

SYLLABUS

LAST REVIEW	Fall 2022
COURSE TITLE	Advanced Plumbing
COURSE NUMBER	BEMT 0215
DIVISION	Career and Technical Education
DEPARTMENT	BEMT
CIP CODE	46.0401
CREDIT HOURS	2
CONTACT HOURS/WEEK	Class: 1 Lab: 2
PREREQUISITES	BEMT 0101 and BEMT 0115

COURSE DESCRIPTION

This is the advanced course in residential plumbing. The course topics include: Environmental sustainability, plumbing codes application (ICC) for, waster, piping, drain, waste and vent systems, drain fixture units, drain waste vent sizing and volume, supply water systems and sizing. The course will focus on applying the code requirements to design systems. Students will learn the proper sizing by calculation of, fixture vent and drain size, Gallons per minute (GPM) for both supply and drain, waste, vent (DWV).

PROGRAM LEARNING OUTCOMES

Students will demonstrate an adherence to safety standards and proficiency in the installation or repair of residential electrical, plumbing, HVAC, exterior building materials, roofing, irrigation systems, landscape/hardscape, concrete placement and finish, masonry install and repair.

TEXTBOOKS

<http://kckccbookstore.com/>

METHOD OF INSTRUCTION

A variety of instructional methods may be used depending on content area. These include but are not limited to lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs.

COURSE OUTLINE

I. Introduction

- II. Plumbing Codes (ICC)
 - A. Local
 - B. State
 - C. National
- III. Waste Piping/Water Supply systems
 - A. DWV Calculations
 - B. Water supply Calculations
- IV. Drain Fixture Units
 - A. Fixture amounts
 - B. Proper Trap sizing
 - C. Trap arm distance
 - D. Vent termination points
- V. Fitting allowance
 - A. Proper use of main fittings
 - B. Proper orientation of fittings
- VI. Design and Layout of DWV and Supply
 - A. Sizing of DWV for each fixture drain
 - B. Designing system for stack allowance
 - C. Designing system for supply requirement per fixture
- VII. Whole House Vents
 - A. Design system with WHV
- VIII. Design Ground rough system
 - A. Design system for below slab
 - B. Calculate GPM per Drain Fixture Units
 - C. Determine Main drain size by Drain Fixture Units

COURSE LEARNING OUTCOMES:

Upon successful completion of this course, the student will:

- A. Define and explain ICC plumbing codes.
- B. Design and install drain, waste, and vent system.
- C. Design and install supply systems.
- D. Calculate Drain Fixture Units.
- E. Determine fitting use per application.
- F. Determine supply calculations for pipe sizing.
- G. Design and install Whole House Vents.
- H. Determine main drain size.
- I. Design and install ground rough systems.

ASSESSMENT OF COURSE LEARNING OUTCOMES AND COMPETENCIES

Student progress is evaluated through both formative and summative assessment methods. Specific details may be found in the instructor's course information document.

COLLEGE POLICIES AND PROCEDURES

Student Handbook

<https://www.kckcc.edu/files/docs/student-resources/student-handbook-and-code-of-conduct.pdf>

College Catalog

<https://www.kckcc.edu/academics/catalog/index.html>

College Policies and Statements

<https://www.kckcc.edu/about/policies-statements/index.html>

Accessibility and Accommodations

<https://www.kckcc.edu/academics/resources/student-accessibility-support-services/index.html>.