

Connecticut Technical Education and Career System

Connecticut-SDE

Plumbing Apprenticeship
Information Packet

State of
Connecticut
Plumbing
Apprenticeship
Information
Packet 18-19



Connecticut Technical Education & Career System

Connecticut State Department of Education

PLUMBING
APPRENTICESHIP
INFORMATION PACKET

1

2018-19

Covering the following licenses:

P-2 Plumbing Mechanic
J-2 Pump Servicer and Installer
J-4 Lawn Sprinkler Installer and Maintainer
P-6 Sewer, Storm and Water Lines Installer
P-8 Gasoline Tank Installer and Repairer

Concerning related classroom instruction, each apprentice student is expected:

- To purchase the textbooks required for each course
- To complete all instructor assigned quizzes and exams as well as any academic reinforcement activities.

Student Responsibility Enrollment and Attendance:

- Students are held responsible for making informed enrollment decisions and for knowledge of and compliance with CTHSS policies and procedures, current printed class schedule as well as special registration instructions which may be issued on a semester-by-semester basis.

ATTENDANCE:

Based on 3 hour class sessions, the following is a list of total hours in a course and the maximum number of allowed absences (by number of classes) prior to denial of credit:

| <u>Total hours in classes</u> | <u>Maximum absences</u> | <u>Total hours in classes</u> | <u>Maximum absences</u> |
|-------------------------------|-------------------------|-------------------------------|-------------------------|
| 1 - 9 | 0 | 61 - 90 | 3 |
| 10 - 30 | 1 | 91 - 120 | 4 |
| 31 - 60 | 2 | | |

Excessive tardiness and/or early departures will be addressed on an individual basis and may cause denial of credit; example being marked tardy for 3- 1 hour incidents will equate to an absence.

Employers have the right to verify their employee's attendance in a program.

NOTE: A minimum grade of 75% is necessary to pass each course.

All trade area content is based on a strong mathematical foundation. For this reason the baseline for transfer credit needs to be set to a higher standard, as well as being recent. Basic Math transfer credit may be awarded with a minimum of an '85' average completed in a comparable course, and taken within the last five years from date request for credit is submitted. All communications will need to be forwarded through the apprentice school supervisor at the local school. For perusal of waiver, please provide the apprentice school supervisor with the following:

- Transcripts detailing grades earned in the course, showing a minimum proficiency level of an '85' or better.
- Course description from institution listed on transcripts.

The following section, Apprentice Responsibilities, is taken from the **State of Connecticut-Apprentice Handbook & Progress Report**, which is given to each apprentice at the beginning of their training by the Office of Apprenticeship Training, Connecticut State Labor Department.

Apprentice Responsibilities:

1. Work safely.
2. Avoid absenteeism and tardiness at work and at school.
3. Attend and participate in related instruction and maintain the highest possible grades.
4. Be involved and show dedication to your training (both on the job and in the classroom).
5. Keep track of your training hours, (either in the form of work records or logbook) and advise your supervisor of any deficiencies in your apprenticeship training.
6. Show dedication and interest in learning the trade.
7. Show respect to the skilled journeypersons training and supervising you.
8. Comply with the provisions of the Apprentice Agreement.
9. Follow your sponsor's written work rules and policies.
10. You must be accompanied by a journeyperson while on the job site.

Regional Apprenticeship Representatives
Office of Apprenticeship Training
Department of Labor
860-263-6085

Contact information and region assigned:

Region 1: Paul Femia, paul.femia@ct.gov (860) 263-6128

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Region 2: Larry Satchell, larry.satchell@ct.gov (860) 263-6084

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Region 3: Owen Golding, owen.golding@ct.gov (860) 263-6083

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Region 4: Gina Knox, gina.knox@ct.gov (860) 263-6277

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Region 5: Tammie Whiting, tammie.whiting@ct.gov (860)263-6154

