Continuing Education Registry

Plumbing Courses Approved

October 8, 2019 – December 3, 2019

Home Builders Association of Utah
HVAC - Ductless Technology - Course #: 15453
Plumber Core Hours: 3.0

Home Builders Association of Utah
Construction Accounting - Course #: 15457
Plumber Pro Hours: 4.0

Home Builders Association of Utah
Accounting Essentials & Quickbooks/Gen Constr Code Review - Course #: 15595
Plumber Core Hours: 3.0 Pro Hours: 3.0

RedVector.com
Residential Green Bldg: Design, Construction, & Certification - Course #: 15477
Plumber Pro Hours: 4.0

UAPMO
Type I&II Commercial Kitchen Hood Requirements - Course #: 15639
Plumber Core Hours: 4.0

UAPMO
HVAC Manual D & J and IECC Updates - Course #: 15643
Plumber Core Hours: 8.0

Utah Career Center
Jobsite Digital Literacy - Course #: 15525
Plumber Pro Hours: 4.0

Utah Career Center
UMCA/LU 140 Orbital Welding Training - Course #: 15527
Plumber Pro Hours: 4.0

Utah Department of Environmental Quality
Hidden Hazards: Asbestos and Lead-Based Paint - Course #: 15389
Plumber Core Hours: 1.0

Utah Plumbing and Heating Contractors Association
HVAC - 12 HOUR Code Updates/HVAC Venting - Course #: 15471
Plumber Core Hours: 12.0

Utah Plumbing and Heating Contractors Association
Lessons Learned from a Forensic Plumbing Engineer - Course #: 15575
Plumber Core Hours: 1.5

Utah Plumbing and Heating Contractors Association
Workman's Compensation Insurance Basics - Course #: 15653
Plumber Pro Hours: 1.0

Utah Plumbing and Heating Contractors Association
Legislative Review of Plumbing Codes and Regulations - Course #: 15655
Plumber Core Hours: 1.0

Workers Compensation Fund
Non-Driving Hazards in the Trucking Industry - Course #: 15603
Plumber Pro Hours: 1.5

Workers Compensation Fund
Safety Programs for Small - Course #: 15609
Plumber Pro Hours: 1.5

UTAH DOPL - PLUMBING SCHOOL SUMMARY

Test Date : 10/08/19 - 12/03/19

Date: 12/03/19

Test Name : UT Journeyman Plumber Examinations

Component : UT Journeyman Plumber Theory Examination ORIGINAL

School Code	School Name	Tested	Passed	Failed	% Passed
3671	Dixie State College	**1**	**0**	**1**	**0.00**
5220	Salt Lake Community College	**8**	**1**	**7**	**12.50**
0045	Bridgerland ATC	**3**	**0**	**3**	**0.00**
0048	Davis ATC	**2**	**0**	**2**	**0.00**
0065	Dixie ATC	**1**	**0**	**1**	**0.00**
0061	Mountainland ATC	**2**	**1**	**1**	**50.00**
0044	Ogden-Weber ATC	**1**	**0**	**1**	**0.00**
9999	Other	**2**	**1**	**1**	**50.00**
0062	Southwest ATC	**2**	**1**	**1**	**50.00**
		22	**4**	**18**	**18.18**

UTAH DOPL - PLUMBING SCHOOL SUMMARY

Test Date : 10/08/19 - 12/03/19

Date: 12/03/19

Test Name : UT Journeyman Plumber Examinations

Component : UT Journeyman Plumber Theory Examination RETAKE

School Code	School Name	Tested	Passed	Failed	% Passed
5220	Salt Lake Community College	**3**	**1**	**2**	**33.33**
0044	Ogden-Weber ATC	**2**	**2**	**0**	**100.00**
9999	Other	**3**	**2**	**1**	**66.67**
		8	**5**	**3**	**62.50**

UTAH DOPL - PLUMBING SCHOOL SUMMARY

Test Date : 10/08/19 - 12/03/19

Date: 12/03/19

Test Name : UT Master Plumber Examinations

Component : UT Master Plumber Written Theory Examination ORIGINAL

School Code	School Name	Tested	Passed	Failed	% Passed
3671	Dixie State College	**1**	**0**	**1**	**0.00**
5220	Salt Lake Community College	**5**	**2**	**3**	**40.00**
0048	Davis ATC	**1**	**0**	**1**	**0.00**
0065	Dixie ATC	**2**	**0**	**2**	**0.00**
0061	Mountainland ATC	**2**	**1**	**1**	**50.00**
9999	Other	**1**	**1**	**0**	**100.00**
		12	**4**	**8**	**33.33**

