

**Connecticut Technical High School System**  
**Connecticut State Department of Education**

**PLUMBING**  
**APPRENTICESHIP**  
**INFORMATION PACKET**  
**2009-10**

**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**

The following section, **Apprentice Responsibilities**, is taken from the **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.**

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**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.

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

**CONNECTICUT TECHNICAL HIGH SCHOOL SYSTEM  
APPRENTICE RELATED INSTRUCTION LOCATIONS AND STAFF**

<b>Kathleen Mason, Education Consultant</b> <a href="mailto:Kathy.Mason@ct.gov">Kathy.Mason@ct.gov</a>	<b>Central Office</b> 25 Industrial Park Rd., Middletown 06457	<b>PHONE #</b> 860-807-2219
<b>Henry Abbott THS</b> Hayestown Ave. Danbury 06810	Jaime Rivera, Apprentice Supervisor <a href="mailto:Jaime.Rivera@ct.gov">Jaime.Rivera@ct.gov</a>	203 -797-4460 X 4423 Fax 203-797-4382
<b>Ella Grasso THS</b> 189 Fort Hill Rd. Groton 06340	Tony Baker, Apprentice Supervisor <a href="mailto:Tony.Baker@ct.gov">Tony.Baker@ct.gov</a>	860-448-0220 Fax 860-446-9895
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	Ken Woolley, Apprentice Supervisor <a href="mailto:Kenneth.Woolley@ct.gov">Kenneth.Woolley@ct.gov</a>	860-496-5300 Fax 860-496-9022
<b>W.F. Kaynor THS</b> 43 Tompkins St. Waterbury 06708	Vacant, Apprentice Supervisor <a href="mailto:@ct.gov">@ct.gov</a>	203-596-4302 x305 Fax 203-596-4121
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<b>Bristol Technical Education Ctr</b> 431 Minor ST. Bristol 06010	Ben Russell, Apprentice Supervisor <a href="mailto:Ben.Russell@ct.gov">Ben.Russell@ct.gov</a>	860-584-8433 X380 Fax 860-584-0795
	Allen Meyerhoff, Apprentice Supervisor <a href="mailto:Allen.Meyerhoff@ct.gov">Allen.Meyerhoff@ct.gov</a>	860-584-8433 X380 Fax 860-584-0795
<b>Howell Cheney THS</b> 791 W. Middle Tpke. Manchester 06040	Bruce McKechnie, Apprentice Supervisor <a href="mailto:Bruce.McKechnie@ct.gov">Bruce.McKechnie@ct.gov</a>	860-649-5396 Fax 860-649-5263
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<b>A.I.Prince THS</b> 401 Flatbush Ave., Hartford 06106	Peter Jennings, Apprentice Supervisor <a href="mailto:Peter.Jennings@ct.gov">Peter.Jennings@ct.gov</a>	860-951-7112 x3332 Fax 860-951-1529
	Joel Zimmerman, Apprentice Supervisor	860-951-7112 x3332
<b>Vinal THS</b> 60 Daniels St. Middletown 06457	Eric Hilversum, Apprentice Supervisor <a href="mailto:Eric.Hilversum@ct.gov">Eric.Hilversum@ct.gov</a>	860-344-7100 Fax 860-344-2622
<b>E.C. Goodwin THS</b> 735 Slater Rd. New Britain 06053	Frank Sesto, Apprentice Supervisor <a href="mailto:Frank.Sesto@ct.gov">Frank.Sesto@ct.gov</a>	860-827-7736 X312 Fax 860-827-7862
<b>Norwich THS</b> 7 Mahan Drive, Norwich, 06360	Mary Lunt, Apprentice Supervisor <a href="mailto:MaryEllen.Lunt@ct.gov">MaryEllen.Lunt@ct.gov</a>	860-889-8453 x2174 Fax 860-886-4632
	Gilda Puccio, Apprentice Supervisor <a href="mailto:Gilda.Puccio@ct.gov">Gilda.Puccio@ct.gov</a>	860-889-8453 x2116 Fax 860-886-4632
<b>Emmett O'Brien THS</b> 141 Prindle Ave. Ansonia 06401	Vacant, Apprentice Supervisor	203-732-1832 Fax 203-735-6236
<b>Bullard Havens THS</b> 500 Palisade Ave. Bridgeport 06610	Brian Schaefer Apprentice Supervisor <a href="mailto:Brian.Schaefer@ct.gov">Brian.Schaefer@ct.gov</a>	203-579-6888 Fax 203-579-6904
	Thomas Grace, Apprentice Supervisor	203-579-6888
<b>Eli Whitney THS</b> 71 Jones Road, Hamden 06604	Peter Dzialo, Apprentice Supervisor <a href="mailto:Peter.Dzialo@ct.gov">Peter.Dzialo@ct.gov</a>	203-397-4031 X326 Fax 203-397-4129
	Henry Galarraga, Apprentice Supervisor <a href="mailto:Henry.Galarraga@ct.gov">Henry.Galarraga@ct.gov</a>	203-397-4031 X326 Fax 203-397-4129
<b>J.M. Wright THS</b> P.O.Box 1416, Stamford 06904	Keith Stadler, Apprentice Supervisor <a href="mailto:Keith.Stadler@ct.gov">Keith.Stadler@ct.gov</a>	203-324-7363 X390 Fax 203-324-1196

