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| RocketCert, LLC9111 Cross Park DriveBld D Suite 244Knoxville, TN 37923800-495-6612 | **Course Objective:**The purpose of this eight (8) hour plumbing continuing education course is to provide the licensee with a better knowledge and understanding key concepts to help improve the welfare of their customers and employees. These key concepts include the 2018 IPC, 2018 IMC, and the OSHA safety regulations. After completing this course, the learner will be able to apply plumbing and safety regulations within their profession. |
|  | **Course Outline:**2018 IPC Part 1* Chapter 1 Scope and Administration
	+ Existing buildings
	+ General
* Chapter 2 Definitions
	+ Accessible
	+ Building
	+ Fixture fitting
	+ Full-open valve
	+ Press-connect joint
	+ Public swimming pool
	+ Registered design professional
	+ Structure
	+ Swimming pool
* Section Review
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|  | 2018 IPC Part 2 * Chapter 3 General Regulations
	+ Third-party certification
	+ Cast-iron soil pipe, fittings and components
	+ Protection against contact
	+ Protection against physical damage
	+ Sway bracing
	+ Thermal expansion tanks
	+ Table 308.5 Hanger spacing
	+ Drain pipe materials and sizes
	+ Table 403.1 Minimum number of required plumbing fixtures

Section Review  |
|  | 2018 IPC Part 3 * Chapter 4 Fixtures, Faucets and Fixture Fittings
	+ Table 403.1 Minimum number of plumbing fixtures
	+ Single-user toilet facility and bathing room fixtures
	+ Lavatory distribution
	+ Separate facilities
	+ Employee and public toilet facilities
	+ Water closets, urinals, lavatories and bidets
	+ Urinal partitions
	+ Floor flanges
	+ Plumbing fixtures with a pumped waste
	+ Dishwashing machines - Approval

Section Review  |
|  | 2018 IPC Part 4 * Chapter 4 Fixtures, Faucets and Fixture Fittings
	+ Waste connection
	+ Residential dishwasher waste connection
	+ Drinking fountains – Approval
	+ Water supply
	+ Temperature-actuated, flow-reduction devices for individual fixture fittings
	+ Water closet personal hygiene devices
	+ Head shampoo sink faucets
	+ Fill valves
	+ Access required
	+ Tempered water for public hand-washing facilities
	+ Shower lining
	+ Footbaths and pedicure baths
	+ Surrounding material

Section Review  |
|  | 2018 IPC Part 5 * Chapter 5 Water Heaters
	+ Pressure marking of storage tanks
	+ General
	+ Requirements for discharge piping
	+ Required pan
* Chapter 6 Water Supply and Distribution
	+ Sources
	+ Table 605.3 Water service pipe
	+ Water distribution pipe
	+ Table 605.4 Water distribution pipe
	+ Table 605.8 Manufactured pipe nipples
	+ Brass
	+ Table 605.5 Pipe Fittings

Section Review  |
|  | 2018 IPC Part 6 * Chapter 6 Water Supply and Distribution
	+ Table 605.7 Valves
	+ Push-fit joints
	+ Copper or copper-alloy tubing to galvanized steel pipe
	+ Pressure tanks, vacuum relief
	+ Thermal expansion control
	+ Devices, appurtenances, appliances and apparatus
	+ Potable water handling and treatment equipment
	+ Valves and outlets prohibited below grade
	+ Table 608.1 application of backflow preventers

Section Review  |
|  | 2018 IPC Part 7 * Chapter 6 Water Supply and Distribution
	+ Reutilization prohibited
	+ Potable water tanks
	+ Air gap
	+ Pressure vacuum breaker assemblies
	+ Beverage dispensers
	+ Carbonated beverage dispensers
	+ Coffee machines and noncarbonated drink dispensers
	+ Dental pumping equipment
	+ Humidifiers
	+ Scope
	+ Design

Section Review  |
|  | 2018 IPC Part 8 * Chapter 7 Sanitary Drainage
	+ Connection to sewer required
	+ Table 702.1 above-ground drainage and vent pipe
	+ Table 702.2 underground building drainage and vent pipe
	+ Table 702.4 pipe fittings
	+ Drainage pipe in filled ground
	+ Existing building sewers and drains
	+ Slope of horizontal drainage piping
	+ Reduction in pipe size in the direction of flow
	+ Brass
	+ Threaded joints
	+ Polypropylene plastic

Section Review  |
|  | 2018 IPC Part 9 * Chapter 7 Sanitary Drainage
	+ Copper pipe or tubing to cast-iron hub pipe
	+ Copper or copper-alloy tubing to galvanized steel pipe
	+ Plastic pipe or tubing to other piping material
	+ Caulking ferrules
	+ Soldering bushings
	+ Prohibited joints
	+ Cleanout plugs
	+ Conversion of GPM flow to DFU values
	+ Sump pit
	+ Materials
	+ Capacity