UTAH DOPL - PLUMBING SCHOOL SUMMARY

Test Date : 10/08/19 - 12/03/19

Date: 12/03/19

Test Name : UT Master Plumber Examinations

Component : UT Master Plumber Written Theory Examination RETAKE

School Code	School Name	Tested	Passed	Failed	% Passed
5220	Salt Lake Community College	**1**	**1**	**0**	**100.00**
9999	Other	**1**	**1**	**0**	**100.00**
		2	**2**	**0**	**100.00**

UTAH DOPL - PLUMBING SCHOOL SUMMARY

Test Date : 10/08/19 - 12/03/19

Date: 12/03/19

Test Name : UT Residential Journeyman Plumber

Component : UT Residential Journeyman Plumber Theory Examination ORIGINAL

School Code	School Name	Tested	Passed	Failed	% Passed
0045	Bridgerland ATC	**1**	**0**	**1**	**0.00**
0065	Dixie ATC	**1**	**0**	**1**	**0.00**
0061	Mountainland ATC	**1**	**1**	**0**	**100.00**
9999	Other	**1**	**0**	**1**	**0.00**
		4	**1**	**3**	**25.00**

UPHCA
Utah Plumbing & Heating
Contractors Association

The Voice & Unity
of the Independent
Plumbing/Mechanical
& HVAC Industry of Utah

Report of the Apprenticeship College Curriculum Committee

November 16, 2019

Those who attended were: Bryce Chapman (DTC), David Butterfield (SLCC), Tim Kohler (BTC), RJ Martin (OWTC), Bart Biller (MTC) and myself. As you know this group was tasked to develop test bank questions for state wide competency tests for 1a, 1b, 2a, 2b, 3a, 3b, and 4a to implement in Fall of 2020. To ensure that the proper questions were developed the group went over the curriculum and what books will be used. There were a couple of tweaks to the curriculum, see attached for a redline version showing the couple of modifications. They were: in 3a delete using the Dugway project drawings and provide a standard set of plans, 1 residential and 1 commercial with a specs book for use by all schools (UPHCA will provide these for the schools). The other change was deleting in 3b the Chapter 10 Boiler Connections, Appurtenances, and Controls Chapter 11 Combustion, Burners, and replace the time with 'Reviewing Roof Drain Sizing'. This review will provide students a good review on this subject prior to some who might take the state tests and the end of 3b.

It was decided by the group to review their own questions for each semester and rank them in order of importance, 1 being important and 5 delete or not necessary. Each test would be a 60 question test with a goal of at least 120 test bank questions for each semester. The group also felt that those apprentices taking online classes would have to come to the school to take the competency tests rather than at home and they would like to see each student be able to take the semester ending competency test twice if needed.

The following is the timeline for the Competency Tests development:

- January 24, 2020 the schools will send to Dave Hill the test questions for each semester with the ranking.
- March 1, 2020: Dave Hill will send back out the draft of the tests. To ensure security no tests will be forwarded or printed. They will be reviewed and modification sent back to Dave Hill by March 31st.
- March 31, 2020: Dave Hill will finalize the questions.
- April 30, 2020: Dave Hill will submit the final test bank questions to the Plumbing Licensing Board.

Submitted to the Plumbing Licensing Board on December 4, 2019.

Plumbing Apprenticeship Books				
Mathematics for Plumbers and Pipe fitters (8e)	CENGAGE Delmar Learning	978-1-111-64260-0	https://www.cengage.com	1st - 4th Years
Modern Plumbing (8th Edition)	Goodheart and Wilcox	978-1-60525-236-0	https://www.g-w.com	1st and 2nd Years
Modern Plumbing Job Practice Manual (7th Edition)	Goodheart and Wilcox	978-1-5907-0351-9	https://www.g-w.com	1st and 2nd Years
2018 International Plumbing Code	International Code Council	3200S18	https://www.iccsafe.org	1st - 4th Years
2018 International Plumbing Code Study Companion	International Code Council	4217S18	https://www.iccsafe.org	1st - 4th Years
2018 International Mechanical Code	International Code Council	3300S18	https://www.iccsafe.org	3rd and 4th Years
2018 International Mechanical Code Study Companion	International Code Council	4317S18	https://www.iccsafe.org	3rd and 4th Years
2018 International Fuel Gas Code	International Code Council	3600S18	https://www.iccsafe.org	3rd and 4th Years
2018 International Fuel Gas Code Study Companion	International Code Council	4607S18	https://www.iccsafe.org	3rd and 4th Years
NFPA 13D				3rd and 4th Years
Reference Books (Not Required)				
Low Pressure Boilers 3rd Edition	ATP Publications	978-0-82694-358-3	http://www.go2atp.com	
Low Pressure Boilers Workbook 3rd Edition	ATP Publications	978-0-82694-359-0	http://www.go2atp.com	