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Region 6: Isaiah Curtis, Isaiah.curtis@ct.gov (860) 263-6042

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Statewide: Keri Lamontagne, keri.lamontagne@ct.gov (860) 263-6129

Towns Served:

| | |
|-----------|---------------|
| Statewide | Manufacturing |
|-----------|---------------|

Towns and Cities by Regional DOL Rep located on the following page:

| REGION 1 PAUL FEMIA 860-263-6128 | REGION 2 LARRY SATCHELL 860-263-6084 | REGION 3 OWEN GOLDING 860-263-6083 | REGION 4 GINA KNOX 860-263-6277 | REGION 6 ISAIAH CURTIS 860-263-6042 | REGION 5 TAMMIE WHITING 860-263-6154 |
|--|--|--|---|---|--|
| Berlin | Andover | Avon | Ansonia | Ashford | Beacon Falls |
| Chester | Bolton | Barkhamsted | Bethel | Bozrah | Bethany |
| Clinton | Columbia | Bethlehem | Bridgeport | Brooklyn | Branford |
| Colchester | Coventry | Bloomfield | Darien | Canterbury | Cheshire |
| Cromwell | East Hartford | Bridgewater | Derby | Chaplin | East Haven |
| Deep River | East Windsor | Bristol | Easton | Eastford | Hamden |
| Durham | Ellington | Brookfield | Fairfield | Franklin | Middlebury |
| East Haddam | Enfield | Burlington | Greenwich | Griswold | Naugatuck |
| East Hampton | Hartford | Canaan | Milford | Hampton | New Haven |
| East Lyme | Hebron | Canton | Monroe | Killingly | North Branford |
| Essex | Manchester | Colebrook | New Canaan | Lebanon | North Haven |
| Glastonbury | Mansfield | Comwall | Newtown | Ledyard | Orange |
| Greenwich | Rocky Hill | Danbury | Norwalk | Lisbon | Oxford |
| Groton | Somers | East Granby | Redding | Montville | Plainville |
| Gulford | South Windsor | Farmington | Ridgefield | Norwich | Prospect |
| Haddam | Stafford | Goshen | Shelton | Plainfield | Seymour |
| Killingworth | Suffield | Granby | Stamford | Pomfret | Southington |
| Lyme | Tolland | Hartland | Stratford | Putnam | Wallingford |
| Madison | Union | Harwinton | Trumbull | Scotland | Waterbury |
| Marlborough | Vernon | Kent | Weston | Sterling | West Haven |
| Meriden | Wethersfield | Litchfield | Westport | Thompson | Wolcott |
| Middlefield | Willington | Morris | Wilton | Woodstock | Woodbridge |
| Middletown | Windham | New Fairfield | | | |
| New Britain | Windsor | New Hartford | | | |
| New London | Windsor Locks | New Milford | | | |
| Newington | | Norfolk | | | |
| North Stonington | | North Canaan | | | |
| Old Lyme | | Plymouth | | | |
| Old Saybrook | | Roxbury | | | |
| Portland | | Salisbury | | | |
| Preston | | Sharon | | | |
| Salem | | Sherman | | | |
| Sprague | | Simsbury | | | |
| Stonington | | Southbury | | | |
| Voluntown | | Thomaston | | | |
| Waterford | | Torrington | | | |
| Westbrook | | Unionville | | | |
| | | Warren | | | |
| | | Washington | | | |
| | | Watertown | | | |
| | | West Hartford | | | |
| | | Winchester | | | |
| | | Woodbury | | | |

