

## Washtenaw Community College Comprehensive Report

### UAT 157 Smart Home Technology (UA 6065) Effective Term: Fall 2020

#### Course Cover

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

**Department:** United Association Department

**Discipline:** United Association Training

**Course Number:** 157

**Org Number:** 28000

**Full Course Title:** Smart Home Technology (UA 6065)

**Transcript Title:** Smart Home Technology 6065

**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 demonstrate the ability to interface electronic and mechanical devices for the residential smart-home service market. Devices covered will include security monitoring capabilities, temperature modulation and control, lighting and access control, along with remote building monitoring. Device installation and commissioning will also be covered in the hands-on lab portion of this course. Limited to approved union program participants.

#### 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. Install, commission, and operate Smart Home devices.

### **Assessment 1**

Assessment Tool: 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. List and explain the steps necessary to set up a home network.

### **Assessment 1**

Assessment Tool: Outcome-related 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

3. Prepare and present a lesson plan that will best fit into their curriculum at their home locals.

### **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

4. Identify and explain various types of wired and wireless connections.

### **Assessment 1**

Assessment Tool: Outcome-related 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. Identify devices capable of utilizing Smart Home Technology.
2. Identify the equipment needed to operate systems (i.e. modem and router).
3. Identify and perform installation of equipment and devices.
4. Perform commissioning, testing, and verifying operation of devices.
5. Review electrical safety and proper personal protective equipment (PPE) needed to install equipment and devices.
6. Identify connection points of devices related to remote operation.
7. Evaluate WIFI, router, and broadband capabilities as they pertain to Smart Technology and home networks.
8. Analyze home markets and the need for Smart Technology.
9. Compare and contrast the benefits of utilizing Smart Technology in relation to the Heating, Ventilation, Air Conditioning, and Refrigeration (HVACR) industry.
10. Create a brief lesson plan that can be utilized at the student's Local Training Center.
11. Compare and contrast wired and wireless connections.
12. Identify wired and wireless connections and their operations.

### New Resources for Course

#### Course Textbooks/Resources

##### Textbooks

Gary J Rockis. *Residential Wiring and Smart Home Technology* by Gary J Rockis , 4th ed. Upper Marlboro, Maryland: American Technical Publishers, 2019

##### 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>Apr 01, 2020</i>
<b>Department Chair/Area Director:</b> <i>Marilyn Donham</i>	<i>Recommend Approval</i>	<i>Apr 06, 2020</i>
<b>Dean:</b> <i>Jimmie Baber</i>	<i>Recommend Approval</i>	<i>Apr 13, 2020</i>
<b>Curriculum Committee Chair:</b> <i>Lisa Veasey</i>	<i>Recommend Approval</i>	<i>Apr 21, 2020</i>
<b>Assessment Committee Chair:</b> <i>Shawn Deron</i>	<i>Recommend Approval</i>	<i>Apr 28, 2020</i>
<b>Vice President for Instruction:</b> <i>Kimberly Hurns</i>	<i>Approve</i>	<i>May 05, 2020</i>