SALT LAKE COMMUNITY COLLEGE
APPRENTICESHIP PLUMBING CURRICULUM

FIRST YEAR APPRENTICE
1-A: First Semester

MODERN PLUMBING — 48 Hours

I. Section 5 – Career Development and Plumbing History (12 Hours)

Text	Chapter 33 in *Modern Plumbing*, *Modern Marvels, Plumbing the Arteries of Civilization,* Video from the History Channel
Objectives	The students will learn the history of plumbing, from its crude beginnings about 5000 years ago to the extensive water supply and DWV systems used today in developed countries.
Text	Chapter 32 in *Modern Plumbing*, E. K. Blankenbaker
Objectives	Students will be introduced to several different career areas for plumbers and the formal training provided through apprenticeship.

II. Section 1 – Introduction to Plumbing (36 Hours)

Text	Chapter 1 in *Modern Plumbing*, E. K. Blankenbaker
Objectives	The students will learn safety attitudes and the practice of safe working habits.
Text	Chapter 2 in *Modern Plumbing*, E. K. Blankenbaker
Objectives	The students will learn the function and care of common plumbing tools.
Text	Chapter 3 in *Modern Plumbing*, E. K. Blankenbaker
Objectives	The students will be introduced to the builder's level and the laser level.
Text	Chapter 5 in *Modern Plumbing*, E. K. Blankenbaker
Objectives	The students will learn the nature of liquids and gases and their properties related to plumbing systems.
Text	Chapter 7 in *Modern Plumbing*, E. K. Blankenbaker
Objectives	The students will learn the mechanical means and tools used to lift or hold heavy piping during installation. (**Note: The instructor may want to discuss IPT's Pipe Trades Handbook Section 11 in conjunction with this chapter.)
Text	Chapter 8 in *Modern Plumbing*, E. K. Blankenbaker
Objectives	The students will learn the purpose and content of building and plumbing code.

INTERNATIONAL PLUMBING CODE — 9 Hours

III. Administration, Definitions, and General Regulations

Text:	International Plumbing Code
Chapter 1	Administration
Chapter 2	Definitions
Chapter 3	General Regulations

IPT's PIPE TRADES HANDBOOK — 3 Hours

V. Section 11 – Rigging

MATHEMATICS — 9 Hours

IV. Mathematic Units 1 through 6

Text:	*Mathematics for Plumbers and Pipefitters*
Unit 1	Basic Rules of Math
Unit 2	Formulas

Unit 3	Solving Formulas/Equations
Unit 4	Square Root (should teach how to find on the calculator)
Unit 5	Review of Angle Measure
Unit 6	Conversion of Length Measure

MISCELLANEOUS — 12 Hours

Labs (6 hours)
Review for Competency Exam (3 hours)
Competency Exam (3 hours)

TOTAL HOURS: 81 Hours

SALT LAKE COMMUNITY COLLEGE
APPRENTICESHIP PLUMBING CURRICULUM

FIRST YEAR APPRENTICE
1-B: Second Semester

INTERNATIONAL PLUMBING CODE — 9 Hours

I. Fixture, Faucets and Fixture Fittings, Water Heaters, and Traps, Interceptors and Separators

Text:	International Plumbing Code
Chapter 4	Fixture, Faucets and Fixture Fittings
Chapter 5	Water Heaters
Chapter 10	Traps, Interceptors and Separators

MATHEMATICS — 15 Hours

II Mathematic Units 7 through 23

Text	Chapter 4 in *Modern Plumbing,* E. K. Blankenbaker
Objectives	Students will learn basic mathematics related to plumbing.
Text:	*Mathematics for Plumbers and Pipefitters*
Unit 7	Standard Weight Pipe
Unit 8	Allowance for Threaded Pipe
Unit 9	Copper Tubing
Unit 10	Allowance for Copper Fittings
Unit 11	Plastic Pipe
Unit 12	Allowance for Plastic Fitting
Unit 13	Welded Steel Pipe
Unit 14	Allowance for Welded Fittings
Unit 15	Equal Spacing
Unit 16	Angels in Plumbing
Unit 17	Offset, Diagonal, Rise and Run
Unit 18	Solving for 45 degree Constants
Unit 19	45 degree Diagonal and Pipe Length
Unit 20	Three-pipe Diagrams with a 45 Degree Offset
Unit 21	Right Angel with a 45 degree Diagonal
Unit 22	45 degree Offset with Wye Fitting
Unit 23	Wye and Tee-wye Assemblies
Unit 24	The 0.707 Constant in 45 degree Pipe Assemblies

(**Note: The instructor may want to discuss IPT's Pipe Trades Handbook Sections 6 and 7 in conjunction with these math lessons.)