Department of Consumer Protection

Plumbing & Piping Licenses: Licenses Expire annually: October 31st

Section 20-330 of the Connecticut General Statutes

"Plumbing and piping work" means the installation, repair, replacement, alteration or maintenance of gas, water and associated fixtures, laboratory equipment, sanitary equipment, other than subsurface sewage disposal systems, fire prevention apparatus, all water systems for human usage, sewage treatment facilities and all associated fittings within a building and shall include lateral storm and sanitary lines from buildings to the mains, swimming pools and pumping equipment, and shall include making connections to back flow prevention devices, and shall include low voltage wiring, not exceeding twenty-four volts, used within a lawn sprinkler system, but on and after July 1, 1984, shall not include solar work, except for the repair of those portions of a solar hot water heating system which include the basic domestic hot water tank and the tie-in to the potable water system and on and after April 1, 1989, shall not

include the installation, repair, replacement, alteration or maintenance of fire prevention apparatus within a structure, except for standpipes which are not connected to sprinkler systems.

"Irrigation work" means making the connections to back flow prevention devices, and low voltage wiring, not exceeding twenty-four volts, used within a lawn sprinkler system.

"Solar work" means the installation, repair, replacement, alteration or maintenance of an active, passive or hybrid solar hot water heating system.

P-1 Contractor Unlimited

The holder of this license may perform all plumbing and piping work as defined in Section 20-330 of the General Statutes.

P-2 Unlimited Journeyman

The holder of this license may do the same work as the P-1 licensee, but only while in the employ of a contractor licensed for such work.

P-7 Contractor (Limited to Sewer, Storm and Water Lines)

The holder of this license may perform the installation, replacement, alteration, or repair of sewer lines, storm water lines, water lines, and services. This license DOES NOT permit any work on septic tank systems or inside a structure.

P-6 Journeyman (Limited to Sewer, Storm and Water Lines)

The holder of this license may do the same work as the P-7 licensee, but only while in the employ of a contractor licensed for such work.

P-9 Contractor -

The holder of this license may perform the installation or repair of gasoline tanks and piping & pumping equipment.

P-8 Journeyman -

The holder of this license may do the same work as the P-9 licensee, but only while in the employ of a contractor licensed for such work.

J-1 Contractor (Limited to Water Pump and Water Conditioning Equipment)

The holder of this license may perform the installation or repair of water pumps, water conditioning equipment and related piping and equipment from the supply of a water well to the main shut-off valve which shall be within three feet of the supply tank. Installation and repair of water conditioning equipment piping shall include making the connection from and to the existing water line.

J-2 Journeyman (Limited to Water Pump and Water Conditioning Equipment)

The holder of this license may perform the same work as the J-1 licensee, but only while in the employ of a contractor licensed for such work.

EFFECTIVE JANUARY 1, 2008
P-2 PLUMBING APPRENTICESHIP
COURSE SEQUENCE AND PREREQUISITES

Related Instruction- 720 Hours

OJT - 8000 Hours

| Courses | Course number | Semester | Course Length | Prerequisites |
|---------------------------------------|----------------------|-----------------|----------------------|----------------------|
| FIRST YEAR COURSES: | | | | |
| Basic Math Computations | A0001 | 1 | 36 Hours | |
| Blueprint Reading | A0031 | 1 | 36 Hours | |
| Intro to Plumbing | A0700 | 2 | 36 Hours | |
| OSHA 30 | A0099 | 2 | 36 Hours | |
| Plumbing Math | A0014 | 2 | 36 Hours | A0001 |
| SECOND YEAR COURSES: | | | | |
| Brazing, Cutting and Metallurgy | A2113 | 1 | 36 Hours | |
| Drain Waste Vent I | A0706 | 1 | 36 Hours | |
| Drain Waste Vent II | A0746 | 2 | 36 Hours | A0706 |
| Gasoline Tank, Piping and Pump | A0749 | 2 | 36 Hours | |
| Sewer, Storm and Water Lines | A0754 | 2 | 36 Hours | |
| THIRD YEAR COURSES: | | | | |
| Water Supplies | A0705 | 1 | 36 Hours | |
| Wells, Pumps and Piping I | A0750 | 1 | 36 Hours | |
| Plumbing Code Part I | A0711 | 2 | 36 Hours | |
| Fixtures, Appliances and Installation | A0708 | 2 | 36 Hours | |
| Wells, Pumps and Piping II | A0751 | 2 | 36 Hours | A0750 |
| FOURTH YEAR COURSES: | | | | |
| Water Treatment | A0752 | 1 | 36 Hours | |
| International Mechanical Code | A0729 | 1 | 36 Hours | |
| Special Piping | A0709 | 2 | 36 Hours | |
| Plumbing Code Part II | A0741 | 2 | 36 Hours | A0711 |
| Related Codes and Standards | A0730 | 2 | 36 hours | |