Regional Apprenticeship Representatives  
Office of Apprenticeship Training  
Department of Labor

Region 1: Paul Femia, [paul.femia@ct.gov](mailto:paul.femia@ct.gov)

(860) 263-6128

Towns Served:

Amston	East Lyme	Lisbon	North Windham	Stonington
Andover	Franklin	Lyme	Oakdale	Storrs
Bozrah	Gales Ferry	Mansfield	Old Lyme	Taftville
Ballouville	Griswold	Montville	Pawcatuck	Voluntown
Baltic	Groton	Moosup	Plainfield	Waterford
Brooklyn	Hampton	Mystic	Preston	Willimantic
Canterbury	Hebron	New London	Quaker Hill	Windham
Chaplin	Jewett City	Niantic	Scotland	Yantic
Columbia	Killingly	North Franklin	South Lyme	Uncasville
Coventry	Lebanon	North Stonington	Sprague	
Danielson	Ledyard	Norwich	Sterling	
Dayville				

Region 2: Larry Satchell, [larry.satchell@ct.gov](mailto:larry.satchell@ct.gov)

(860) 263-6084

Towns Served:

Ashford	Glastonbury	Rockville	Stafford Springs	Willington
Bolton	Grasvenordale	Rocky Hill	Thompson	Windsor
Broad Brook	Manchester	Somers	Tolland	Windsor Locks
East Windsor	North Grasvenordale	South Glastonbury	Union	Woodstock
East Woodstock	Promfret Center	South Windsor	Vernon	Woodstock Valley
Eastford	Putnam	Rockville	Suffield	West Suffield
Ellington	Quinebaug	Enfield		

Region 3: Owen Golding, [owen.golding@ct.gov](mailto:owen.golding@ct.gov)

(860) 263-6083

Towns Served:

Avon	Collinsville	Granby	Oakville	Thomaston
Bantam	Cornwall	Hartland	Pequabuck	Unionville
Barkhamstead	Cornwall Bridge	Harwinton	Pine Meadow	Watertown
Bethlehem	East Canaan	Lakeville	Pleasant Valley	Weatogue
Bloomfield	East Granby	Litchfield	Plymouth	West Granby
Bristol	East Hartford	Morris	Riverton	West Hartford
Bridgewater	Enfield	New Hartford	Salisbury	West Hartland
Burlington	Falls Village	Norfolk	Sharon	West Simsbury
Canaan	Farmington	North Canaan	Simsbury	West Suffield
Canton	Forestville	North Canton	Suffield	Winsted
Canton Center	Goshen	North Granby	Terryville	Wolcott
Gaylordsville	New Milford	Roxbury	South Kent	Warren
Kent	New Preston	Sherman	Torrington	Washington
				Washington Depot