MODERN PLUMBING — 30 Hours

III. Section 1 – Introduction to Plumbing (Cont.) (9 Hours)

Text	Chapter 6 in *Modern Plumbing,* E. K. Blankenbaker
Objectives	Students will learn basic skills needed to read drawings and produce piping sketches. (**Note: The instructor may want to discuss IPT's Pipe Trades Handbook Section 9 in conjunction with this chapter.)
Text	Chapter 9 in *Modern Plumbing,* E. K. Blankenbaker
Objectives	Students will learn the process of making watertight joints using heat and various filler metals.
Text	Chapter 10 in *Modern Plumbing,* E. K. Blankenbaker

Objectives The students will discuss machine and hand excavating with emphasis on safety.

IV. Section 2 – Plumbing Systems (21 Hours)

Text Chapter 11 in *Modern Plumbing,* E. K. Blankenbaker

Objectives Students will learn the basics of well locations, types of wells, selection of well equipment, and installation of a private water supply system. (**Note: The instructor may want to introduce the students to IPC Chapter 6 Sections 601, 602 and 603 in conjunction with this chapter.)

Text Chapter 12 in *Modern Plumbing,* E. K. Blankenbaker

Objectives Students will receive and overview of the contaminants sometimes found in water and the devices used to remove these impurities.

Text Chapter 13 in *Modern Plumbing,* E. K. Blankenbaker

Objectives Students will learn the many different fixtures designed for residential and small commercial buildings. (**Note: The instructor may want to discuss IPC Chapter 4 in conjunction with this chapter.)

Text Chapter 14 in *Modern Plumbing,* E. K. Blankenbaker

Objectives Students will learn the various types of pipe and fittings used in residential and light commercial plumbing systems. Emphasis is given to materials, sizes and applications. (**Note: The instructor may want to discuss IPT's Pipe Trades Handbook Sections 1, 2, and 4 as they apply to this chapter.)

Text Chapter 15 in *Modern Plumbing,* E. K. Blankenbaker

Objectives Students will learn the valves and meters most common to residential and light commercial plumbing. (**Note: The instructor may want to discuss IPT's Pipe Trades Handbook Section 3 in conjunction with this chapter.)

Text Chapter 16 in *Modern Plumbing,* E. K. Blankenbaker

Objectives Students will learn the design, operation and installation of the water heaters used in homes and small commercial buildings. (**Note: The instructor may want to discuss IPC Chapter 5 in conjunction with this chapter.)

IPT's PIPE TRADES HANDBOOK — 9 Hours

V. Section 1 – Pipe Data
VI. Section 2 – Tube Data
VII. Section 3 – Valves
VIII. Section 4 – Fittings
IX. Section 6 – Pipe Offsets
X. Section 7 – Trigonometry
XI. Section – 9 Piping Prints

FIELD TRIP TO WATER TREATMENT PLANT — 3 Hours

FIELD TRIP TO SEWAGE TREATMENT PLANT — 3 Hours

MISCELLANEOUS — 12 Hours

Labs (6 hours)
Review for Competency Exam (3 hours)
Competency Exam (3 hours)

TOTAL HOURS: 81 Hours

SALT LAKE COMMUNITY COLLEGE
APPRENTICESHIP PLUMBING CURRICULUM

SECOND YEAR APPRENTICE
2-A: First Semester

INTERNATIONAL PLUMBING CODE — 15 Hours

I. Water Supply and Distribution, Sanitary Drainage, Indirect/Special Waste, Vents, and Traps, Interceptors and Separators

Text: International Plumbing Code

Chapter 6	Water Supply and Distribution
Chapter 7	Sanitary Drainage
Chapter 8	Indirect/Special Waste
Chapter 9	Vents
Chapter 10	Traps, Interceptors and Separators (Review)