J-2 WELL PUMPS & PIPING APPRENTICESHIP

COURSE SEQUENCE AND PREREQUISITES

Related Instruction- 288 Hours

OJT - 4000 Hours

| COURSES | Course number | Semeste | Course Length |
|-----------------------------|----------------------|----------------|----------------------|
| FIRST YEAR COURSES: | | | |
| Basic Math Computations | A0001 | 1 | 36 Hours |
| OSHA 30 | A0099 | 1 | 36 Hours |
| Blueprint Reading | A0031 | 2 | 36 Hours |
| Wells, Pumps and Piping I | A0750 | 2 | 36 Hours |
| SECOND YEAR COURSES: | | | |
| Wells, Pumps and Piping II | A0751 | 1 | 36 Hours |
| Water Treatment | A0752 | 1 | 36 Hours |
| Water Supply | A0705 | 2 | 36 Hours |
| Plumbing Code II | A0741 | 2 | 36 Hours |

P-6 SEWER STORM & WATER APPRENTICESHIP

COURSE SEQUENCE AND PREREQUISITES

Related Instruction- 180 Hours

OJT - 2000 Hours

| COURSES | Course number | Semester | Course Length |
|------------------------------|----------------------|-----------------|----------------------|
| FIRST YEAR COURSES: | | | |
| Basic Math Computations | A0001 | 1 | 36 Hours |
| OSHA 30 | A0099 | 1 | 36 Hours |
| Blueprint Reading | A0031 | 2 | 36 Hours |
| Sewer, Storm and Water Lines | A0754 | 2 | 36 Hours |
| Plumbing Code II | A0741 | 2 | 36 Hours |

P-8 GASOLINE TANK PIPING APPRENTICESHIP

COURSE SEQUENCE AND PREREQUISITES

Related Instruction- 144 Hours

OJT - 2000 Hours

| COURSES | Course number | Semester | Course Length |
|--------------------------------|----------------------|-----------------|----------------------|
| FIRST YEAR COURSES: | | | |
| Basic Math Computations | A0001 | 1 | 36 Hours |
| OSHA 30 | A0099 | 1 | 36 Hours |
| Blueprint Reading | A0031 | 2 | 36 Hours |
| Gasoline Tank, Piping and Pump | A0749 | 2 | 36 Hours |

J-4 LAWN SPRINKLER INSTALLER AND MAINTAINER APPRENTICESHIP

COURSE SEQUENCE AND PREREQUISITES

Related Instruction- 144 Hours

OJT - 2000 Hours

| COURSES | Course number | Semester | Course Length |
|----------------------------|----------------------|-----------------|----------------------|
| FIRST YEAR COURSES: | | | |
| Basic Math Computations | A0001 | 1 | 36 Hours |
| Blueprint Reading | A0031 | 1 | 36 Hours |
| Plumbing Math | A0014 | 2 | 36 Hours |
| Water Supply | A0705 | 2 | 36 Hours |

P-2 PLUMBING APPRENTICESHIP
COURSE SEQUENCE AND PREREQUISITES

**P-2 Plumbing Curriculum Requirements for Apprentices registered for classes
before the start of the Spring 2008 semester**

