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# Instructional Objectives Checklist

1. Introduction
  - Types of cross-connections, definitions
  - Historical background
  - Plumbing water distribution
  - Plumbing cross-connections
  - Cross-connection incidents
  - Industry and public health significance of cross-connections
2. Drinking Water Regulations
  - Safe Drinking Water Act
  - Primary and secondary standards and MCL's
  - Toxicology
3. Cross connection programs
  - Responsibilities (Purveyor, Tester, Surveyor, Repairer)
  - Cross-connection control surveys
  - Security for Backflow Prevention Assemblies
4. Definitions, vocabulary & terminology pertaining to:
  - backflow preventers
  - devices
  - hydraulics
  - plumbing & cross-connection control industry
5. Hydraulics & science pertaining to:
  - backsiphonage
  - backpressure
  - atmospheric pressure
  - absolute pressure
  - gauge pressure
  - backflow
  - thermal expansion
  - Venturi principle
6. Laws, rules, regulations, codes - federal, state & local levels:
  - EPA
  - City ordinances
  - State or Model Plumbing Code
  - State, County & City Ordinances
7. Knowledge & identification of the following:
  - listing agencies
  - testing laboratories
  - professional associations
8. Assembly test gauge equipment - knowledge & operation

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9. **Parts, terminology & identification, and application & installation for the following:**
    - Air Gap**
    - Atmospheric Type Vacuum Breakers (ASSE 1001)**
    - Reduced Pressure Principle Backflow Preventers (ASSE 1013)**
    - Double Check Backflow Prevention Assemblies (ASSE 1015)**
    - Pressure Vacuum Breaker Assembly (ASSE 1020)**
    - Reduced Pressure Detector Fire Protection Backflow Prevention Assembly (ASSE 1047)**
    - Double Check Detector Fire Protection Backflow Prevention Assemblies (ASSE 1048)**
    - Hose Connection Backflow Preventer (ASSE 1052)**
    - Spill Resistant Vacuum Breaker (ASSE 1056)**
    - Backflow Prevention Assembly Field Test Kits (ASSE 1064)**
  10. **Test Procedures for Backflow Prevention Assemblies:**
    - Reduced Pressure Principle Backflow Preventers (ASSE 1013)**
    - Double Check Backflow Prevention Assemblies (ASSE 1015)**
    - Pressure Vacuum Breaker Assembly (ASSE 1020)**
    - RPDF (ASSE 1047)**
    - DCD (ASSE 1048)**
  11. **Troubleshooting backflow prevention assemblies, failures & causes:**
    - Reduced Pressure Principle Backflow Preventers (ASSE 1013)**
    - Double Check Backflow Prevention Assemblies (ASSE 1015)**
    - Pressure Vacuum Breaker Assembly (ASSE 1020)**
    - RPDF (ASSE 1047)**
    - DCD (ASSE 1048)**
    - Components**
    - Check valves**
    - Relief valve**
    - Air inlet**
    - Test cocks**
    - Shut-off valves**
  12. **Documentation of information**
  13. **Tester responsibilities**
  14. **Safety**

**I verify that the above mentioned instructional objectives have been covered in this course of instruction.**

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**SIGNATURE**

**DATE**

04/2004