Section Review  |
|  | 2018 IPC Part 10 * Chapter 7 Sanitary Drainage
	+ General
	+ Applicability
	+ Replacement pipe
	+ Cleanouts
* Chapter 8 Indirect/Special Waste
	+ Scope
	+ Protection
	+ Where required
	+ Domestic dishwashing machines
	+ Material, joints and connections
	+ Connection of laundry tray to standpipe

Section Review  |
|  | 2018 IPC Part 11 * Chapter 9 Vents
	+ Air admittance valves - Prohibited installations
* Chapter 10 Traps, Interceptors, and Separators
	+ Grease interceptors
	+ Food waste disposers restriction
	+ Additives to grease interceptors
* Chapter 11 Storm Drainage
	+ Table 1102.4 building storm sewer pipe
	+ Subsoil drain pipe
	+ Cleanout
	+ Parapet wall scuppers
	+ Sump pit
* Chapter 13 Nonpotable Water Systems
	+ Components and materials

Section Review  |
|  | 2018 IPC Part 12 * Chapter 13 Nonpotable Water Systems
	+ Draining of tanks
	+ General
	+ Sources
	+ Bypass valve
	+ Fire protection system
	+ Collection surface
	+ Debris excluders
	+ First-flush diverter
	+ Pumping and control system
	+ First-flush diverter test
	+ Water quality test
	+ Collected raw rainwater quality

Section Review  |
|  | 2018 IMC Part 1* Chapter 1 Scope and Administration
	+ Applicability
	+ Existing buildings
	+ Approval
	+ Alternative materials, design and methods of construction and equipment
	+ Inspections and testing
* Definitions
	+ Access (to)
	+ Approved agency
	+ Building
	+ Commercial cooking appliances
	+ Direct solar system
	+ Drain-back system
	+ Food-grade fluid
	+ High-volume, large-diameter fan
	+ Indirect solar system
	+ Labeled
* Section Review
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|  | 2018 IMC Part 2 * Chapter 2 Definitions
	+ Low-probability pump
	+ Machinery room
	+ No-flow condition (solar)
	+ Nonfood-grade fluid
	+ Piping
	+ Pollution-control unit (PCU)
	+ Press-connect joint
	+ Ready access (to)
	+ Solar thermal system

Section Review |
|  | 2018 IMC Part 3 * Chapter 3 General Regulations
	+ Equipment and appliance location
	+ Pit locations
	+ Fireplaces in group I-2, condition 2 occupancies
	+ Guards
	+ Table 305.4 Piping support spacing
	+ Drain pipe material and sizes
* Chapter 4 Ventilation
	+ Table 401.5 Opening sizes in louvers, grilles and screens protecting air Intake openings
	+ System controls
	+ Ventilating equipment
	+ Enclosed parking garages
	+ Table 403.3.1.1 Minimum ventilation rates
* Section Review
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|  | 2018 IMC Part 4 * Chapter 5 Exhaust Systems
	+ Independent system required
	+ Stationary storage battery systems
	+ Ventilation of battery systems in cabinets
	+ Portable container use
	+ Repair garages for vehicles fueled by lighter than-air fuels
	+ Repair garages for hydrogen-fueled vehicles
	+ Exhaust ventilation system
	+ Design
	+ Operation
	+ Exhaust termination outlet and passageway size
	+ Duct installation
	+ Domestic cooking exhaust equipment

Section Review |
|  | 2018 IMC Part 5 * Chapter 5 Exhaust Systems
	+ Domestic cooking exhaust equipment
	+ Exhaust ducts
	+ Other than Group R
	+ Termination through an exterior wall
	+ Pollution-control units
	+ Domestic cooking appliances used for commercial purposes
	+ Clearances for Type I hood
	+ Capture and containment test
	+ Duct cleanout
	+ Subslab soil exhaust system materials
	+ Smoke control systems
	+ Scope and purpose
	+ Minimum pressure difference
	+ Automatic control

Section Review |
|  | 2018 IMC Part 6 * Chapter 6 Duct Systems
	+ Return air openings
	+ Plenums
	+ Materials within plenums
	+ Wiring
	+ Fire sprinkler piping
	+ Pneumatic tubing
	+ Foam plastic in plenums as interior finish trim

Section Review |
|  | 2018 IMC Part 7 * Chapter 6 Duct Systems
	+ Plastic plumbing piping and tubing
	+ Pipe and duct insulation within plenums
	+ Duct construction and installation
	+ Phenolic ducts
	+ Sealing
	+ Joints, seams and connections
	+ Vapor retarders
	+ Ducts that penetrate fire-resistance-rated assemblies without dampers
	+ Damper testing
	+ Fire damper ratings
	+ Shaft enclosures
	+ Membrane penetrations
	+ Ceiling radiation dampers testing and installation
* Chapter 8 Chimneys and Vents
	+ Factory-built chimneys insulation shield
* Chapter 9 Specific Appliances. Fireplaces and Solid Fuel-Burning Equipment
	+ Solid fuel-burning fireplaces and appliances in I-2, Condition 2
	+ Pool and spa heaters
	+ High-volume large-diameter fans

