Washtenaw Community College Comprehensive Report

UAT 367 Advanced Air and Water Analysis
Effective Term: Spring/Summer 2016

Course Cover

Division: Advanced Technologies and Public Service Careers
Department: United Association Department
Discipline: United Association Training
Course Number: 367
Org Number: 28200
Full Course Title: Advanced Air and Water Analysis
Transcript Title: Advanced Air & Water Analysis
Is Consultation with other department(s) required: No
Publish in the Following: College Catalog , Web Page
Reason for Submission: Course Change
Change Information:
Consultation with all departments affected by this course is required.
Course description
Credit hours
Total Contact Hours
Outcomes/Assessment
Objectives/Evaluation
Rationale: Change credit hours, contact hours, assessment date and text.
Proposed Start Semester: Fall 2015
Course Description: In this course students will learn methods of teaching advanced air and water analysis. Students should have previous experience in Start, Test and Balance procedures. Topics include: advanced studies of psychometrics, pump and fan design, electrical power analysis, and the use of variable frequency drives. Limited to United Association Instructor Training program graduates.

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. Explain to journey-people and apprentices the central concepts and skills of advanced air and water analysis.
   Assessment 1
   Assessment Tool: Teaching demonstration
   Assessment Date: Fall 2015
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All
   Number students to be assessed: 75% of all students
   How the assessment will be scored: Departmentally-developed rubric
   Standard of success to be used for this assessment: 75% will score 11 or higher out of 16.
   Who will score and analyze the data: UA faculty

2. Demonstrate to apprentices and journey-people the proper maintenance and repair procedures related to teaching advanced air and water analysis.
   Assessment 1
   Assessment Tool: Teaching demonstration
   Assessment Date: Fall 2015
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All
   Number students to be assessed: 75% of all students
   How the assessment will be scored: Departmentally-developed rubric
   Standard of success to be used for this assessment: 75% will score 11 or higher out of 16.
   Who will score and analyze the data: UA faculty

3. Utilize approved industry and UA course/training materials to teach advanced air and water analysis.
   Assessment 1
   Assessment Tool: Teaching demonstration
   Assessment Date: Fall 2015
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All
   Number students to be assessed: 75% of all students
   How the assessment will be scored: Departmentally-developed rubric
   Standard of success to be used for this assessment: 75% will score 11 or higher out of 16.
   Who will score and analyze the data: UA faculty

Course Objectives

1. Identify the importance of commissioning, psychrometrics, pressure drop, fans, and fan curves.
2. Identify the need for series and parallel pumping, control valves, duct design, and VAV systems.
3. Understand air and water applications, power factor, and harmonics as they relate to air and water analysis.
4. Recognize the different motors and drives and how to measure power quality.
5. Demonstrate use of UA course materials.

New Resources for Course

Course Textbooks/Resources

Textbooks
Manuals
Periodicals
Software

Equipment/Facilities

Reviewer	Action	Date
Faculty Preparer:		
Justin Carter	*Faculty Preparer*	*Jul 29, 2015*
Department Chair/Area Director:		
Scott Klapper	*Recommend Approval*	*Jul 30, 2015*
Dean:		
Brandon Tucker	*Recommend Approval*	*Aug 03, 2015*
Curriculum Committee Chair:		
Kelley Gottschang	*Recommend Approval*	*Oct 06, 2015*
Assessment Committee Chair:		
Michelle Garey	*Recommend Approval*	*Oct 11, 2015*
Vice President for Instruction:		
Michael Nealon	*Approve*	*Oct 23, 2015*