

Washtenaw Community College Comprehensive Report

UAT 130 Fire Pump Inspection, Testing, Maintenance, and Repair (UA 7040) Effective Term: Spring/Summer 2019

Course Cover

Division: Advanced Technologies and Public Service Careers
Department: United Association Department
Discipline: United Association Training
Course Number: 130
Org Number: 28200
Full Course Title: Fire Pump Inspection, Testing, Maintenance, and Repair (UA 7040)
Transcript Title: Fire Pump Inspect, Test 7040
Is Consultation with other department(s) required: No
Publish in the Following: College Catalog
Reason for Submission: New Course
Change Information:
Rationale: New United Association course
Proposed Start Semester: Spring/Summer 2019
Course Description: In this course, students will learn proper procedures and develop methods needed to teach the operation, inspection, testing, maintenance, and repair of fire pumps. Students will also be introduced to the code requirements per National Fire Protection Association NFPA 20 and NFPA 25 as well as plotting pump curves necessary for proper fire pump operation. Limited to United Association program participants.

Course Credit Hours

Variable hours: No
Credits: 3
Lecture Hours: Instructor: 45 **Student:** 45
Lab: Instructor: 0 **Student:** 0
Clinical: Instructor: 0 **Student:** 0

Total Contact Hours: Instructor: 45 **Student:** 45
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. Identify fire pump and jockey pump piping arrangements used in fire protection systems.

Assessment 1

Assessment Tool: Written Exam

Assessment Date: Spring/Summer 2019

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: 80% of students will score 100%

Who will score and analyze the data: UA Training Coordinator

2. Identify procedure, test equipment, and troubleshooting techniques used in testing fire pumps and fire protection systems as per standard NFPA 25.

Assessment 1

Assessment Tool: Written Exam

Assessment Date: Spring/Summer 2019

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: 80% of the students will score 100%

Who will score and analyze the data: UA Training Coordinator

3. Disassemble, inspect and reassemble major and minor fire pumps currently used in the industry.

Assessment 1

Assessment Tool: Skills Demonstration

Assessment Date: Spring/Summer 2019

Assessment Cycle: Every Three Years

Course section(s)/other population: All

Number students to be assessed: All

How the assessment will be scored: Skills Demonstration Checklist

Standard of success to be used for this assessment: 80% of the students will score 100%

Who will score and analyze the data: UA Training Coordinator

4. Create and use lesson plan for teaching inspection, maintenance, testing, and repair of fire pumps at the student's training center.

Assessment 1

Assessment Tool: Teaching Demonstration

Assessment Date: Spring/Summer 2019

Assessment Cycle: Every Three Years

Course section(s)/other population: All

Number students to be assessed: All

How the assessment will be scored: Observation Checklist

Standard of success to be used for this assessment: 80% of the students will score 100%

Who will score and analyze the data: UA Training Coordinator

Course Objectives

1. Compare and contrast fire pump and jockey pump and their piping installations.
2. Recognize the NFPA 20 and NFPA 25 code requirements and their adaptation to fire pump installations.
3. Operate test equipment in accordance with the code requirements.

4. Identify components of major and minor pumps during rebuild by disassembling and reassembling various fire pumps.
5. Verify annual test procedures as required by code requirements of NFPA 20 and NFPA 25.
6. Troubleshoot probable causes of fire pump failure and their ramifications in regards to structural and personal damage.
7. Calculate fire pump performance, pump curve distribution, and possible causes of improper operation and failures.
8. Chart performance and pump curve distribution to engineered building.
9. Describe installation and maintenance procedures of large fire pump systems and their piping arrangements.
10. Use blueprints to identify piping, pumps, and sprinkler usage in buildings.
11. Review safety procedures required for the safe operation and testing of mechanical, stagnant water, and electrical equipment.
12. Create lesson plans for individual training centers with peer critique.
13. Review resources available for additional training materials for lesson plan.

New Resources for Course

Course Textbooks/Resources

Textbooks
Manuals
Periodicals
Software

Equipment/Facilities

Level III classroom
Other: Lab area for pump testing

<u>Reviewer</u>	<u>Action</u>	<u>Date</u>
Faculty Preparer: <i>Tony Esposito</i>	<i>Faculty Preparer</i>	<i>Dec 18, 2018</i>
Department Chair/Area Director: <i>Marilyn Donham</i>	<i>Recommend Approval</i>	<i>Jan 03, 2019</i>
Dean: <i>Brandon Tucker</i>	<i>Recommend Approval</i>	<i>Jan 16, 2019</i>
Curriculum Committee Chair: <i>Lisa Veasey</i>	<i>Recommend Approval</i>	<i>Mar 19, 2019</i>
Assessment Committee Chair: <i>Shawn Deron</i>	<i>Recommend Approval</i>	<i>Mar 28, 2019</i>
Vice President for Instruction: <i>Kimberly Hurns</i>	<i>Approve</i>	<i>Apr 07, 2019</i>