Regional Apprenticeship Representatives

Region 5: Gina Knox, [gina.knox@ct.gov](mailto:gina.knox@ct.gov)

(860) 263-6277

Towns Served:

<b>Bridgeport</b>	<b>Fairfield</b>	<b>Norwalk</b>	<b>Stamford</b>	<b>Weston</b>
<b>Cos Cob</b>	<b>Greenwich</b>	<b>Old Greenwich</b>	<b>Stratford</b>	<b>Westport</b>
<b>Darien</b>	<b>Milford</b>	<b>Riverside</b>	<b>Trumbull</b>	<b>Wilton</b>
<b>Danbury</b>	<b>Monroe</b>	<b>Rowayton</b>	<b>Bethel</b>	<b>Ridgefield</b>
<b>East Norwalk</b>	<b>New Canaan</b>	<b>South Norwalk</b>	<b>Brookfield</b>	<b>Sandy Hook</b>
<b>Easton</b>	<b>New Fairfield</b>	<b>Newtown</b>	<b>Redding</b>	

Region 6: Tammie Whiting, [tammie.whiting@ct.gov](mailto:tammie.whiting@ct.gov)

(860)263-6154

Towns Served

<b>Bethany</b>	<b>Durham</b>	<b>Hamden</b>	<b>New Haven</b>	<b>Orange</b>
<b>Branford</b>	<b>East Haddam</b>	<b>Higganum</b>	<b>North Branford</b>	<b>Salem</b>
<b>Centerbrook</b>	<b>East Hampton</b>	<b>Ivoryton</b>	<b>North Haven</b>	<b>West Haven</b>
<b>Chester</b>	<b>East Haven</b>	<b>Killingworth</b>	<b>North Salem</b>	<b>Westbrook</b>
<b>Clinton</b>	<b>Essex</b>	<b>Madison</b>	<b>Northford</b>	<b>Woodbridge</b>
<b>Colchester</b>	<b>Guilford</b>	<b>Marlborough</b>	<b>Old Saybrook</b>	
<b>Deep River</b>	<b>Haddam</b>	<b>Moodus</b>		

Region 7: Keri Lamontagne, [keri.lamontagne@ct.gov](mailto:keri.lamontagne@ct.gov)

(860) 263-6129

Towns Served:

<b>Berlin</b>	<b>Kensington</b>	<b>Middletown</b>	<b>Plantsville</b>	<b>Southington</b>
<b>Cheshire</b>	<b>Marion</b>	<b>Milldale</b>	<b>Portland</b>	<b>Wallingford</b>
<b>Cromwell</b>	<b>Meriden</b>	<b>New Britain</b>	<b>Rockfall</b>	<b>Yalesville</b>
<b>East Berlin</b>	<b>Middlefield</b>	<b>Plainville</b>	<b>South Meriden</b>	

Region 8: Robert Albini, [robert.albini@ct.gov](mailto:robert.albini@ct.gov)

(860) 263-6585

Towns Served:

<b>Ansonia</b>	<b>Huntington</b>	<b>Oxford</b>	<b>South Britain</b>
<b>Beacon Falls</b>	<b>Middlebury</b>	<b>Prospect</b>	<b>Southbury</b>
<b>Derby</b>	<b>Naugatuck</b>	<b>Seymour</b>	<b>Waterbury</b>
		<b>Shelton</b>	<b>Woodbury</b>

Region 9: Ken Duff, [kenneth.duff@ct.gov](mailto:kenneth.duff@ct.gov)

(860) 263-6167

Towns Served:

<b>East Hartford</b>	<b>Newington</b>
<b>Hartford</b>	<b>Wethersfield</b>

## **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 Journeyperson**

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 Journeyperson (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 Journeyperson -**