INDIVIDUAL WASTEWATER DISPOSAL SYSTEMS — 6 Hours

II. Onsite Wastewater Systems

Text: Rule 317-4, Utah Administrative Code Sections 1-6

MODERN PLUMBING — 48 Hours

III. Section 3 – Plumbing System Design and Installation

Text	Chapter 17 in *Modern Plumbing*, E. K. Blankenbaker
Objectives	A. Students will learn the principles for designing DWV and water supply systems that will provide long and satisfactory service. (**Note: The instructor may want to introduce IPC Chapters 6, 7 and 9 as they apply to this chapter.)
Text	Chapter 18 in *Modern Plumbing*, E. K. Blankenbaker
Objectives	A. Students will discuss the two stages of plumbing installation – rough in and finish stages.
Text	Chapter 19 in *Modern Plumbing*, E. K. Blankenbaker
Objectives	A. Students will learn the installation of DWV systems. (**Note: The instructor may want to discuss IPC Chapters 7 and 9 in conjunction with this chapter.)
Text	Chapter 20 in *Modern Plumbing*, E. K. Blankenbaker
Objectives	A. Students will learn how to determine the size of water supply piping, proper procedures for locating and installing water supply systems and techniques for working with pipe of various materials. (**Note: The instructor may want to discuss IPC Chapter 6 in conjunction with this chapter.)
Text	Chapter 21 in *Modern Plumbing*, E. K. Blankenbaker
Objectives	A. Students will learn how to support and test both DWV and water supply systems. (**Note: The instructor may want to review IPC Chapter 3 and other chapters as they relate to this chapter.)
Text	Chapter 22 in *Modern Plumbing*, E. K. Blankenbaker
Objectives	A. Students will learn proper installation procedures for installing various plumbing fixtures, faucets and appliances. (**Note: The instructor may want to do a review of IPC Chapter 4 in conjunction with this chapter.)
Text	Chapter 23 in *Modern Plumbing*, E. K. Blankenbaker
Objectives	A. Students will learn septic system basics along with other waste-disposal systems. (**Note: The instructor may want introduce Rule R317-4 as it applies to the State of Utah in conjunction with this chapter.)

MISCELLANEOUS **12 Hours**

Labs (6 hours)
Review for Competency Exam (3 hour)
Competency Exam (3 hours)

TOTAL HOURS: 81 Hours

SALT LAKE COMMUNITY COLLEGE
APPRENTICESHIP PLUMBING CURRICULUM

SECOND YEAR APPRENTICE
2-B: Second Semester

INTERNATIONAL PLUMBING CODE — 6 Hours

I. Storm Drainage; and Special Piping and Storage Systems

Text:	International Plumbing Code
Chapter 11	Storm Drainage
Chapter 12	Special Piping and Storage Systems

MATHEMATICS — 15 Hours

II. Mathematics

Text:	*Mathematics for Plumbers and Pipefitters*
Unit 32	Grade, Percent Grade, Drop and Run
Unit 33	Elevation and Grade
Unit 34	Elevation in a Plan View Pipe Diagram
Unit 36	45° Offsets in Parallel
Unit 37	Special Case of 45° Offsets in Parallel
Unit 38	Rolling Offsets
Unit 47	Water Measure
Unit 48	Rectangular Solid
Unit 49	Cylinders
Unit 50	Spheres
Unit 51	Segments
Unit 52	Partially Filled Containers of Varying Shapes
Unit 53	Water Pressure, Head, and Force

MODERN PLUMBING — 39 Hours

III. Section 3 – Plumbing System Design and Installation (Cont.) (15 hours)

Text	Chapter 24 in *Modern Plumbing,* E. K. Blankenbaker
Objectives	A. Students will learn identification and installation techniques of storm sewers, and the function and installation of sump pumps. (**Note: The instructor may want to discuss IPC Chapter 11 in conjunction with this chapter.)
Text	Chapter 25 in *Modern Plumbing,* E. K. Blankenbaker
Objectives	A. Students will discuss the plumber's participation in installing HVAC systems
Text	Chapter 26 in *Modern Plumbing,* E. K. Blankenbaker
Objectives	A. Students will learn to identify the basic components, design considerations, and installation techniques of swimming pools, hot tubs, and spas.
Text	Chapter 27 in *Modern Plumbing,* E. K. Blankenbaker
Objectives	A. Students will learn to identify and describe the components and materials used in lawn and garden irrigation systems.

IV. Section 4 - Plumbing Services (21 hours)

Text	Chapter 28 in *Modern Plumbing,* E. K. Blankenbaker
Objectives	A. Students will learn to troubleshoot, recognize and repair problems associated with DWV systems. (**Note: The instructor may want to review IPC Chapter 7 and others as they apply to this chapter.)
Text	Chapter 29 in *Modern Plumbing,* E. K. Blankenbaker

Objectives A. Students will learn to troubleshoot, recognize and repair problems associated with water supply systems. (**Note: The instructor may want to review IPC Chapter 6 and others as they apply to this chapter.)

Text Chapter 30 in *Modern Plumbing*, E. K. Blankenbaker

Objectives A. Students will learn those issues necessary for consideration, planning and performing remodel jobs. (**Note: The instructor may want to review IPC and Modern Plumbing chapter that apply specifically to this chapter.)

