

# Washtenaw Community College Comprehensive Report

## UAT 187 Revit for Fire Protection III (UA 7027) Effective Term: Spring/Summer 2021

### Course Cover

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

**Department:** United Association Department

**Discipline:** United Association Training

**Course Number:** 187

**Org Number:** 28200

**Full Course Title:** Revit for Fire Protection III (UA 7027)

**Transcript Title:** Revit Fire Protect III 7027

**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 2021

**Course Description:** In this course, students will use HydraCAD software to estimate building projects and will use Building Information Modeling (BIM) to virtually install a fire protection system in a medical facility. This real-world simulation project allows students to experience the challenges and level of detail required to design fire protection systems with an aim to prepare them for advancement as a foreman, superintendent, project manager or detailer. Limited to United Association program participants.

### Course Credit Hours

**Variable hours:** No

**Credits:** 3

**Lecture Hours: Instructor:** 45 **Student:** 45

**The following Lab fields are not divisible by 15: Student Min, Instructor Min**

**Lab: Instructor:** 3 **Student:** 3

**Clinical: Instructor:** 0 **Student:** 0

**Total Contact Hours: Instructor:** 48 **Student:** 48

**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. Design a virtual fire sprinkler system for a predetermined new medical facility utilizing BIM software.

#### **Assessment 1**

Assessment Tool: Skills demonstration

Assessment Date: Spring/Summer 2021

Assessment Cycle: Every Three Years

Course section(s)/other population: All

Number students to be assessed: All

How the assessment will be scored: 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. Develop and analyze fire sprinkler systems using HydraCAD.

#### **Assessment 1**

Assessment Tool: Skills demonstration

Assessment Date: Spring/Summer 2021

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

3. Prepare a tagging and annotating system piping for stock listing.

#### **Assessment 1**

Assessment Tool: Skills demonstration

Assessment Date: Spring/Summer 2021

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

4. Create material stock lists and installation sheets.

#### **Assessment 1**

Assessment Tool: Skills demonstration

Assessment Date: Spring/Summer 2021

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

## Course Objectives

1. Discuss the spacing and layout of fire protection sprinkler mains and branch lines in a commercial building.
2. Create a BIM layout of the fire sprinkler riser and mains, including the support hanger and bracing.
3. Calculate hydraulic water supply pressures of various fire pumps and city water main systems and its effects on fire sprinkler systems.
4. Schedule and coordinate the installation of a new fire sprinkler system along side other mechanical systems throughout commercial and industrial buildings.
5. Identify common obstacles and obstructions in the installation of fire sprinkler system piping and sprinkler heads.
6. Demonstrate procedures to leak test fire sprinkler systems.
7. Tag and annotate a fire sprinkler system, including the pump room, to prepare for material stock listing.
8. Create a material stock list for a fire sprinkler system.
9. Create installation drawings and documents accurately reflecting the new material lists.
10. Identify the fittings and equipment that need to be tagged and annotated in a fire sprinkler system.
11. Compare and contrast the different types of fire sprinkler systems and equipment installed in commercial buildings.

## New Resources for Course

### Course Textbooks/Resources

Textbooks  
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>Nov 16, 2020</i>
<b>Department Chair/Area Director:</b> <i>Marilyn Donham</i>	<i>Recommend Approval</i>	<i>Nov 29, 2020</i>
<b>Dean:</b> <i>Jimmie Baber</i>	<i>Recommend Approval</i>	<i>Dec 01, 2020</i>
<b>Curriculum Committee Chair:</b> <i>Lisa Veasey</i>	<i>Recommend Approval</i>	<i>Jan 29, 2021</i>
<b>Assessment Committee Chair:</b> <i>Shawn Deron</i>	<i>Recommend Approval</i>	<i>Feb 10, 2021</i>
<b>Vice President for Instruction:</b> <i>Kimberly Hurns</i>	<i>Approve</i>	<i>Feb 10, 2021</i>