Related Instruction- 576 Hours

OJT - 8000 Hours

| COURSES | Course number | Semester | Course Length |
|---------------------------------------|----------------------|-----------------|----------------------|
| FIRST YEAR COURSES: | | | |
| Basic Math Computations | A0001 | 1 | 36 Hours |
| Business Math | A0007 | 1 | 36 Hours |
| OSHA 30 | A0099 | 2 | 36 Hours |
| Gas Heating Systems | A0728 | 2 | 36 Hours |
| SECOND YEAR COURSES: | | | |
| Blueprint Reading | A0031 | 1 | 36 Hours |
| Science I | A0703 | 1 | 36 Hours |
| Plumbing Blueprint Reading | A0036 | 2 | 36 Hours |
| Drain-Waste-Vent and Design Systems | A0706 | 2 | 36 Hours |
| THIRD YEAR COURSES: | | | |
| Science II | A0704 | 1 | 36 Hours |
| Water Supplies | A0705 | 1 | 36 Hours |
| Fixtures, Appliances and Installation | A0708 | 2 | 36 Hours |
| Basic Electricity | A0710 | 2 | 36 Hours |
| FOURTH YEAR COURSES: | | | |
| Special Piping and Installation | A0709 | 1 | 36 Hours |
| Plumbing Code Part I | A0711 | 1 | 36 Hours |
| Plumbing Code Part II | A0741 | 2 | 36 Hours |
| Heating Code | A0729 | 2 | 36 hours |

Related Instruction:

- **Old curriculum 576 Hours**
 - **Note: Old coursework is no longer being offered. Grandfathered apprentices will need to abide by current standards and coursework**

New curriculum 720 Hours

Connecticut Technical Education and Career System

P-2 Plumbing Apprenticeship

Revised curriculum crossover chart

Related Instruction:

- **Old curriculum 576 Hours**
 - **Note: Old coursework is no longer being offered. Grandfathered apprentices will need to abide by current standards and coursework**
- **New curriculum 720 Hours**

| OLD COURSES | Course number | NEW COURSES | Course number |
|---------------------------------------|---------------|---------------------------------------|---------------|
| Basic Math Computations | A0001 | Basic Math Computations | A0001 |
| Business Math | A0007 | None | |
| OSHA 30 | A0099 | OSHA 30 | A0099 |
| Basic Electricity | A0710 | None | |
| Blueprint Reading | A0031 | Blueprint Reading | A0031 |
| Science I | A0703 | None | |
| Science II | A0704 | None | |
| Plumbing Blueprint Reading | A0036 | None | |
| Drain-Waste-Vent and Design Systems* | A0706 | Drain-Waste-Vent I | A0706 |
| Special Piping and Installation | A0709 | Special Piping and Installation | A0709 |
| Water Supplies | A0705 | Water Supplies | A0705 |
| Fixtures, Appliances and Installation | A0708 | Fixtures, Appliances and Installation | A0708 |
| Gas Heating Systems | A0728 | None | |
| Plumbing Code Part I | A0711 | Plumbing Code Part I | A0711 |
| Plumbing Code Part II | A0741 | Plumbing Code Part II | A0741 |
| International Mechanical Code | A0729 | International Mechanical Code | A0729 |

*** Note:** Grandfathered plumbing apprentices needing Drain Waste Vent and Design from the old curriculum will need to take both Drain-Waste-Vent I and Drain Waste Vent II from the new curriculum.

Mandatory: In addition to core curriculum, Grandfathered Apprentices will need to successfully complete:

| | |
|---------------------------------|-------|
| Intro to Plumbing | A0700 |
| Plumbing Math | A0014 |
| Brazing, Cutting and Metallurgy | A2113 |
| Drain Waste Vent II | A0746 |
| Gasoline Tank, Piping and Pump | A0749 |
| Wells, Pumps and Piping I | A0750 |
| Wells, Pumps and Piping II | A0751 |
| Water Treatment | A0752 |
| Related Codes and Standards | A0730 |

When substituting new courses for the dropped old courses, the grandfather apprentices must include the following courses:

| | |
|-----------------------------|-------|
| Related Codes and Standards | A0730 |
| Plumbing Math | A0014 |
| Drain Waste Vent II | A0746 |

Course Outlines

NOTE: Each apprentice student is expected to complete all instructor assigned quizzes and exams as well as any academic reinforcement activities.