V. Section 5 - Job Organization (3 hours)

Text Chapter 31 in *Modern Plumbing*, E. K. Blankenbaker

Objectives A. Students will learn an overview of how to effectively plan and organize a plumbing job.

NFPA 13D — 9 Hours

VI. Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes

Chapter 1 Administration
Chapter 2 Referenced Publications
Chapter 3 Definitions
Chapter 4 General Requirements
Chapter 5 System Components
Chapter 6 Water Supply
Chapter 7 Installation
Chapter 8 System Design

MISCELLANEOUS — 12 Hours

Labs (6 hours)
Review for Competency Exam (3 hours)
Competency Exam (3 hours)

TOTAL HOURS: 81 Hours

SALT LAKE COMMUNITY COLLEGE
APPRENTICESHIP PLUMBING CURRICULUM

THIRD YEAR APPRENTICE
3-A: First Semester

INTERNATIONAL PLUMBING CODE — 18 Hours

I. Chapter 1 - Administration
- Section 101 General
- Section 102 Applicability
- Section 103 Department of Plumbing Inspection
- Section 104 Duties and Powers of the Code Official
- Section 105 Approval
- Section 106 Permits
- Section 107 Inspections and Testing
- Section 108 Violations
- Section 109 Means of Approval

II. Chapter 2 - Definitions
- Section 201 General
- Section 202 General Definitions

III. Chapter 3 - General Regulations & Commercial/Industrial Application
- Section 301 General
- Section 302 Exclusion of Materials Detrimental to Sewer System
- Section 303 Materials
- Section 304 Rodent Proofing
- Section 305 Protection of Pipes and Plumbing System Components
- Section 306 Trenching, Excavation and Backfill
- Section 307 Structural Safety
- Section 308 Piping Support
- Section 309 Flood Hazard Resistance
- Section 310 Washroom and Toilet Room Requirements
- Section 311 Toilet Facilities for Workers
- Section 312 Tests and Inspections
- Section 313 Equipment Efficiencies
- Section 314 Condensate Disposal

IV. Chapter 4 - Fixtures, Faucets, and Fixture Fittings & Commercial/Industrial Application
- Section 401 General
- Section 402 Fixture Materials
- Section 403 Minimum Plumbing Facilities
- Section 404 Accessible Plumbing Facilities
- Section 405 Installation of Fixtures
- Sections 407-421 Plumbing Fixtures
- Section 422 Health Care Fixtures and Equipment
- Section 423 Specialty Plumbing Fixture
- Section 424 Faucets and Other Fixture Fittings
- Section 425 Flushing Devices for Water Closets and Urinals
- Section 426 Manual Food and Beverage Dispensing Equipment
- Section 427 Floor Sinks

INTERNATIONAL MECHANICAL CODE — 30 Hours

V. Chapter 3 - Mechanical General Regulations
- Section 301 General
- Section 302 Protection of Structure
- Section 303 Equipment and Appliance Location
- Section 304 Installation
- Section 305 Piping Support
- Section 306 Access and Service Space
- Section 307 Condensate Disposal
- Section 308 Clearance Reduction

VI. Chapter 7 - Combustion Air
- Section 701 General
- Section 702 Indoor Air
- Section 703 Outdoor Air
- Section 704 Combined Use of Indoor and Outdoor Air (Condition 1)
- Section 705 Combined Use of Indoor and Outdoor Air (Condition 2)
- Section 706 Forced Combustion Air Supply
- Section 707 Direct Connection
- Section 708 Combustion Air Ducts
- Section 709 Opening Obstructions
- Section 710 Opening Locations and Protection

VII. Chapter 8 - Chimneys and Vents
- Section 801 General
- Section 802 Vents
- Section 803 Connectors
- Section 804 Direct-vent, Integral Vent, Mechanical Draft Systems
- Section 805 Factory Built Chimneys
- Section 806 Metal Chimneys

VIII. Chapter 10 - Boilers, Water Heaters, and Pressure Vessels
- Section 1001 General
- Section 1002 Water Heaters
- Section 1003 Pressure Vessels
- Section 1004 Boilers
- Section 1005 Boiler Connections
- Section 1006 Safety and Pressure Relief Valves and Controls
- Section 1007 Boiler Low-Water Cutoff
- Section 1008 Steam Blowoff Valve
- Section 1009 Hot Water Expansion Tank
- Section 1010 Gauges
- Section 1011 Tests
- Appendix A Combustion Air Openings and Chimney Connector

IX. Chapter 12 Hydronic Piping
- Section 1201 General
- Section 1202 Material
- Section 1203 Joints and Connections
- Section 1204 Pipe Insulation
- Section 1205 Valves
- Section 1206 Pipe Installation
- Section 1207 Transfer Fluid
- Section 1208 Tests
- Section 1209 Embedded Piping

MECHANICAL AND PLUMING BLUEPRINT READING AND CONSTRUCTION DOCS — 9 Hours

X. ~~Army Lodging Facility, Dugway, Utah~~ Have a standard set of Residential and Commercial Drawings and book of specifications for each school.

