Washtenaw Community College Comprehensive Report

UAT 304A Air Quality for Building Systems (UA 6078)
Effective Term: Spring/Summer 2025

Course Cover

College: Advanced Technologies and Public Service Careers
Division: Advanced Technologies and Public Service Careers
Department: United Association Department (UAT Only)
Discipline: United Association Training
Course Number: 304A
Org Number: 28200
Full Course Title: Air Quality for Building Systems (UA 6078)
Transcript Title: Air Quality for Bldg Syst 6078
Is Consultation with other department(s) required: No
Publish in the Following:
Reason for Submission: New Course
Change Information:
Rationale: New United Association course
Proposed Start Semester: Spring/Summer 2024
Course Description: In this course students will evaluate and assess mechanical systems for compliance with American Society for Sanitary Engineers (ASSE) standards 12050 and 12051 concerning indoor air quality. Students will identify control measures to bring building systems into compliance. At the conclusion of this course, students will identify methods to develop an air quality risk management plan specifically designed for mechanical systems building automation. Students will also have the opportunity to take the ASSE 12050/12051 certification exam. 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

Request Course Transfer

Proposed For:

Student Learning Outcomes

1. Evaluate and document mechanical systems for air quality compliance in accordance with ASSE 12050 and the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) 241.
   Assessment 1
   Assessment Tool: Outcome-related worksheet
   Assessment Date: Fall 2024
   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: 80% of the students will score 80% or higher.
   Who will score and analyze the data: U.A. Instructors

2. List control measures required for mechanical systems to bring them into compliance with ASSE 12050.
   Assessment 1
   Assessment Tool: Outcome-related worksheet
   Assessment Date: Fall 2024
   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: 80% of the students will score 80% or higher.
   Who will score and analyze the data: U.A. Instructors

3. Identify the codes and requirements of ASSE 12050/12051 processes and documentation.
   Assessment 1
   Assessment Tool: Outcome-related exam questions
   Assessment Date: Fall 2024
   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 80% or higher.
   Who will score and analyze the data: U.A. Instructors

Course Objectives

1. Identify the proper testing locations of building mechanical systems.
2. Test system air flow with appropriate devices and testing equipment.
3. Document and analyze air flow test results.
4. Perform risk assessment of air flow systems of building mechanical systems.
5. Identify safety hazards of building occupants based on air quality indicators.
6. Identify, compare, and recommend engineering solutions to control corrective actions.
7. Identify and define specific language used in ASSE 12050 standards.
8. Identify related industry standards referenced in ASSE 12050.

9. Explain the roles and responsibilities of persons involved in air quality compliance.
10. Review safety requirements and Personal Protective Equipment (PPE) used when testing and maintaining air mechanical systems.

New Resources for Course

Course Textbooks/Resources

Textbooks

Ronnie J. Auvil. *Indoor Air Quality Solutions*, 2nd ed. ATP, 2020

Manuals

Periodicals

Software

Equipment/Facilities

Reviewer	Action	Date
Faculty Preparer:		
Tony Esposito	*Faculty Preparer*	*May 03, 2024*
Department Chair/Area Director:		
Marilyn Donham	*Recommend Approval*	*May 07, 2024*
Dean:		
Eva Samulski	*Recommend Approval*	*May 15, 2024*
Curriculum Committee Chair:		
Randy Van Wagnen	*Recommend Approval*	*Nov 07, 2024*
Assessment Committee Chair:		
Jessica Hale	*Recommend Approval*	*Nov 21, 2024*
Vice President for Instruction:		
Brandon Tucker	*Approve*	*Nov 26, 2024*