**Sinclair Community College**

**Continuous Improvement Annual Update 2015-16**

**Please submit to your Division Assessment Coordinator / Learning Liaison for feedback no later than March 1, 2016**

**After receiving feedback from your Division Assessment Coordinator, please revise accordingly and make the final submission to your dean and the Provost’s Office no later than May 2, 2016**

**Department:** **SME – 0554 Energy Management Technology**

Year of Last Program Review: FY 2013-2014

Year of Next Program Review: FY 2019-2020

**Section I: Progress Since the Most Recent Review**

Below are the goals from Section IV part E of your last Program Review Self-Study. Describe progress or changes made toward meeting each goal over the last year. Responses from the previous year’s Annual Update are included, if there have been no changes to report then no changes to the response are necessary.

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| **GOALS** | **Status** | **Progress or Rationale for No Longer Applicable** |

Below are the Recommendations for Action made by the review team. Describe the progress or changes made toward meeting each recommendation over the last year. Responses from the previous year’s Annual Update are included, if there have been no changes to report then no changes to the response are necessary.

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| **RECOMMENDATIONS** | **Status** | **Progress or Rationale for No Longer Applicable** |
| According to the self-study, “students entering the program are generally ill-prepared in math”. The department is encouraged to consider adding MAT prerequisites to some of its courses early in the program – and perhaps later in the program for higher level MAT courses - based on careful deliberation and data regarding how well students who have not had the proposed prerequisite compare in terms of course completions with those who have had the proposed perquisite. | In progress [ ] Completed [x] No longer applicable [ ]  | The department has taken care not to include many prerequisites in introductory courses for fear of turning students off initially. However, the tech math courses once required for the degrees have been changed to MAT1580 Precalculus. This will be beneficial for students as they go on to university and will help them be better prepared for industry. |
| It is clear that the department is collecting assessment data. The standardization of coursework puts the department at a distinct advantage in this regard relative to many other departments at the college. The department is encouraged to better document this assessment work by formally collecting and analyzing student assignment and exam scores that relate to general education and program outcomes. The self-study provided evidence that assessment data was being collected, but in the next self-study it should be made clearer that this data is being combined, analyzed, reported, and used for improving student learning. The department is strongly encouraged to work with its Divisional Assessment Coordinator / Learning Liaison to explore ways of combining data across sections and analyzing it in relation to general education and program outcomes. | In progress [x] Completed [ ] No longer applicable [ ]  | Data continues to be collected and analyzed. Often, recommendations from our industry led advisory board are tested, analyzed and considered before that change is made permanently. Best data collection tends to be the Engineering Technology Capstone Dinner and Expo survey results from advisory board members and guests. |
| Social media, such as LinkedIn, provide new avenues for maintaining connections with graduates and gathering data from students who have moved on to the next phase of their careers. The department is encouraged to consider exploring social media for this reason, and consider whether faculty should be assigned to oversee this. | In progress [ ] Completed [ ] No longer applicable [x]  | After the department set up both Facebook and Twitter accounts, marketing asked us to take them both down. The department complied with the request. |
| Related to the above recommendation, the department is encouraged to explore other ways of tracking graduates, and also for tracking co-op experiences. There are currently efforts underway to better document students in all internship and co-op experiences at the college, and hopefully in the next self-study the department will be positioned to describe the number and scope of co-op experiences its students participate in. | In progress [ ] Completed [x] No longer applicable [ ]  | The division now has a full time internship coordinator, Chad Bridgman that tracks internship opportunities and students within the program. The coordinator is now tracking data electronically so that it can better be evaluated. |
| The department is strongly encouraged to update articulation agreements for semesters and explore whether articulations with new institutions might be appropriate. The Assistant Dean in the division can be a valuable resource in this regard. | In progress [x] Completed [ ] No longer applicable [ ]  | The department met with Franklin University to work on articulation agreements for Architectural Technology, Civil Engineering Technology, Construction Management Technology, Energy Management Technology, Environmental Engineering Technology, HVAC-R Engineering Technology and Mechanical Engineering Technology. These degrees would transfer into a Bachelor of Science in Applied Management. Details are still being finalized. |
| There appears to be some confusion in the minds of some students regarding which programs are transfer programs and which are designed to result in a terminal degree. The department is encouraged to explore new ways of making students aware of these distinctions – much work has already been done, but it seems that additional efforts are needed. | In progress [x] Completed [ ] No longer applicable [ ]  | The department is working to educate students about career and educational pursuits after completing a technology degree. Work has been done to update the Sinclair website department and program pages as well as hosting an open house that outlines those possibilities. |
| Moving all of the programs in the department under a single budget number appears to make sense – the department is encouraged to explore this possibility, although care should be taken to identify and address any potential unintended consequences by conferring with the Budget Office. | In progress [ ] Completed [x] No longer applicable [ ]  | After years of attempting to separate the department’s seven programs by GL code, as of July 1, 2015 the department now has a GL code for all programs. Tracking, data analysis and budgeting should be much easier as a result. |
| The Energy Management Technology EGMT.S.ATS program has existed for a couple of years now – the time has come to decide whether this should be an actual .AS or .AAS program, or whether it should be dropped from the curriculum. If the decision is made to make this a full-fledged degree program, the department should work closely with the Provost’s Office to prepare the required Letter of Intent and Degree Approval submissions to the Ohio Board of Regents.  | In progress [x] Completed [ ] No longer applicable [ ]  | The department is working to educate potential students regarding the Energy Management program. The department has hosted two open house events (one fall, one spring) that introduce potential students to energy management, the course content, job opportunities and continuing education. |

**Section II: Assessment of General Education & Degree Program Outcomes**

The Program Outcomes for the degrees are listed below. **All program outcomes must be assessed at least once during the 5 year Program Review cycle, and assessment of program outcomes must occur each year**.

