

Washtenaw Community College Comprehensive Report

UAT 253 Copper Piping Systems Effective Term: Spring/Summer 2014

Course Cover

Division: Advanced Technologies and Public Service Careers

Department: United Association Department

Discipline: United Association Training

Course Number: 253

Org Number: 28200

Full Course Title: Copper Piping Systems

Transcript Title: Copper Piping Systems

Is Consultation with other department(s) required: No

Publish in the Following: College Catalog , Web Page

Reason for Submission: Three Year Review / Assessment Report

Change Information:

Credit hours

Total Contact Hours

Outcomes/Assessment

Objectives/Evaluation

Rationale: Course update

Proposed Start Semester: Spring/Summer 2014

Course Description: In this course, students will learn about methods of teaching about the copper piping systems. Topics of instruction to be covered include: copper production, standards and codes regulating the manufacture, specification and installation of copper systems, soldering and brazing of copper to copper and copper to dissimilar metals, alternative joining systems including roll-grooving, press-connect, push-connect and mechanically formed tees. Students will also review installation-related field failure troubleshooting and prevention. Limited to United Association program participants.

Course Credit Hours

Variable hours: No

Credits: 1

Lecture Hours: Instructor: 15 Student: 15

The following Lab fields are not divisible by 15: Student Min, Instructor Min

Lab: Instructor: 5 Student: 5

Clinical: Instructor: 0 Student: 0

Total Contact Hours: Instructor: 20 Student: 20

Repeatable for Credit: NO

Grading Methods: Letter Grades

Audit

Are lectures, labs, or clinicals offered as separate sections?: NO (same sections)

College-Level Reading and Writing

College-level Reading & Writing

College-Level Math

Requisites

General Education

Degree Attributes

Request Course Transfer

Proposed For:

Student Learning Outcomes

1. Explain the central concepts and skills of the copper piping systems utilizing UA approved materials.

Assessment 1

Assessment Tool: Presentation

Assessment Date: Spring/Summer 2014

Assessment Cycle: Every Three Years

Course section(s)/other population: All

Number students to be assessed: All

How the assessment will be scored: Departmentally-developed rubric

Standard of success to be used for this assessment: 75% of students will score 75% or above.

Who will score and analyze the data: Departmental faculty

2. Demonstrate methods of teaching of proper maintenance and repair procedures related to copper piping systems.

Assessment 1

Assessment Tool: Skill assessment

Assessment Date: Spring/Summer 2014

Assessment Cycle: Every Three Years

Course section(s)/other population: All

Number students to be assessed: All

How the assessment will be scored: Departmentally-developed rubric

Standard of success to be used for this assessment: 75% of students will score 75% or above.

Who will score and analyze the data: Departmental faculty

3. Recognize and analyze copper system failures and identify approved solutions.

Assessment 1

Assessment Tool: Written exam

Assessment Date: Spring/Summer 2014

Assessment Cycle: Every Three Years

Course section(s)/other population: All

Number students to be assessed: All

How the assessment will be scored: Answer key

Standard of success to be used for this assessment: 75% of students will score 75% or above.

Who will score and analyze the data: Departmental faculty

Course Objectives

1. Develop concepts and strategies needed to teach apprentices how to identify copper design and installation practices, copper corrosion concerns, and installation-related copper failure mechanisms.

Matched Outcomes

2. Develop concepts and strategies needed to teach apprentices how to identify the standards related to the manufacture of copper and copper alloy pipe, tube, and fittings.

Matched Outcomes

3. Develop concepts and strategies needed to teach apprentices how to recognize Plumbing Code references to copper pipe, tube, and fittings.

Matched Outcomes

4. Develop concepts and strategies needed to teach apprentices the proper techniques related

to joining methods of copper and copper alloy pipe, tube, and fittings.

Matched Outcomes

5. Demonstrate appropriate use of course materials.

Matched Outcomes

6. Develop concepts and strategies needed to teach apprentices about alternative joining methods such as push-connect, press-connect, roll-grooving, mechanically formed tees (T-Drill), bending and flaring.

Matched Outcomes

New Resources for Course

Course Textbooks/Resources

Textbooks

International Pipe Trades Joint Training Committee. *Soldering and Brazing Manual*, 2 ed.

International Pipe Trades Joint Training Committee, 2012

Manuals

Periodicals

Software

Equipment/Facilities

Data projector/computer

Other: Tables for students to assemble copper projects on.

Reviewer

Action

Date

Faculty Preparer:

Amanda Scheffler

Faculty Preparer

Jun 27, 2013

Department Chair/Area Director:

Scott Klapper

Recommend Approval

Feb 03, 2014

Dean:

Marilyn Donham

Recommend Approval

Feb 05, 2014

Vice President for Instruction:

Bill Abernethy

Approve

Mar 31, 2014