



BCCM 1280

Division: Career and Technical Education

Department: Building Construction and Construction Management

Course: BCCM 1280

Title: Plumbing Fundamentals

Catalog Description:

This course includes the study of plumbing fundamentals and is a familiarization course for carpenters to aid them in coordinating their work with that of the mechanical work performed by the plumber. It includes practical experience in plumbing a project house and code compliance.

General Education Requirements: N/A

Semesters Offered: Fall

Credit/Time Requirement: Credit: 3; Lecture: 2; Lab: 2

Clock/Hour Requirements: 0

Offered for Non-Credit: No

Prerequisites: N/A

Corequisites: N/A

Justification:

A background course needed for construction students.

Student Learning Outcomes:

Upon successful completion of this course, students will:

- be able to develop basic skills in the use of plumbing materials, tools, equipment, and code compliance necessary for installation of plumbing fixtures and appliances for a residential house.

Content:

This course will include:

- introduction
 - plumbing business
 - plumbing sequence and construction sequence
- first rough in
 - city hookup sewer and water

- DWV - cast iron, hub system, no hub system
- DWV - copper and durham
- septic system
- second rough in
 - DWV system
 - fixture units and vent system
 - framing allowances
 - rough in for each fixture
 - shower pan and details
 - water lines
- tools
 - cutting
 - threading
 - joining
 - copper
 - solder
 - flare
 - compression
 - galvanized and end to end measurements
 - plastic no hub
 - cast iron
- second rough in project house
- final installation
 - toilet
 - bathtub
 - basin
 - sink
 - hot water heater
 - hot water heater and water softener
- other items
 - valves
 - cross connection
 - lawn sprinkling system
 - gas lines
- repairs
 - faucets
 - water heater
- code compliance and inspecting the plumbing system
 - plumbing system test
 - protecting potable water supply.

General Education Outcomes:

Applied Education Outcomes:

2) Students will become aware of industry specific certification and develop skills sufficient to acquire the same.

Student will develop a basic awareness of plumbing procedures and what is needed to become a licensed plumber.

Key Performance Indicators:

Outcome assessment will be determined by:

- attendance and performance on job site project (50%)
- faculty developed tests on the contents of the course (50%).

Percentages are approximate.

Representative Text and/or Supplies:

- L.V. Ripka, *Plumbing*, current edition, American Technical Society.

Optimum Class Size: 10

Maximum Class Size: 15

Signatures:

I hereby submit this course syllabus:

Officer Robert Wright, ,

I hereby find this course consistent with the goals and resources of the Building Construction and Construction Management Department:

Marlin Christensen, M. Ed., Instructor, Chair

I hereby find this course consistent with the goals and resources of the Career and Technical Education Division:

Michael P. Medley, MBA, Assistant Professor, Dean

I have discussed the need for library resources related to this class with the person submitting the syllabus:

Lynn Anderson, MLIS, Technical Services Librarian (Main Campus)

Michelle Olsen, MLS, Campus Librarian (Richfield Campus)