
      3. Employee Handbook and Policies
         1. Communication Tool
         2. Legal Obligations
         3. Sections in the Handbook
2. Ethics
   1. Ethics Part 1
      1. Basics in Ethics
         1. Greek “Ethos”
            1. Character or Custom
         2. Normal Customs
            1. Please and Thank You
            2. Etiquette
         3. Branch of Philosophy
         4. Meta-Ethics
            1. Ethical Judgements and/or Prescriptions
         5. Descriptivism/Non-Descriptivism
         6. Ethical Dilemmas
         7. Four-Way Test
            1. What Is the Problem?
            2. Why Problem Should be Solved?
            3. Who Are the Affected Parties?
            4. Does Problem Have Deadline or Specific Time-Line?
         8. Publicity Test
         9. Business Ethics
            1. Written/Unwritten Codes of Principles and Values
         10. Ethical Decision-Making Practices
      2. Impacts
         1. Factors
            1. Corporate Culture
            2. Written Code of Ethics
            3. Formal and Informal Policies and Rules
            4. Acceptable Behavior
            5. Financial Reward System
            6. System for Recognizing Accomplishments
            7. Company Attitude Toward Employees
            8. Employee Selection for Promotions
            9. Hiring Practices
            10. Legal Behavior
            11. Emphasized Professionalism
            12. Company’s Decision Making Process
            13. Organization’s Leaders Behaviors and Attitudes
      3. Behavior of Business Ethics
         1. Business Conduct
      4. Good Business Ethics
         1. Chain of Unethical Businesses
         2. Eliminate Exploitation
      5. Business Ethics and the Public
         1. Public Makes Sure Company Adheres to correct Business Ethics
      6. Workplace Ethics
         1. Vital Part of Employment
         2. Employee Handbook
            1. Guidelines
         3. Respect from Within
         4. Admissible Employee Behavior
            1. Written and Verbal Warnings
         5. Integrity
         6. Working Well With Others
         7. Forms of Employee Misconduct
            1. Misrepresenting Time Worked
            2. Lying to Supervisors
            3. Lying to Coworkers, Customers, Vendors
            4. Misuse of Employer’s Assets
            5. Lying on Reports or Falsifying Records
         8. Treatment of Employees
            1. Hiring

Screening

Testing

Interviewing

* + - * 1. Promotions
        2. Discipline and Discharge
        3. Wages of an Employee
  1. Ethics Part 2
     1. Hiring Ethics
        1. Screening
           1. Attract Qualified Employees
           2. Written Job Description
           3. Avoid Wrongful Discrimination
        2. Testing
           1. Applicant’s Verbal, Quantitative, and Logical Skills
           2. Aptitude Test
           3. Skills Test
           4. Personality Test
        3. Interviews
     2. Promotions
        1. Seniority
           1. Senior Employees
           2. Faithful Service
        2. Promoting Within
           1. High Productivity
           2. Improves Spirit
           3. Possibility of Advancement
        3. Favoritism
           1. Undeserved Advantages
     3. Discipline and Discharge
        1. Just Cause
        2. Due Process
        3. Discharging Employees
           1. Firing
           2. Termination
           3. Layoff
           4. Position Elimination
        4. Carefully Analyze Decision for Dismissing
           1. Treatment Matches Type of Discharge
           2. Consistency
           3. No Preferential Treatment
     4. Wages
        1. Fair Wage
           1. What is the Law?
           2. What is the Popular Wage in the Business?
           3. What is the Community Wage Level?
           4. What is the Nature of the Job Itself?
           5. Is the Job Secure?
           6. What are the Employer’s Financial Capabilities?
           7. What are Other Employees Inside the Company Earning for Comparable Work?

1. Safety
   1. Safety Part 1
      1. Where to Begin?
         1. Safe Working Environment
         2. Safety Training for Work Activities
         3. Safety Program
            1. Management Commitment
            2. Hazard Assessment and Control
            3. Safety Planning, Rules, and Work Procedures
            4. Safety and Health Training
         4. OSHA Poster
         5. OSHA Construction Safety Act
            1. Safer Work Environment
            2. Strengthened Employee Protection
            3. Two Categories

Unsafe Actions by People

Unsafe Conditions Left Uncorrected

* + - 1. Thorough Screening of Potential Employees
      2. Safety and Health Regulations
         1. Employer Benefits
         2. Company Benefits
      3. Designating and Training Employees
         1. Safety Practices
         2. Workers’ Tasks
         3. Work Practices, Tools, and Equipment
    1. Emergency Action Plan
       1. Organize Employer and Employee Actions in Emergencies
       2. Review Emergency Plan
       3. Content of Emergency Action Plan
          1. Fire/Emergency Reporting Procedures
          2. Emergency Evacuation Procedures
          3. Operating Critical Plant Operations Procedures
          4. Employee Count Procedures
          5. Designated Employees Information
    2. Protection of the General Public
       1. Construction Site Hazards Warnings
       2. Safeguards
          1. Barriers
          2. Overhead Protection
          3. Signage-Hazard
          4. Traffic Controls
          5. Surveillance
          6. Walkway Protection
          7. Solid Walls
    3. Personal Safety Equipment
       1. Eye and Face Protection
          1. Safety Glasses
          2. Goggles
          3. Moulded Goggles
          4. Face Shields
          5. Welding Goggles
       2. Head Protection
          1. Type 1
          2. Type 2
       3. Hand Protection
          1. Gloves
          2. Guards
          3. Braces
       4. Foot and Leg Protection
          1. Hazard Suits
          2. Boots
          3. Long Pants
          4. Shin Guards
       5. Respirator
          1. Tight-Fitting
          2. Loose-Fitting
          3. Air-Purifying
          4. Atmosphere-Supplying
       6. Hearing Protection
          1. Ear Plugs
          2. Semi-Insert Ear Plugs
          3. Ear Muffs
       7. Body Protection
       8. Protective Clothing
          1. Fiber
          2. Wool and Cotton
          3. Duck
          4. Leather
          5. Rubber/Plastics
       9. Fall Protection
          1. Harnesses
          2. Lanyards
          3. Self-Retracting Devices
          4. Anchorage Connectors
          5. Lifeline Systems
  1. Safety Part 2
     1. OSHA Recordkeeping
        1. Reporting Accidents, Illnesses, and Deaths
        2. Prevention of Accidents and Illnesses
        3. Safety Poster Requirements
        4. OSHA 300 Form
           1. Identify Employee
           2. Describe Case
           3. Classify Case
        5. OSHA 300A
           1. Summary
        6. OSHA Recordkeeping Regulation
           1. Work-Related Fatalities
           2. Work-Related Injuries and Illnesses
        7. Reporting the Hospitalization of Three or More Employees
        8. Accessing OSHA Injury and Illness Records
     2. Material Safety Data Sheets (MSDS)
        1. Potential Hazards Information
        2. Use, Storage, Handling, and Emergency Procedures
     3. Employee Rights
        1. Right to Complain to OSHA Regarding Safety and Health Conditions
        2. Right to Contest Time to Correct Violations
        3. Right to Participate in OSHA Inspections
     4. OSHA Act
        1. Safe and Healthful Workplace
        2. OSHA Inspections
        3. OSHA Compliance Officer
     5. Penalties and Violations
        1. Other Than Serious Violation
        2. Serious Violation
        3. Willful Violation
        4. Repeated Violation
        5. Failure to Abate Prior Violation
        6. De Minimis Violation
        7. Additional Violations
           1. Falsifying Records
           2. Posting Requirements Violations
     6. Assaulting Compliance Officer