Section Review |
|  | 2018 IMC Part 8 * Chapter 10 Boilers, Water Heaters and Pressure Vessels
	+ Boilers, water heaters and pressure vessels
	+ Safety and relief valve discharge
	+ Expansion tanks
* Chapter 11 Refrigeration
	+ Table 1103.1 Refrigerant classification, amount and OEL
	+ Industrial occupancies and refrigerated rooms
	+ Indoor exhaust opening location
	+ Ventilation rate
	+ Flammable refrigerant
	+ Special requirements for Group A2l
	+ Refrigerant detection system
	+ Emergency ventilation system
	+ Table 1106.5.2 Minimum exhaust rates
	+ Piping location
	+ Copper and copper-alloy pipe
	+ Copper tube
* Section Review
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|  | 2018 IMC Part 9 * Chapter 12 Hydronic Piping
	+ Table 1202.4 Hydronic pipe material and standard
	+ Table 1202.5 Hydronic pipe fittings
	+ Soldered joints
	+ Copper or copper-alloy tubing
	+ Press-connect joints
	+ Cross-linked polyethylene (PEX) plastic tubing
	+ Push-fit joints
	+ Raised temperature polyethylene (PE-RT) plastic tubing
	+ Testing
	+ Embedded joints
	+ Cross-linked polyethylene (PEX) joints
	+ Thermal barrier
	+ Table 1210.4 Ground-source loop pipe
	+ Table 1210.5 Ground-source loop pipe Fittings
* Section Review
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|  | 2018 IMC Part 10 * Chapter 13 Fuel Oil Piping and Storage
	+ Joints between different piping materials
* Chapter 14 Solar Thermal Systems
	+ Scope
	+ Solar thermal equipment and appliances
	+ Collectors and panels
	+ Solar thermal system design and installation
	+ Access
	+ Pressure and temperature
	+ Relief device
	+ Vacuum
	+ Drain-back systems
	+ Protection from freezing
	+ Freeze-protection valves
	+ Protection of potable water
* Section Review
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|  | 2018 IMC Part 11 * Chapter 14 Solar Thermal Systems
	+ Indirect systems
	+ Direct systems for potable water distribution systems
	+ Direct systems for other than potable water
	+ Protection of structure
	+ Penetrations
	+ Collectors and panels
	+ Design
	+ Rooftops-mounted solar thermal collectors and systems
	+ Collectors as roof covering
	+ Collector sensors
	+ Filtering
	+ Piping
	+ Piping insulation
	+ Heat exchangers
	+ Double-wall heat exchangers
* Section Review
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|  | 2018 IMC Part 12 * Chapter 14 Solar Thermal Systems
	+ Single-wall heat exchangers
	+ Water heaters and hot water storage tanks
	+ Hot water storage tank insulation
	+ Outdoor locations
	+ Storage tank sensors
	+ Solar loop
	+ Solar loop isolation
	+ Drain and fill valve caps
	+ Expansion tanks
	+ Heat transfer fluids
	+ Food-grade additives
	+ Toxicity
	+ Water storage tanks
	+ Fluid safety labeling
	+ Heat exchangers
* Section Review
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|  | OSHA Focus Four (2 Hours) * Caught Hazards- Identifying Hazards
	+ What is a caught-in or -between hazard?
	+ What are common types of caught-in or -between hazards in construction?
* Fall Hazards- Identifying Hazards
	+ What is a fall hazard?
	+ What are the major types of fall hazards in construction?
* Electrocution– Identifying Hazards
	+ What is an electrocution hazard?
	+ What are the major types of electrocution hazards in construction?
* Struck- Identifying Hazards
	+ What is a struck-by hazard?
	+ What are the common types of struck-by hazards in construction?
* Caught Hazards- Employer Responsibility
	+ Provide guards on power tools and other equipment with moving parts
	+ Support, secure or otherwise make safe equipment having parts that workers could be caught between
	+ Take measures to prevent workers from being crushed by heavy equipment that tips over
	+ Take measures to prevent workers from being pinned between equipment and a solid object
	+ Provide protection for workers during trenching and excavation work
	+ Provide means to avoid the collapse of structures scaffolds
	+ Provide means to avoid workers’ being crushed by collapsing walls during demolition or other
	+ Designate a competent person
	+ Provide training for workers
* Fall Hazards- Employer Responsibility
	+ Provide fall protection
	+ Proper scaffold construction
	+ Ladder use and condition
	+ Worksite Maintenance
	+ Training
* Electrocution- Employer Responsibility
	+ Ensure overhead power line safety
	+ Isolate Electrical Parts
	+ Supply GFCI
	+ Assured Equipment Grounding Conductor Program (AEGCP)
	+ Ensure Power Tools are Maintained in Safe Condition
	+ Ensure Proper Guarding
	+ Provide Training
	+ Enforce Lock Out Tag Out (LOTO) Safety-Related Work Practices
	+ Ensure Proper Use of Flexible Cords
* Struck- Employer Responsibility
	+ What is my employer required to do to protect workers from struck-by hazards?
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