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 Journeyperson (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**

<b>Courses</b>	<b>Course number</b>	<b>Semester</b>	<b>Course Length</b>	<b>Prerequisites</b>
<b>FIRST YEAR COURSES:</b>				
Basic Math Computations	A0001	1	36 Hours	
Blueprint Reading	A0031	1	36 Hours	
Intro to Plumbing	A0700	2	36 Hours	
Building Trade Safety	A0099	2	36 Hours	
Plumbing Math	A0014	2	36 Hours	A0001
<b>SECOND YEAR COURSES:</b>				
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	
<b>THIRD YEAR COURSES:</b>				
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
<b>FOURTH YEAR COURSES:</b>				
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**

<b>COURSES</b>	<b>Course number</b>	<b>Semester</b>	<b>Course Length</b>
<b>FIRST YEAR COURSES:</b>			
Basic Math Computations	A0001	1	36 Hours
Building Trade Safety	A0099	1	36 Hours
Blueprint Reading	A0031	2	36 Hours
Wells, Pumps and Piping I	A0750	2	36 Hours
<b>SECOND YEAR COURSES:</b>			
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**

<b>COURSES</b>	<b>Course number</b>	<b>Semester</b>	<b>Course Length</b>
<b>FIRST YEAR COURSES:</b>			
Basic Math Computations	A0001	1	36 Hours
Building Trade Safety	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**

<b>COURSES</b>	<b>Course number</b>	<b>Semester</b>	<b>Course Length</b>
<b>FIRST YEAR COURSES:</b>			
Basic Math Computations	A0001	1	36 Hours
Building Trade Safety	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**

<b>COURSES</b>	<b>Course number</b>	<b>Semester</b>	<b>Course Length</b>
<b>FIRST YEAR COURSES:</b>			
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**

<b>COURSES</b>	<b>Course number</b>	<b>Semester</b>	<b>Course Length</b>
<b>FIRST YEAR COURSES:</b>			
Basic Math Computations	A0001	1	36 Hours
Business Math	A0007	1	36 Hours
Building Trade Safety	A0099	2	36 Hours
Gas Heating Systems	A0728	2	36 Hours
<b>SECOND YEAR COURSES:</b>			
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
<b>THIRD YEAR COURSES:</b>			
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
<b>FOURTH YEAR COURSES:</b>			
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

**Technical High School System**  
**P-2 Plumbing Apprenticeship**  
**Revised curriculum crossover chart**

**Related Instruction:**

- **Old curriculum 576 Hours**
- **New curriculum 720 Hours**

OLD COURSES	Course number	NEW COURSES	Course number
Basic Math Computations	A0001	Basic Math Computations	A0001
Business Math	A0007	None	
Building Trade Safety	A0099	Building Trade Safety	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.

**New courses:**

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

## Table of Contents

**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

**Course: Building Trade Safety A0099 36 Hours**

- A. Introduction to Building Trade Safety
- B. Identify Potential Danger
- C. Safety and Protective Equipment (PPE)
- D. Hand Tool Safety
- E. Ladder Safety
- F. Lock-out / Tag-out
- G. Portable Electrical Tools and Equipment
- H. Identify Hazardous Material, Using a Material Safety Data (M.S.D.S.)
- I. Lifting Objects
- J. Assured Grounding
- K. Trenches

**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**

- A. Joining, Installing and Support Pipe
- B. Sanitary Drainage, Vent and Storm Water Drainage

**Course: Drain, Waste and Vent II A0746 36 Hours**

- A. Sizing Sanitary Drainage and Vent Piping
- B. Plumbing Traps

**Course: Gasoline Tank, Piping and Pump A0749 36 Hours**

- 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**

- A. General Installation Methods
- B. Concrete Pipe Installation
- C. Ductile Pipe Installation