A minimum grade of 75% is necessary to pass each course.

Course: Basic Math Computations A0001 36 Hours

- A. Computations Using Real Numbers
- B. Computations Using Fractions
- C. Computations Using Decimal Fractions
- D. Base, Rate, and Portion
- E. Computation of Area and Volume
- F. Units of Measurements

Course: Blueprint Reading A0031 36 Hours

- A. Application of Building Codes and Standards
- B. Introduction to Blueprint Reading
- C. Alphabet of Lines and Symbols
- D. Orthographic Projection Drawings
- E. Construction Dimensions and Construction Materials
- F. Reading Plot Plans and Contour Maps
- G. Footings, Foundations and Floor Blueprint
- H. Structural Steel, Framing Blueprints
- I. Plumbing System Blueprints
- J. H.V.A.C. System Blueprints
- K. Electrical Systems Blueprints

Course: Introduction to Plumbing A0700 36 Hours

- A. The Plumbing Trade
- B. Job Site Safety
- C. Plumbing Math
- D. Plumbing Materials
- E. Plumbing Tools and Equipment

- A. Introduction to OSHA – 2 hours**
- B. Managing Safety and Health – 2 hours**
- C. OSHA Focus Four Hazards – 6 hours**
 - a. (1) Falls (minimum one hour and 15 minutes)**
 - b. (2) Electrocution**
 - c. (3) Struck-By (e.g., falling objects, trucks, cranes)**
 - d. (4) Caught-In or Between (e.g., trench hazards, equipment)**
- D. Personal Protective and Lifesaving Equipment – 2 hours**
- E. Health Hazards in Construction – 2 hours**
- F. Stairways and Ladders – 1 hour.**
- G. Electives - 12 hours**
 - a. Concrete and Masonry Construction**
 - b. Confined Space Entry**
 - c. Cranes, Derricks, Hoists, Elevators, & Conveyors**
 - d. Ergonomics**
 - e. Excavations**
 - f. Fire Protection and Prevention**
 - g. Materials Handling, Storage, Use and Disposal**
 - h. Motor Vehicles, Mechanized Equipment and Marine Operations; Rollover Protective Structures and Overhead Protection; and Signs, Signals and Barricades**
 - i. Powered Industrial Vehicles**
 - j. Safety and Health Programs**
 - k. Scaffolds**
 - l. Steel Erection**
 - m. Tools - Hand and Power**
 - n. Welding and Cutting**

Course: Plumbing Math**A0014****36 Hours**

- A. Basic Fundamental**
- B. Pipe Length Calculations**
- C. Volumes, Pressures and Capacities**
- D. Physics**

Course: Brazing, Cutting and Metallurgy**A2113****36 Hours**

- A. Brazing, Braze Welding & Soldering**
- B. Cutting Operations**
- C. Pipe Welding**
- D. Welding Metallurgy**
- E. Metal Identification**
- F. Weldability of Carbon & Alloy Steels**
- G. Weldability of Tool Steels and Cast Iron**
- H. Weldability of Stainless Steel**
- I. Weldability of Nonferrous Metals**
- J. Distortion Control**
- K. Materials & Fabrication Standards & Codes**

