

# Washtenaw Community College Comprehensive Report

## UAT 263 Fundamentals of Building Automation Effective Term: Spring/Summer 2016

### Course Cover

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

**Department:** United Association Department

**Discipline:** United Association Training

**Course Number:** 263

**Org Number:** 28200

**Full Course Title:** Fundamentals of Building Automation

**Transcript Title:** Fund. of Building Automation

**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**

**Outcomes/Assessment**

**Objectives/Evaluation**

**Rationale:** Change credit hours, assessment date and text.

**Proposed Start Semester:** Fall 2015

**Course Description:** In this course, students will learn methods of teaching the basic fundamentals of direct digital control and various building automation system applications as applied to the HVACR industry. Students should have HVACR control experience. Limited to United Association program participants.

### 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 the central concepts and skills of building automation to apprentices and journey-people.

#### **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:** UAT faculty

2. Demonstrate maintenance and repair procedures related to teaching the fundamentals of building automation to apprentices and journey-people.

#### **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:** UAT faculty

3. Teach apprentices and journey-people the fundamentals of building automation using approved industry and UA course/training materials.

#### **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:** UAT faculty

### Course Objectives

1. Identify the history and fundamentals of a building automation system, such as digital control system and direct digital control.
2. Identify the exchange of information between the controller and inputs/outputs related to basic control electronics.
3. Distinguish the differences between binary and analog inputs/outputs and their functions.
4. Identify the importance of transducers, basic control theory, and communications protocol.
5. Demonstrate appropriate use and knowledge of course materials.

### New Resources for Course

#### Course Textbooks/Resources

Textbooks

Manuals

Periodicals  
Software

**Equipment/Facilities**

Level III classroom

<b><u>Reviewer</u></b>	<b><u>Action</u></b>	<b><u>Date</u></b>
<b>Faculty Preparer:</b> <i>Justin Carter</i>	<i>Faculty Preparer</i>	<i>Jun 25, 2015</i>
<b>Department Chair/Area Director:</b> <i>Scott Klapper</i>	<i>Recommend Approval</i>	<i>Jul 02, 2015</i>
<b>Dean:</b> <i>Brandon Tucker</i>	<i>Recommend Approval</i>	<i>Jul 07, 2015</i>
<b>Curriculum Committee Chair:</b> <i>Kelley Gottschang</i>	<i>Recommend Approval</i>	<i>Sep 29, 2015</i>
<b>Assessment Committee Chair:</b> <i>Michelle Garey</i>	<i>Recommend Approval</i>	<i>Sep 29, 2015</i>
<b>Vice President for Instruction:</b> <i>Michael Nealon</i>	<i>Approve</i>	<i>Oct 06, 2015</i>