

## Washtenaw Community College Comprehensive Report

### UAT 372 UA/IBEW Instrumentation Calibration Certification Level II (UA 5021) Effective Term: Fall 2020

#### Course Cover

**Division:** Advanced Technologies and Public Service Careers

**Department:** United Association Department

**Discipline:** United Association Training

**Course Number:** 372

**Org Number:** 28200

**Full Course Title:** UA/IBEW Instrumentation Calibration Certification Level II (UA 5021)

**Transcript Title:** Instrumentation Calib II 5021

**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 2020

**Course Description:** In this course, students will explore the process of instrument calibration and prepare to implement an instrument calibration program at their local Training Center. Students will demonstrate calibration and documentation of various devices in a classroom and lab environment. In addition, students will prepare to take the UA/International Brotherhood of Electrical Workers (IBEW) Electrical Power Research Institute (EPRI) Level II Administrator Certification for proctoring of exams at their Training Center. 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 and demonstrate the proper set-up of calibration equipment, including a pressure differential transmitter, a pressure switch, and current-to-pneumatic transducer “I/P”.

### **Assessment 1**

Assessment Tool: Skills demonstration

Assessment Date: Fall 2020

Assessment Cycle: Every Three Years

Course section(s)/other population: All

Number students to be assessed: All

How the assessment will be scored: Skills 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. Prepare and present a lesson plan for delivering a calibration program at the local level.

### **Assessment 1**

Assessment Tool: Presentation

Assessment Date: Fall 2020

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 80% or higher.

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

3. Pass the Level II Administrator Certification examination for proctoring.

### **Assessment 1**

Assessment Tool: Outcome-related written exam questions

Assessment Date: Fall 2020

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. Discuss the history of calibration.
2. Identify the tools and equipment used in calibration.
3. Discuss the process for the set-up of calibration equipment.
4. Demonstrate the proper set-up of calibration equipment as per manufacturers' specifications.
5. Review the requirements and qualifications for the UA/IBEW EPRI Level II Administrator Certification Exam.
6. Demonstrate the calibration of a conventional pressure differential transmitter, a pressure switch, a current-to-pneumatic transducer I/P, a pressure differential transmitter and a temperature transmitter.
7. Discuss the methods and curriculum needed to develop a calibration program at the student's local Training Center.

8. Locate and navigate educational resources available for establishing a Calibration Program at the student's local Training Center.
9. Prepare and present a lesson plan for classroom critique.
10. Review safety precautions and personal protective equipment (PPE) needed when performing calibration.

## New Resources for Course

### Course Textbooks/Resources

#### Textbooks

International Association of Plumbing and Mechanical Officials. *APPLIED SCIENCE OF INSTRUMENTATION*, First ed. IAPMO Group, 2017, ISBN: 1935941267.

#### Manuals

#### Periodicals

#### Software

### Equipment/Facilities

<u>Reviewer</u>	<u>Action</u>	<u>Date</u>
<b>Faculty Preparer:</b> <i>Tony Esposito</i>	<i>Faculty Preparer</i>	<i>May 18, 2020</i>
<b>Department Chair/Area Director:</b> <i>Marilyn Donham</i>	<i>Recommend Approval</i>	<i>May 20, 2020</i>
<b>Dean:</b> <i>Jimmie Baber</i>	<i>Recommend Approval</i>	<i>May 27, 2020</i>
<b>Curriculum Committee Chair:</b> <i>Lisa Veasey</i>	<i>Recommend Approval</i>	<i>Aug 13, 2020</i>
<b>Assessment Committee Chair:</b> <i>Shawn Deron</i>	<i>Recommend Approval</i>	<i>Oct 20, 2020</i>
<b>Vice President for Instruction:</b> <i>Kimberly Hurns</i>	<i>Approve</i>	<i>Oct 22, 2020</i>