| | | |
|---|--------------|-----------------|
| Course: Drain, Waste and Vent I | A0706 | 36 Hours |
| <ul style="list-style-type: none"> A. Joining, Installing and Support Pipe B. Sanitary Drainage, Vent and Storm Water Drainage | | |
| Course: Drain, Waste and Vent II | A0746 | 36 Hours |
| <ul style="list-style-type: none"> A. Sizing Sanitary Drainage and Vent Piping B. Plumbing Traps | | |
| Course: Gasoline Tank, Piping and Pump | A0749 | 36 Hours |
| <ul style="list-style-type: none"> A. Installation of Underground Liquid Storage Systems B. Installation of Aboveground Storage Systems for Motor Vehicle Fueling C. Testing Electrical Continuity | | |
| Course: Sewer, Storm and Water Lines | A0754 | 36 Hours |
| <ul style="list-style-type: none"> A. General Installation Methods B. Concrete Pipe Installation C. Ductile Pipe Installation | | |
| Course: Water Supply | A0705 | 36 Hours |
| <ul style="list-style-type: none"> A. Sizing Water Supply Piping B. Protecting the Potable Water Supply C. Connecticut Cross Connection Control Manual | | |
| Course: Wells, Pumps and Piping I | A0750 | 36 Hours |
| <ul style="list-style-type: none"> A. Well Fundamentals B. Pumps C. Components | | |
| Course: International Plumbing Code Part I | A0711 | 36 Hours |
| <ul style="list-style-type: none"> A. International Plumbing Code, Chapters 1 thru 5, 8 & 10 | | |
| Course: Fixtures, Appliances Installation and Repairs | A0708 | 36 Hours |
| <ul style="list-style-type: none"> A. Plumbing Fixtures and Appliances B. Testing and Inspecting Plumbing Systems C. Customer Service and Plumbing System Repairs | | |
| Course: Wells, Pumps and Piping II | A0751 | 36 Hours |
| <ul style="list-style-type: none"> A. Service B. Water Quality Assurance C. Electric Safety and Controls D. Community Water Systems, Shared Wells and Groundwater Heat Pumps | | |

Course: Water Treatment **A0752** **36 Hours**

- A. Filtration Processes
- B. Aeration Processes
- C. Adsorption Process
- D. pH Modification and Neutralization Processes
- E. Ion Exchange Water Softening Process
- F. Iron, Manganese and Hydrogen Sulfide Treatment
- G. Multifunctional Treatment Systems
- H. Drinking and Cooking Water Quality
- I. Water Ailments- Symptoms, Causes and Remedies

Course: International Mechanical Code **A0729** **36 Hours**

- A. Administration of the International Mechanical Code

Course: Special piping and Installation **A0709** **36 Hours**

- A. Copper Tubing
- B. Plastic Piping
- C. Gas Piping

Course: International Plumbing Code Part II **A0741** **36 Hours**

- A. International Plumbing Code Chapters 6, 7, 9, 11 & 12

Course: Related Codes and Standards **A0730** **36 Hours**

- A. International Residential Code
- B. National Fire Protection Association Standards

Required Booklist for Plumbing Apprentice Students:

Following are the required textbooks that each student must purchase for each course.

For Basic Math Computations (A0001):

- Applied Mathematics, R. Jesse Phagan, Goodheart-Willcox Company, Inc. ISBN 1-56637-995-4
- Workbook: Applied Mathematics, R. Jesse Phagan, Goodheart-Willcox Company, Inc., ISBN 1-56637-996-2

For Plumbing Mathematics (A0014):

- Mathematics for Plumbers and Pipefitters, Lee Smith, 8th Edition, 2013

For Blueprint Reading (A0031):

- Print Reading for Construction, Residential and Commercial by Walter C. Brown and Daniel P. Dorfmueller, Goodheart-Willcox Company, Inc., ISBN 1-59070-347-2.

