
COURSE PREFIX/NO:	BCT 151
COURSE TITLE:	Introduction to Residential Plumbing
LEC HRS/WK:	2.0
LAB HRS/WK:	3.0
CREDIT HRS/SEMESTER:	3.0

[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 competent to perform the following tasks:

Module 1 – Hand and Power Tools

- Identify and select appropriate measuring and layout tools (rulers, squares, plumb bobs, chalk boxes, and levels) for plumbing operations.
- Identify and correctly use various kinds of saws and cutters used for cutting plastic, copper, and steel pipe.
- Identify and properly use wallboard saws, wood chisels, cold chisels, utility knives and multi-purpose tools.
- Identify and wear appropriate Personal Protection Equipment (PPE).
- Select and properly use the appropriate drills and saws for a specific plumbing procedure.
- Select the appropriate drill bit or saw blade for a specific plumbing procedure.
- Observe appropriate safety rules in the use of extension cords and ground fault circuit interrupters.
- Observe appropriate safety rules in selecting, placing and using ladders and fall protection devices.

Module 2 - 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.
- 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 3 - Blueprint Reading and Drafting

- Explain how schematic, isometric 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 4 – Fixtures and Appliances

- Identify the basic types of residential fixtures.
- Explain how to select appropriate faucets and drain assembly for a particular fixture.
- Discuss the differences in water heater design and function
- Explain how to properly size and select a water heater.

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.

ATTENDANCE

The College attendance policy in the College handbook will be honored.

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.

TEXTBOOK

Students are expected to purchase the required textbook for this course.

EVALUATION CRITERIA/GRADING

The grading scale will be the standard for York Technical College:

Grade Points

- A 90 - 100
- B 80 - 89
- C 70 - 79
- D 60 - 69
- F 0 - 59

Evaluation Method

Module Tests	50%
Lab / Homework	40%
Work Attitude	10%

Work Attitude is defined as:

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

LAB EXERCISES

See addendum and/or instructor for additional details.

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.

Disability Statement: Any student who feels s/he may need an accommodation based on the impact of a disability should contact the Special Resources Office (SRO) at 803-327-8007 in the 300 area of Student Services. The SRO coordinates reasonable accommodations for students with documented disabilities.