Washtenaw Community College Comprehensive Report

UAT 117 Robotic Total Station Layout-Leica (UA 3032)
Effective Term: Spring/Summer 2018

Course Cover

Division: Advanced Technologies and Public Service Careers
Department: United Association Department
Discipline: United Association Training
Course Number: 117
Org Number: 28200
Full Course Title: Robotic Total Station Layout-Leica (UA 3032)
Transcript Title: Rob Tot Station Layout (3032)
Is Consultation with other department(s) required: No
Publish in the Following: College Catalog , Time Schedule , Web Page
Reason for Submission: New Course
Change Information:
Rationale: New course
Proposed Start Semester: Spring/Summer 2018
Course Description: In this course, students focus on using the Leica Robotic Total Station. Participants will learn setup, layout, and Quality Assistance/Quality Control (QA/QC) with an emphasis on hands-on learning the latest equipment and software. Training will include how to verify building control points to other levels of a structure, load layout points from a model into the total station, and load points back into the model. Limited to United Association 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. Set up and operate Lecia total station to properly arrange construction features and ensure job site quality control.

   Assessment 1
   Assessment Tool: Skills demonstration
   Assessment Date: Spring/Summer 2018
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All
   Number students to be assessed: All
   How the assessment will be scored: Skills demonstration checklist
   Standard of success to be used for this assessment: 90% of students will score 100%
   Who will score and analyze the data: U.A. training coordinator

2. Utilize the BIM model and control points to survey and arrange hangers, piping, and equipment of a job site.

   Assessment 1
   Assessment Tool: Skills demonstration
   Assessment Date: Spring/Summer 2018
   Assessment Cycle: Every Three Years
   Course section(s)/other population: All
   Number students to be assessed: All
   How the assessment will be scored: Skills demonstration checklist
   Standard of success to be used for this assessment: 90% of students will score 100%
   Who will score and analyze the data: U.A. training coordinator

Course Objectives

1. Successfully set up and establish correct control points for a new construction project.
2. Verify and establish the correct control points of additional floors of a project with reference to original set points.
3. Layout hangers and equipment pads (foundations) utilizing both manufacturer's software and BIM 360.
4. Layout of control points with BIM model provided.
5. Create new points for existing equipment and and piping into model provided.
6. Adjust control points for future piping and equipment in reference to existing layout and equipment.

New Resources for Course

Course Textbooks/Resources
   Textbooks
   Manuals
   Periodicals
   Software
      Lecia RTS Icon Field Software . Lecia, 2016 ed.

Equipment/Facilities
   Level I classroom
   Computer workstations/lab

Reviewer	Action	Date
Faculty Preparer:		
Tony Esposito	*Faculty Preparer*	*Nov 16, 2017*
Department Chair/Area Director:		
Marilyn Donham	*Recommend Approval*	*Nov 17, 2017*
Dean:		
Brandon Tucker	*Recommend Approval*	*Dec 27, 2017*
Curriculum Committee Chair:		
David Wooten	*Recommend Approval*	*Mar 12, 2018*
Assessment Committee Chair:		
Michelle Garey	*Recommend Approval*	*Mar 28, 2018*
Vice President for Instruction:		
Kimberly Hurns	*Approve*	*Mar 29, 2018*