IPT's PIPE TRADES HANDBOOK — 3 Hours

XI. Section 9 – Piping Prints

BOILER OPERATOR'S GUIDE — 6 Hours

XII. Boiler Operator's Guide

Chapter 10 Boiler Connections, Appurtenances, and Controls
Chapter 11 Combustion, Burners, Controls, and Flame Safeguard

MISCELLANEOUS — 15 Hours

Labs (9 hours)
Review for Competency Exam (3 hour)
Competency Exam (3 hours)

TOTAL HOURS: 81

SALT LAKE COMMUNITY COLLEGE
APPRENTICESHIP PLUMBING CURRICULUM

THIRD YEAR APPRENTICE
3-B: Second Semester

INTERNATIONAL PLUMBING CODE — 36 Hours

I. Chapter 5 - Water Heaters & Commercial/Industrial Application
- Section 501 General
- Section 502 Installation
- Section 503 Connections
- Section 504 Safety Devices
- Section 505 Insulation

II. Chapter 6 - Water Supply and Distribution & Commercial/Industrial Applications
- Section 601 General
- Section 602 Water Required
- Section 603 Water Service
- Section 604 Design of Building Water Distribution Systems
- Section 605 Materials, Joints, and Connections
- Section 606 Installation of the Building Water Distribution Systems
- Section 607 Hot Water Supply System
- Section 608 Protection of Potable Water Supply
- Section 609 Health Care Plumbing
- Section 610 Disinfection of Potable Water System
- Section 611 Drinking Water Treatment Units
- Section 612 Solar Systems
- Section 613 Temperature Control Devices and Valves

III. Chapter 7 - Sanitary Drainage & Commercial/Industrial Applications
- Section 701 General
- Section 702 Materials
- Section 703 Building Sewer
- Section 704 Drainage Piping Installation
- Section 705 Joints
- Section 706 Connections Between Drainage Piping and Fixtures
- Section 707 Prohibited Joints and Connections
- Section 708 Cleanouts
- Section 709 Fixture Units
- Section 710 Drainage System Sizing
- Section 711 Offsets in Drainage Piping in Buildings of Five Stories or More
- Section 712 Sumps and Ejectors
- Section 713 Health Care Plumbing
- Section 714 Computerized Drainage Design
- Section 715 Backwater Valves

IV. Chapter 8 - Indirect/Special Waste & Commercial/Industrial Application
- Section 801 General
- Section 802 Indirect Wastes
- Section 803 Special Wastes
- Section 804 Materials, Joints, and Connections

V. Chapter 9 - Vents & Commercial/Industrial Application

Section 901	General
Section 902	Materials
Section 903	Outdoor Vent Extension
Section 904	Vent Terminals
Section 905	Vent Connections and Grades
Section 906	Fixture Vents
Section 907	Individual Vents
Section 908	Common Vent
Section 909	Wet Venting
Section 910	Waste Stack Vent
Section 911	Circuit Venting
Section 912	Combinations Drain and Vent System
Section 913	Island Fixture Venting
Section 914	Relief Vent-Stacks of More than 10 Branch Circuits
Section 915	Vents for Stack Offsets
Section 916	Vent Pipe Sizing
Section 917	Air Admittance Valves
Section 918	Engineered Vent Systems
Section 919	Computerized Vent Design

INTERNATIONAL FUEL GAS CODE — 18 Hours

VI. Chapter 4 - Gas Piping Installations

Section 401	General
Section 402	Pipe Sizing
Section 403	Piping Materials
Section 404	Piping System Installation
Section 405	Pipe Bends and Changes in Direction
Section 406	Inspection, Testing and Purging
Section 407	Piping Support
Section 408	Drips and Sloped Piping
Section 409	Shutoff Valves
Section 410	Flow Controls
Section 411	Appliance and Manufactured Home Connections
Section 412	Liquefied Petroleum Gas Motor Vehicle Fuel-Dispensing Stations
Section 413	Compressed Natural Gas Motor Vehicle Fuel-Dispensing Stations
Section 414	Supplemental and Standby Gas Supply
Section 415	Piping Support Intervals
Section 416	Overpressure Protection Devices

