

Washtenaw Community College Comprehensive Report

UAT 301 Data Harvesting (UA 6066)

Effective Term: Winter 2022

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: 301

Org Number: 28200

Full Course Title: Data Harvesting (UA 6066)

Transcript Title: Data Harvesting (UA 6066)

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: Fall 2021

Course Description: In this course, students will be introduced to the advantages of data harvesting through Direct Digital Control (DDC). Specific attention will be given to how to recognize controls, set up cloud-based controls and data setpoints, as well as how to upgrade these controls to align with current software. Students will engage in hands-on learning by collecting, evaluating, and interpreting DDC data. 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. Identify direct digital control equipment and its purpose.

Assessment 1

Assessment Tool: Outcome-related multiple-choice quiz

Assessment Date: Fall 2021

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

2. Demonstrate how to set up, calibrate, operate and upgrade current cloud-based controls.

Assessment 1

Assessment Tool: Demonstration

Assessment Date: Fall 2021

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 cloud-based data setup and data interpretation.

Assessment 1

Assessment Tool: Demonstration

Assessment Date: Fall 2021

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. Review the inception and history of direct digital controls (DDC).
2. Identify various types of DDC used in industry.
3. Compare and contrast various types of DDC devices and the equipment being monitored.
4. Review the calibrations and upgrade procedures of current cloud-based digital controls.
5. Demonstrate the use, purpose, and location of data setpoints used in direct digital controls.
6. Analyze and interpret cloud-based data spreadsheet reports.
7. Troubleshoot common faults associated with direct digital controls and data collection.
8. Identify safety precautions and Personal Protective Equipment (PPE) when using and installing direct digital controls.
9. Compare the return on investment (ROI) costs of DDC installation and energy savings to continued use of aged Heating, Ventilation, Air Conditioning (HVAC) systems.

10. Demonstrate data collection procedures.

New Resources for Course

Course Textbooks/Resources

Textbooks

ATP. *Building Controls* , first ed. ATP Staff, 2020, ISBN: 0826920241.

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>Jun 10, 2021</i> |
| Department Chair/Area Director: <i>Marilyn Donham</i> | <i>Recommend Approval</i> | <i>Jul 20, 2021</i> |
| Dean: <i>Jimmie Baber</i> | <i>Recommend Approval</i> | <i>Jul 21, 2021</i> |
| Curriculum Committee Chair: <i>Randy Van Wagnen</i> | <i>Recommend Approval</i> | <i>Aug 31, 2021</i> |
| Assessment Committee Chair: <i>Shawn Deron</i> | <i>Recommend Approval</i> | <i>Sep 01, 2021</i> |
| Vice President for Instruction: <i>Kimberly Hurns</i> | <i>Approve</i> | <i>Sep 02, 2021</i> |