

## **COURSE INFORMATION**

<b>Course prefix/No.:</b>	<b>BCT 157</b>
<b>Course Title:</b>	<b>Residential/Commercial Plumbing Codes</b>
<b>Lecture Hours/Week:</b>	<b>3.0</b>
<b>Lab Hours/Week:</b>	<b>0.0</b>
<b>Credit Hours/Semester</b>	<b>3.0</b>

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

## **COURSE DESCRIPTION:**

This course is a study of the national and/or international plumbing code requirements as they apply to residential and commercial construction.

## **COURSE COMPETENCIES:**

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

### **Module 1. Introduction to Plumbing Codes and General Regulations**

- Describe the intent and applicability of the Plumbing Code.
- Explain rules of the SC Plumbing code on additions, alterations or repairs of existing plumbing.
- Describe the Duties and Powers of the Code Officials.
- Describe the testing requirements and methods for Plumbing systems.
- Discuss when Permits are necessary and the application process for permits.
- Discuss Violations and Means of Appeal.
- Discuss general Plumbing terms and their definitions

### **Module 2. Plumbing Fixture and Water Heaters**

- Identify the standards organizations with abbreviations ASME, ASTM, ASSE, ANSI and NSF and describe the role of standards organizations.
- Describe the code requirements for construction and installation of showers, lavatories and water closets.
- Locate in the code rules that apply to bathtubs, sinks, laundry tubs, food waste grinders, dishwashing machines, clothes washing machines, floor drains, whirlpool bathtubs, and bidets.
- Describe the code requirements for water heaters, relief valves for water heaters and water temperature limits

### **Module 3. Water Distribution Systems**

- Identify and interpret codes that apply to protection of potable water supply.

- Locate and explain flow rate and flow pressure requirements for various fittings and fixtures.
- Describe the specifications for types of water distribution lines and acceptable methods for joining them
- Locate and explain methods for joining pipes and fittings of differing composition.
- Explain acceptable methods for supporting distribution piping.

#### **Module 4. Sanitary Drainage, Vents and Traps**

- Explain the specifications for the composition and features of DWV piping and fittings.
- Describe kinds of joints and connections that are prohibited by the code.
- Describe types of joints and connections allowed by the code.
- Calculate DWV load by using code charts.
- Use tables to size and determine slope for drains.
- Explain rules for sizing and placing cleanouts.
- Describe code requirements for the venting of systems and fixtures.
- Explain venting techniques permitted by the code.
- Properly use the code to size vent piping and layout venting systems.
- Explain trap features required by the code.
- Locate and use code chart to size traps.

#### **Module 5. Plumbing for fuel gas**

- Explain rules for maintaining structural safety in installation of gas piping.
- Name prohibited locations for placing gas appliances.
- Explain rules on combustion, ventilation and dilution air.
- Use tables to determine clearances for appliances and equipment.
- Locate and explain rules that apply to electrical grounding, connections and bonding.
- Use tables to size schedule 40 metallic pipe, semi-rigid copper pipe, plastic pipe and corrugated stainless steel tubing.
- Explain the rules on joints and fittings for schedule 40 metallic pipe, semi-rigid copper pipe, plastic pipe and corrugated stainless steel tubing.
- Describe acceptable methods for connecting appliances to the piping system.
- Describe requirements for shutoff valves and flow controls.
- Describe acceptable procedures for inspecting, testing, and purging fuel gas systems.
- Locate and explain rules for sizing vents and exhausts.

#### **REQUIREMENTS:**

##### **Attendance Policy**

The college attendance policy, stated 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.

### **Disabilities Statement**

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

### **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)	50% of each Module
Work Attitude	25% of each Module
Lab	25% of each Module

20% X 5 module grades = 100% Final Grade

### **Work Attitude is defined as:**

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

### **ENTRY LEVEL SKILLS:**

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

**PREREQUISITES/CO-REQUISITES:**

**Prerequisite:** RDG 031

**Co-requisite:** 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 or instructor for additional details.