**Course: Water Supply A0705 36 Hours**

- 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**

- A. Well Fundamentals
- B. Pumps
- C. Components

**Course: International Plumbing Code Part I A0711 36 Hours**

- A. International Plumbing Code, Chapters 1 thru 5, 8 & 10

**Course: Fixtures, Appliances Installation and Repairs A0708 36 Hours**

- 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**

- 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):**

- Textbook: Mathematics for Plumbers and Pipefitters, Lee Smith, Delmar Learning, ISBN 1-4283-0461-4

### **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 Building Trade Safety (A0099):**

- OSHA 1926 CFR 29

### **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, American Technical Publishers<sup>3<sup>rd</sup></sup>(or latest edition)
- NFPA 54, National Fuel Gas Code, National Fire Protection Association (NFPA)
- Connecticut Cross Connection Control Manual, Connecticut Department of Health

### **For Brazing, Cutting and Metallurgy (A2113)**

- Textbook: Welding Skills, 3<sup>rd</sup> Edition, Moniz and Miller, American Technical Publishers

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

- Water Systems Handbook, Water Systems Council

### **For Water Treatment (A0752)**

- Water Processing, #3rd Edition, Water Quality Association

### **For Sewer, Storm and Water Lines (A0754)**

- Pipe & Excavation Contracting by Dave Roberts: Craftsman Book Company
- Concrete Pipe Installation, American Concrete Pipe Association
- Installation Guide for Ductile Iron Pipe, Ductile Iron Pipe Research Association

### **For Special Piping and Installation (A0709)**

- The Copper Tube Handbook, Copper Development Association, [www.copper.org](http://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 2003, International Code Council

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

- International Mechanical Code Book 2006, International Code Council
- International Residential Code Book 2006, 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
- 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

# APPRENTICE PROGRAM

## BOOK PUBLISHERS PHONE ORDER NUMBERS & WEBSITES

<b><u>Book Publishers</u></b>	<b><u>Phone Numbers</u></b>	<b><u>Website</u></b>
Goodheart-Willcox	1-800-323-0440	<a href="http://www.goodheartwillcox.com">www.goodheartwillcox.com</a>
Thomson Delmar Learning	1-800-347-7707	<a href="http://www.delmarlearning.com">www.delmarlearning.com</a>
National Fire Protection Association (NFPA)	1-800-344-3555	<a href="http://www.nfpa.org/index.asp">www.nfpa.org/index.asp</a>
American Technical Publishers	1-800-323-3471	<a href="http://www.go2atp.com">www.go2atp.com</a>
International Code Council (ICC)	1-800-786-4452	<a href="http://www.iccsafe.org/e/category.html">www.iccsafe.org/e/category.html</a>
CRC Press	1-800-272-7737	<a href="http://www.crcpress.com/default.asp">www.crcpress.com/default.asp</a>
Amazon Bookstore	1-800-201-7575	<a href="http://www.amazon.com">www.amazon.com</a>
Prentice Hall	1-800-282-0693	<a href="http://vig.prenhall.com/catalog/">http://vig.prenhall.com/catalog/</a>
Petroleum Equipment Institute	1-918-494-9696	<a href="http://www.pei.org">www.pei.org</a>
Plastic Piping Educational Foundation	1-630-858-6540	<a href="http://www.ppfahome.org">www.ppfahome.org</a>
Copper Development Association	212-251-7200	<a href="http://www.copper.org">www.copper.org</a>
Water Systems Council	1-202-625-4387	<a href="http://www.watersystemcouncil.org">www.watersystemcouncil.org</a>
Craftsman Book Company	1-800-829-8123	<a href="http://craftsman-book.com">http://craftsman-book.com</a>
American Concrete Pipe Association	1-972 506-7216	<a href="http://www.concrete-pipe.org">http://www.concrete-pipe.org</a>
Ductile Iron Pipe Research Association	1-251-990-4984	<a href="http://www.dipra.org/">http://www.dipra.org/</a>
Water Quality Association	1-630-505-0160	<a href="http://www.wqa.org/">http://www.wqa.org/</a>