

Washtenaw Community College Comprehensive Report

UAT 275 Trade Related Trigonometry Effective Term: Spring/Summer 2014

Course Cover

Division: Advanced Technologies and Public Service Careers

Department: United Association Department

Discipline: United Association Training

Course Number: 275

Org Number: 28200

Full Course Title: Trade Related Trigonometry

Transcript Title: Trade Related Trigonometry

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:

Course description

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 the principles of trade-related trigonometry. Following a review, students will discuss and develop skills to instruct on topics such as trigonometry, application of a right triangle, Pythagorean theorem, rolling offsets (including cut-downs/degree of roll), equal spread offsets and miter joints. Teaching techniques will be addressed and problematic areas will be discussed to provide student instructors with ideas for their own classrooms teaching. 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

Below College Level Pre-Reqs

Request Course Transfer

Proposed For:

Student Learning Outcomes

1. Demonstrate methods of teaching the central concepts of pipe trades trigonometry.

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: Skill checklist with rubric

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

Who will score and analyze the data: Departmental faculty

2. Demonstrate teaching practicum on the central concepts of trigonometry for pipe layout.

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: Performance parameters with rubric

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

Who will score and analyze the data: Departmental faculty

Course Objectives

1. Identify the basic trigonometry functions and principles of a right triangle.

Matched Outcomes

2. Recognize how to use the Pythagorean Theorem as it pertains to the plumbing and pipefitting trades.

Matched Outcomes

3. Apply trigonometry to calculate various rolling offsets, equal spread offsets and miter joints.

Matched Outcomes

4. Recognize how trigonometry applies to pipe fabrication, pipe layout, tube bending, and optical survey.

Matched Outcomes

5. Demonstrate operation of the Pipe Trades Pro calculator for various problems.

Matched Outcomes

6. Demonstrate how a PC and EXCEL can be used for right angle trigonometry.

Matched Outcomes

7. Develop and present a problem and solution using the EXCEL format.

Matched Outcomes

8. Identify systematic and incremental learning approaches related to trade trigonometry.

Matched Outcomes

New Resources for Course

Course Textbooks/Resources

Textbooks

Manuals

Periodicals

Software

Equipment/Facilities

Level III classroom

Other: An open classroom area to layout pipe fittings and apply measurements.

<u>Reviewer</u>	<u>Action</u>	<u>Date</u>
Faculty Preparer: <i>Amanda Scheffler</i>	<i>Faculty Preparer</i>	<i>Feb 02, 2014</i>
Department Chair/Area Director: <i>Scott Klapper</i>	<i>Recommend Approval</i>	<i>Feb 03, 2014</i>
Dean: <i>Marilyn Donham</i>	<i>Recommend Approval</i>	<i>Feb 05, 2014</i>
Vice President for Instruction: <i>Bill Abernethy</i>	<i>Approve</i>	<i>Apr 21, 2014</i>