BOILER OPERATOR'S GUIDE — REVIEW ROOF DRAIN SIZES — 6 Hours

VII. Boiler Operator's Guide

Chapter 12 - Boiler Auxiliaries and External Water Treatment

Chapter 13 - Boiler Water Problems and Treatment

INDIVIDUAL WASTEWATER DISPOSAL SYSTEMS — 6 Hours

VIII. Onsite Wastewater Systems

Text: Rule 317-4, Utah Administrative Code Sections 7-13

MISCELLANEOUS — 15 Hours

Labs (9 hours)
Review for Competency Exam (3 hour)
Competency Exam (3 hours)

Total hours: 81 Hours

SALT LAKE COMMUNITY COLLEGE
APPRENTICESHIP PLUMBING CURRICULUM

FOURTH YEAR APPRENTICE
4-A: First Semester

INTERNATIONAL PLUMBING CODE CHAPTER 10 — 15 Hours

I. Chapter 10 - Traps, Interceptors and Separators & Commercial/Industrial Applications

Section 1001	General
Section 1002	Trap Requirements
Section 1003	Interceptors and Separation
Section 1004	Materials, Joints, and Connectors

II. Chapter 11 - Storm Drainage & Commercial/Industrial Application

Section 1101	General
Section 1102	Materials
Section 1103	Traps
Section 1104	Conductors and Connections
Section 1105	Roof Drains
Section 1106	Size of Conductors, Leaders, and Storm System
Section 1107	Secondary (Emergency) Roof Drains
Section 1108	Combined Sanitary and Storm Systems
Section 1109	Value for Continuous Flow
Section 1110	Controlled Flow Roof Drains Systems
Section 1111	Subsoil Drains
Section 1112	Building Subdrains
Section 1113	Sumps and Piping Systems

III. Chapter 12 - Special Piping and Storage Systems

Section 1201	General Regulations
Section 1202	Medical Gases
Section 1203	Oxygen Systems

MATHEMATICS — 24 Hours

IV. Applied Trade Formulas

Unit 1-19	Review
Unit 21-24	Review
Unit 32-34	Review
Unit 36-38	Review
Unit 47-53	Review
Unit 56	Heat Loss vs. Radiator Size
Unit 57	Radiation Sizing for Total Heat Loss of a Room
Unit 58	Estimating Size of Piping
Unit 59	Sizing Ventilation
Unit 60	Heating Problems for a two-floor house

IPT's PIPE TRADES HANDBOOK — 6 Hours

V. Section 3 - Valves
VI. Section 6 – Pipe Offsets
VII. Section 7 – Trigonometry

NFPA 13D — 12 Hours

VIII. Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes

Chapter 1	Administration
Chapter 2	Referenced Publications
Chapter 3	Definitions
Chapter 4	General Requirements
Chapter 5	System Components
Chapter 6	Water Supply
Chapter 7	Installation
Chapter 8	System Design

INDIVIDUAL WASTEWATER DISPOSAL SYSTEMS — 6 Hours

IX Onsite Wastewater Systems Review

Text: Rule 317-4, Utah Administrative Code Sections 1-13

MISCELLANEOUS — 18 Hours

Labs (12 hours)
Review for Competency Exam (3 hour)
Competency Exam (3 hours)

TOTAL: 81 HOURS

SALT LAKE COMMUNITY COLLEGE
APPRENTICESHIP PLUMBING CURRICULUM

FOURTH YEAR APPRENTICE
4-B: Second Semester

BOILER OPERATOR'S GUIDE — 12 Hours

Boiler Operator's Guide
Chapter 10 Boiler Connections, Appurtenances, and Controls
Chapter 11 Combustion, Burners, Controls, and Flame Safeguard
Chapter 12 Boiler Auxiliaries and External Water Treatment
Chapter 13 Boiler Water Problems and Treatment

INTERNATIONAL MECHANICAL CODE — 12 Hours

Applicable Chapter Review and Application
Section 3 General Regulations
Section 7 Combustion Air
Section 8 Chimneys and Vents
Section 10 Boilers, Water Heaters and Pressure Vessels
Section 12 Hydronic Piping

INTERNATIONAL PLUMBING CODE — 21 Hours

Code Review and Application
Sections 1-12 Practical Code Chapter Applications

INTERNATIONAL FUEL GAS CODE — 12 Hours

Code Review and Application
Section 4 Practical Code Chapter Applications

UTAH LAWS AND RULES — 6 Hours

Laws, Rules, and Amendments
Utah Construction Licensing Act, 55-55
Construction Trades Licensing Act Plumber Licensing Rules
Candidate Information Bulletin and Application Review

MISCELLANEOUS — 18 Hours

Labs (12 hours)
Review for Final Exam (3 hours)
Final Exam (3 hours)

Total hours: 81 Hours