For OSHA 30 (A0099):

- Code of Federal Regulations - 29 CFR Part 1926 (OSHA), with latest available amendments, U.S. Government Printing Office, (866) 512-1800 or <http://www.access.gpo.gov/nara/cfr/cfr-table-search.html#page1>

For the following courses:

Introduction to Plumbing (A0700)

Drain, Waste and Vent I (A0706)

Drain, Waste and Vent II (A0746)

Water Supply (A0705)

Fixtures, Appliances Installation and Repairs (A0708)

- Textbook: Plumbing Design and Installation, L.V. Ripka/ATP Publication.
- NFPA 54: National Fuel Gas Code or National Fuel Gas Code Handbook, 2012, National Fire Protection Association,
- NFPA 58: Liquefied Petroleum Gas Code, 2014, National Fire Protection Association
- Connecticut Cross Connection Control Manual, Connecticut Department of Health

For Brazing, Cutting and Metallurgy (A2113)

- Textbook: Welding Skills, 3rd Edition, Moniz and Miller, American Technical Publishers

For Wells, Pumps and Piping I and II (A0750 & A0751)

- International Plumbing Code or International Plumbing Code 2012 or 2015 edition. International Code Council Inc.
- Water Systems Handbook, (11th Edition) Water Systems Council

For Water Treatment (A0752)

- International Plumbing Code or International Plumbing Code 2012 or 2015 edition. International Code Council Inc.
- Water Processing: Residential, Commercial, Light Industrial 3rd Edition, 2000, Wes McGowan, Water Quality Association 630-505-0160 www.wqa.org

For Sewer, Storm and Water Lines (A0754)

- Pipe and Excavation Contracting, Dave Roberts, 2011, Craftsman Book Company,
- Installation Guide for Ductile Iron Pipe, 2015 Edition, Ductile Iron Pipe Research Association, 205-402-8700, www.dipra.org
- Concrete Pipe and Box Culvert Installation. (2007) American Concrete Pipe Association, 683 Grigsby Way, Cedar Hill, TX 75104. www.concretepipe.org
- CBYD Excavation Manual. Call Before You Dig. Available from <http://www.cbyd.com/excavatorsman.htm> (ONE CALL).

For Special Piping and Installation (A0709)

- The Copper Tube Handbook, Copper Development Association, www.copper.org
- Plumbing Apprentice Training Manual for Plastic Piping Systems, Plastic Piping Educational Foundation
- National Fuel Gas Code Handbook, National Fire Protection Association (NFPA)

For Gasoline Tank, Piping and Pump (A0749)

- Recommended Practices for Installation of Underground Liquid Storage Systems, Petroleum Equipment Institute
- Recommended Practices for Installation of Aboveground Liquid Storage Systems for Motor Fueling, Petroleum Equipment Institute
- Recommended Procedure for Testing Electrical Continuity of Fuel-Dispensing Hanging Hardware, Petroleum Equipment Institute
- NFPA 30A Code for Motor Fuel Dispensing Facilities and Repair Garages, National Fire Protection Association (NFPA)

For Plumbing Code I & II (A0711 & A0741)

- International Plumbing Code or International Plumbing Code Commentary 2012 or 2015 edition. International Code Council Inc.

For International Mechanical Code (A0729) and Related Codes and Standards (A0730)

- International Mechanical Code or International Mechanical Code Commentary, 2009, 2012, or 2015 Editions, International Code Council Inc.
- International Residential Code Book 2012, International; Code Council
- NFPA 30 Flammable and Combustible Liquids
- NFPA 31 Standard for the Installation of Oil Burning Equipment
- NFPA 54: National Fuel Gas Code or National Fuel Gas Code Handbook, 2012, National Fire Protection Association,
- NFPA 56: Standard for Fire and Explosion Prevention During Cleaning and Purging of Flammable Gas Piping Systems Current Edition.
- NFPA 58: Liquefied Petroleum Gas Code, 2014, National Fire Protection Association
- NFPA 85 Boiler and Combustion Systems Hazards Code
- NFPA 90A Standard for the Installation of Air Conditioning and Ventilation Systems
- NFPA 90B Standard for the Installation of Warm Air heating and Air Conditioning Systems
- NFPA 96 Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations

- NFPA 99C Standard on Gas and Vacuum Systems

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