

Washtenaw Community College Comprehensive Report

UAT 364 Safe Handling and Installation of Fuel Gas Systems (UA 4016) Effective Term: Spring/Summer 2024

Course Cover

College: Advanced Technologies and Public Service Careers

Division: Advanced Technologies and Public Service Careers

Department: United Association Department

Discipline: United Association Training

Course Number: 364

Org Number: 28200

Full Course Title: Safe Handling and Installation of Fuel Gas Systems (UA 4016)

Transcript Title: Fuel Gas Systems (UA 4016)

Is Consultation with other department(s) required: No

Publish in the Following:

Reason for Submission: New Course

Change Information:

Rationale: New U.A. course

Proposed Start Semester: Spring/Summer 2024

Course Description: In this course, students will review the installation and procedures involved in the safe handling of Polyethylene (P.E.) pipe used for underground gas service piping. Students will review codes that include safety precautions, depth, markings, risers, and meter settings for piping systems.

System pressure tests will be demonstrated, including using the Kuhlman pressure test gauge. Students will also be review ditch safety and repairing existing P.E. plastic gas lines and returning them to service. Limited to United Association Instructor Training program graduates.

Course Credit Hours

Variable hours: No

Credits: 1.5

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

Lecture Hours: Instructor: 22.5 Student: 22.5

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

Lab: Instructor: 1.5 Student: 1.5

Clinical: Instructor: 0 Student: 0

Total Contact Hours: Instructor: 24 Student: 24

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 P.E. pipe and material selection required to install a buried service line and assemble a stab assembly, brackets, and post.

Assessment 1

Assessment Tool: Outcome-related demonstration

Assessment Date: Spring/Summer 2024

Assessment Cycle: Every Three Years

Course section(s)/other population: All

Number students to be assessed: All

How the assessment will be scored: Checklist

Standard of success to be used for this assessment: 80% of the students will score 80% or higher.

Who will score and analyze the data: U.A. Instructors

2. Demonstrate leak detection testing procedures by using Kuhlman gauge to perform a legal gas pressure test and interpret the reading.

Assessment 1

Assessment Tool: Outcome-related demonstration

Assessment Date: Spring/Summer 2024

Assessment Cycle: Every Three Years

Course section(s)/other population: All

Number students to be assessed: All

How the assessment will be scored: Checklist

Standard of success to be used for this assessment: 80% of the students will score 80% or higher.

Who will score and analyze the data: U.A. Instructors

3. Demonstrate the procedure involved in a "Dig-in" style of gas leak.

Assessment 1

Assessment Tool: Outcome-related demonstration

Assessment Date: Spring/Summer 2024

Assessment Cycle: Every Three Years

Course section(s)/other population: All

Number students to be assessed: All

How the assessment will be scored: Checklist

Standard of success to be used for this assessment: 80% of the students will score 80% or higher.

Who will score and analyze the data: U.A. Instructors

Course Objectives

1. Discuss the different types of pipe and pipe sizes used in a buried gas service.
2. Explain the marking on a P.E. pipe.
3. Explain the procedure involved in burying a P.E. pipe gas line.
4. Explain the installation, size, and procedure used in a stab-style riser for P.E. pipe.
5. Discuss and demonstrate wire and ribbon marking for tracing underground P.E. pipe, including tracing ribbon and GPS ball where needed.
6. Explain and identify the different pressures and length of time to perform a buried house line test.
7. Distinguish between buried house line and buried service line.

8. Discuss and demonstrate leak test procedures at locations at meter settings as required by gas company providers.
9. Discuss, demonstrate, and access the results of the Kuhlman gauge gas leak test.
10. Demonstrate personal protective equipment (PPE) and the necessary safety precautions to avoid potential hazards.
11. Discuss the correct course of action while repairing a P.E. piping system and returning it to service.
12. Identify and discuss potential safety issues with static electricity and static build-up while working with P.E. pipe inside and outside of trenches.

New Resources for Course

Course Textbooks/Resources

Textbooks

United Association . *Fuel Gas Systems for United Association Journeyworkers and Apprentices*, First ed. United Association , 2020
 International Code Council . *2021 International Fuel Gas Code*, First ed. International Code Council , 2021, ISBN: 160983966.

Manuals

Periodicals

Software

Equipment/Facilities

<u>Reviewer</u>	<u>Action</u>	<u>Date</u>
Faculty Preparer: <i>Tony Esposito</i>	<i>Faculty Preparer</i>	<i>Jan 02, 2024</i>
Department Chair/Area Director: <i>Marilyn Donham</i>	<i>Recommend Approval</i>	<i>Jan 02, 2024</i>
Dean: <i>Jimmie Baber</i>	<i>Recommend Approval</i>	<i>Jan 10, 2024</i>
Curriculum Committee Chair: <i>Randy Van Wagnen</i>	<i>Recommend Approval</i>	<i>Mar 09, 2024</i>
Assessment Committee Chair: <i>Jessica Hale</i>	<i>Recommend Approval</i>	<i>Mar 12, 2024</i>
Vice President for Instruction: <i>Brandon Tucker</i>	<i>Approve</i>	<i>Mar 13, 2024</i>