

**SALT LAKE COMMUNITY COLLEGE**

NAME OF DEPARTMENT - APPRENTICESHIP

PREFIX AND NUMBER OF COURSE – TEPL 1210

NAME OF COURSE – PLUMBING IIA

SEMESTER AND TERM –

INSTRUCTOR'S NAME –

PHONE

E-MAIL ADDRESS

MAILBOX LOCATION –

CONSULTATION HOURS – BY APPOINTMENT

**TEXTBOOKS**

2021 IPC – ICC

Utah Statewide Amendments to the IPC

Mathematics for Plumbers/Pipefitters - Eighth Edition - Smith, Guest, Darcangelo - Delmar

Modern Plumbing - E. Keith Blankenbaker - Goodheart-Wilcox Company

Modern Plumbing Job Practice Manual - Charles H. Owenby - Goodheart-Wilcox Company

International Plumbing Code Commentary - ICC (Optional – Cannot be used on tests or exams)

**MATERIALS REQUIRED EACH CLASS PERIOD:**

IPC Code book and amendments (Commentary is not permitted for use on any test or exam)

Modern Plumbing textbook and workbook

Calculator (Recommended: TI-30 or equivalent. Graphing or programmable calculators are not permitted. Construction Master or other similar calculators are not permitted.

Calculators on cell Phones will also not be allowed to be used in the classroom.)

Pencil/Pen

Highlighter

Notebook

**MATERIALS REQUIRED FOR EACH LAB CLASS PERIOD:**

Students are expected to bring their own tools and safety equipment to lab classes. The following is a list of minimum tools and protective equipment that students must bring to the lab:

Safety Glasses

Leather Gloves

rag

Tape measure

Framing square

Copper reamer  
PVC reamer  
Torch and appropriate gas for soldering and brazing copper pipe  
Pipe cutter capable of cutting up to 1 ½” copper pipe  
Cutter capable of cutting up to 1 ½” PVC  
Channel Locks (at least 1 pair, 2 pair preferred)  
Calculator

Students who do not bring all of the required tools and safety equipment will not be allowed to attend the lab and will receive a 0 (zero) for the assignment and be marked as absent for the night.

#### ELECTRONIC DEVICES:

Electronic devices are not permitted to be used in the classroom. Please turn off all electronic devices. Cell phones are permitted to be in the vibrate mode. If it is necessary to answer a call, please step out of the classroom and make it as brief as possible. Extended phone calls may result in reduction of clock hours.

#### COURSE DESCRIPTION

The Plumbing IIA course introduces the fundamentals of plumbing theory for the apprentice plumbers and covers the International Plumbing Code (IPC), related math, and craft skills.

PREREQUISITE – TEPL 1120 WITH A GRADE OF C OR HIGHER

#### COURSE GOALS &/OR LEARNING OBJECTIVES

At the conclusion of this course, the student will demonstrate:

- Describe water supply and distribution, sanitary drainage, indirect/special waste, vents, traps, interceptors and separators, along with other basic fundamental plumbing components
- Identify the many different fixtures designed for residential and small commercial buildings
- Apply correct principles for designing Drainage, Waste, and Vent (DWV) and water supply systems that will provide long and satisfactory service
- Describe how to determine the size of water supply piping
- Define how to support and test both DWV and water supply systems
- Explain R317-4 onsite wastewater systems
- Fabricate several piping projects in a lab situation

This knowledge will be demonstrated by a final end of semester competency exam on which the student will be required to score a minimum of 70%.

#### COURSE REQUIREMENTS

- **CLASSROOM EXAMS** – Unit tests and exams will be given periodically throughout the semester to assess the student’s learning and retention of the course material. There will be a final competency exam on which the student is required to score a minimum of 70%.
- **Preparation** – Students should expect to spend 5 hours each week in class and approximately an additional 6 hours of study/homework time each week to be successful in this course.
- **Lab requirement** – Students will be expected to attend a minimum of two labs during the

semester. These labs will be scheduled by the instructor.

- **On the Job Training** – It is expected that students are employed in the plumbing industry and are working full-time while attending school. It is mandatory that students hold a current valid Utah Apprentice Plumber license while enrolled in school. Students without a valid license may be administratively withdrawn from class.
- **ATTENDANCE** - As per the requirements set forth in 29 CFR 29.5 Standards of Apprenticeship paragraph (b)(4), each apprentice must successfully complete a minimum of 144 hours of related and supplemental instruction each year of Apprenticeship (72 hours each semester). In our efforts to accommodate the demanding schedules of the majority of the Apprentices registered and enrolled at Salt Lake Community College, we are offering each of our courses for a period of 75 hours each semester (2.5 hours for each of 30 evenings). The enforcement of the attendance policy is the responsibility of each instructor. Instructors are required to take attendance each evening. Individual Students will be held responsible for ensuring they have sufficient clock hours to successfully complete the course. Salt Lake Community College will offer up to an additional 6 clock hours at the end of the semester (usually on a Saturday) for those students who need to “make-up” time. There will be an additional cost of \$35 for each block of 3 clock hours, payable on the day of the class. Salt Lake Community College will only offer these additional hours if there is sufficient students to offset the costs associated with providing the training (a minimum of 10 students). Students requiring make up hours must contact the Apprenticeship Office as soon as possible. **Students are not allowed to “make-up” clock hours or labs by attending classes for which they are not registered.** Students with insufficient clock hours will not be permitted to sit for the final Competency Exam at the end of the semester. They will receive a failing grade and be required to re-take the semester course prior to moving forward in their apprenticeship.
- **COMPETENCY EXAM** – The Utah State Licensing Board has mandated a final end of semester competency exam which will be administered on the **second to last day of class**. This competency exam may include any information covered in the approved curriculum outline for the individual program. This will be a 60 question, Multiple-Choice and True/False, exam which must be completed in 2 hours. This exam will account for a major portion (30%) of the final grade awarded in the class. Students are required to bring a picture ID and a #2 pencil to this exam. Students without these items may be asked to leave and receive a failing grade. Additionally, the following materials will be allowed to be used on the competency exam: a 2021 International Plumbing Code (Commentarys are not allowed); a calculator (Recommended: TI-30 or equivalent. Graphing or programmable calculators are not permitted. Construction Master, Electrical Pro, Project Master, or other similar calculators are not permitted. Calculators on cell Phones will also not be allowed to be used in the classroom.).

\*\*This exam will account for 30% of the final grade awarded for the class. If the student scores less than 70% on the exam, the score will be recorded as a 0 (zero). If the student scores a 70% or higher, the earned score will be calculated as 30% of the final grade.

- **GRADING SCALE AND POLICY** – Grades will be awarded based on the following percentages:
  - Homework: 20%
  - Quizzes: 25%
  - Midterms: 25%
  - Comp Exam: 30%

The final grade will be issued according to the following table:

A 94 – 100%

A-	90 – 93%
B+	87 – 89%
B	84 – 86%
B-	80 – 83%
C+	77 – 79%
C	74 – 76%
E	0 – 73%

Students receiving an E grade will be issued 0 clock hours for the course.