

COURSE INFORMATION

Course prefix/No.:	BCT 151
Course Title:	Introduction to Residential Plumbing
Lecture Hours/Week:	2
Lab Hours/Week:	3
Credit Hours/Semester:	3

[*Distance Learning Attendance/VA Statement*](#)
[*Textbook Information*](#)

COURSE DESCRIPTION

This course covers plumbing theory as it relates to residential construction.

COURSE COMPETENCIES

Upon successful completion of this course, the student should be able to:

Module 1 - Types of Pipe, Fittings and Valves

- Describe common types of pipe and tubing used in residential plumbing.
- Identify the types and schedules of plastic pipe and describe the applications for each.
- Identify types of fittings and valves used with plastic piping.
- Properly measure, cut and join plastic piping and fittings.
- Identify the types and sizes of copper tubing and describe applications.
- Describe types of fittings and valves used with copper piping.
- Properly measure, cut and join copper piping and fittings.
- Identify the types and sizes of cast iron pipe and describe applications.
- Identify types of fittings used with cast iron fittings.
- Properly measure, cut and join cast iron piping.
- Identify the types and sizes of steel pipe and describe applications.
- Identify types of fittings and valves used with steel piping.
- Properly measure, cut, thread and connect steel piping.
- Properly measure, cut and connect corrugated stainless steel tube (CSST) for gas distribution systems.

Module 2 - Blueprint Reading and Drafting

- Explain how pictorial, schematic, and orthographic drawings views give necessary information about objects and their placement.
- Explain the importance and use of submittal data.
- Identify basic plumbing symbols and abbreviations used in schematic drawings of pipe assemblies.

- Follow residential architectural blueprints to create basic sketches of piping systems.
- Use an architect's scale to measure lines drawn to scale and to draw lines to scale on orthographic and schematic drawings.
- Prepare a material takeoff from a given set of plans.

Module 3 - Water Distribution Installation

- Use plans and fixture rough-in sheets to determine the location of fixtures and the route of the water supply piping.
- Properly size and install water meter and associated devices.
- Correctly modify structural members without weakening the structure.
- Properly install a water distribution system.
- Correctly explain the procedures for testing a water distribution system.
- Properly test water distribution systems in accordance with applicable codes.

Module 4 - Introduction to Drain, Waste and Vent (DWV) Systems

- Identify and describe major segments of a DWV system.
- Identify the different kinds of drain, waste and vent (DWV) fittings and describe their applications.
- Size the segments of a DWV system.
- Describe and explain the operation of a conventional septic system.
- Follow plans and rough-in sheets to mark locations for fixtures.
- Lay out the route for the plumbing.
- Correctly install a DWV system.
- Properly modify structural members without weakening the structure.
- Explain the procedures for testing a DWV system.
- Properly test a DWV system.

REQUIREMENTS

Attendance Policy

The college attendance policy, stated in the college handbook, will be honored. The instructor will provide specific requirements for the course.

Academic Honesty

Students are expected to adhere to the college policy regarding student conduct as stated in the college handbook.

Assignments

Students are expected to complete all assignments and any supplementary exercises designated by the instructor.

EVALUATION STRATEGIES/GRADING

Students must complete all modules, including assignments, projects, labs, and tests. Students must earn at least a "C" in order for the course to serve as a prerequisite and for the course to apply towards a certificate.

Grading Scale

A = 90 - 100

B = 80 - 89

C = 70 - 79

D = 60 - 69

F = 0 - 59

Evaluation Method

Tests/Projects (minimum of four total)	12.50% for each module
Work Attitude	6.25% for each module
Lab	6.25% for each module

$$100\% \text{ Final Grade} = 25\% \times 4 \text{ modules}$$

Work Attitude is defined as:

- Participation
- Responsibility
- Cooperation
- Professionalism
- Appearance
- Attendance
- Effort
- Self Motivation
- Safety
- Works Independently

ENTRY LEVEL SKILLS

The student must be able to read and solve basic mathematical equations.

PREREQUISITES - RDG 031 or equivalent

CO-REQUISITES: None

METHODS OF INSTRUCTION

Lectures, reading assignments, projects, discussions, video presentations, multimedia presentations, and web content are the major teaching methods used in this course. See instructor for specifics.

LAB EXERCISES

See addendum and/or instructor for additional details.

Effective Date: SU06