

---

<b>COURSE PREFIX/NO:</b>	<b>BCT 154</b>
<b>COURSE TITLE:</b>	<b>Plumbing Tests and Connections</b>
<b>LEC HRS/WK:</b>	<b>2.0</b>
<b>LAB HRS/WK:</b>	<b>3.0</b>
<b>CREDIT HRS/SEMESTER:</b>	<b>3.0</b>

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

### **COURSE DESCRIPTION**

This course is a study and application of DWV piping systems, testing DWV piping, testing water lines, testing faucets and valves, and installing water heaters.

### **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 – Fixture and Equipment Installation**

- Discuss the basic fixture and equipment installations.
- Identify basic jobsite conditions and considerations for plumbing installations.
- Select the appropriate tools and materials required for each installation.
- Properly install different residential fixtures and equipment.

#### **Module 3 – Plumbing Repairs and Troubleshooting**

- Discuss the basic operation of various plumbing equipment.
- Identify manufacturers' resource material available for troubleshooting.

- Discuss and demonstrate safe troubleshooting practices for various plumbing equipment.
- Demonstrate the use of critical thinking in problem solving.

#### **Module 4 – Hydronic Heat**

- Explain the concept of hydronic heating.
- Identify the different components in hydronic heating systems.
- Describe the basic operation of water heaters.
- Identify and explain the functions of main components of water heaters.
- Discuss the different types of solar water heating systems
- Correctly install gas water heaters.
- Correctly install electric water heaters.

#### **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.