**PLEASE NOTE – FOR THE PREVIOUS YEAR AND THIS YEAR, REPORTING OF GENERAL EDUCATION OUTCOME ASSESSMENT HAS BEEN TEMPORARILY POSTPONED. WE WOULD ASK THAT IN THIS ANNUAL UPDATE YOU IDENTIFY AT LEAST ONE COURSE IN YOUR DEGREE PROGRAM(S) WHERE ASSESSEMENT AT THE MASTERY LEVEL WILL OCCUR FOR THE FOLLOWING GENERAL EDUCATION OUTCOME:**

* **Cultural Diversity & Global Citizenship: Apply knowledge of cultural diversity to real world context by acknowledging, understanding, and engaging constructively within the contemporary world.**

**PLEASE RESPOND TO THE FOLLOWING QUESTIONS:**

**Do you have a required course in your program curriculum where Cultural Diversity & Global Citizenship could be assessed for mastery?**

[x] **Yes** [ ] **No If yes, please list the course: MET2711 Ethics for Engineering Technology Professionals.**

**If no, is there an elective course that is listed on your Preferred Program Pathway Template where Cultural Diversity & Global Citizenship could be assessed for mastery?**

[ ] **Yes** [ ] **No If yes, please list the course:** Click here to enter text.

**If no, is there another elective course that is an option in your program curriculum where Cultural Diversity & Global Citizenship could be assessed for mastery?**

[ ] **Yes** [ ] **No If yes, please list the course:** Click here to enter text.

**If no, where do students master Cultural Diversity & Global Citizenship in your program? Do you need assistance incorporating this General Education outcome into your degree program?**

Click here to enter text.

**NOTE THAT THERE WILL NEED TO BE AT LEAST ONE EXAM / ASSIGNMENT / ACTIVITY IN THIS COURSE THAT CAN BE USED TO ASSESS MASTERY OF THE COMPETENCY.**

**YOU MAY ALSO SUBMIT ASSESSMENT RESULTS FOR THIS GENERAL EDUCATION COMPETENCY IF YOU HAVE THEM, BUT IT WILL BE CONSIDERED OPTIONAL**.

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| **Energy Management Technology Program Outcomes** | To which course(s) is this program outcome related? | Year assessed or to be assessed. | Assessment MethodsUsed | What were the assessment results? (Please provide brief summary data) |
| Apply fundamental technical principles to evaluation of energy systems. | HVA 1261 - HVA 1201 - HVA 1221 - MAT 1280 - MAT 1290 - EGV 1301 - EGV 2780 - PHY 1131 - | 2017 |  |  |
| With knowledge of building envelope, building mechanical & building electrical systems, perform an energy audit & prepare a complete report with recommendations for savings opportunities. | HVA 1201 - HVA 1221 - HVA 1351 - CAT 1111 - EET 1120 - EGV 1201 - EGV 1301 - EGV 1351 - EGV 2201 - EGV 2251 - EGV 2301 - HVA 1261 -  | 2016 | Capstone final project. | Student success rates equaled 100%. Client success rates also equaled 100%.Students wrote 10 reports.Clients included Montgomery County, Sinclair Community College and a few local school district buildings.Overall, students recommended practices that would save these clients over $200,000 yearly in energy consumption. This represents a 16% savings on their current energy usage.The clients were happy with their work and commented that the reports were both professional tin display and readable.  |
| Demonstrate professionalism through ethical behavior, demonstrating sensitivity to individuals of other cultures, & conveying a global perspective on energy issues. | OTM: Arts & Humanities ElectiveOTM: Social & Behavioral Sciences ElectiveMET 2711 | 2015 | Challenger case and KC Skywalk case w/ written rubrics for ProfessionalismNSPE Ethics quiz for ethical responsibilitiesDiversity, Risky Tank case w/written rubric | Challenger Case:Average score: 91.1% (spring) 100% (fall)Students achieving 70% threshold: 90% (spring) 100% (fall)KC Skywalk Case:Average score: 81.3% (spring) 82% (fall)Students achieving 70% threshold: 90% (spring) 100% (fall)NSPE Ethics QuizAverage score: 82.6% (spring) 84% (fall)Students achieving 70% threshold: 91% (spring) 100% (fall)Risky Tank (Diversity: Average score: 72.4% (spring) 91.2% (fall)Students achieving 70% threshold: 64% (spring) 100% (fall) |
| Develop an energy management plan. | EGV 1251 - EGV 1301 - EGV 2780 - | 2017 |  |  |
| Assess a site for the use of renewable energy technologies & prepare a proposal for installation, taking into account applicable codes, & standards, utility rate structures, economics & safety. | EGV 1101 - EGV 1251 - EGV 1301 - EGV 2101 - EGV 2151 - EGV 2780 - | 2018 |  |  |
| Effectively communicate technical information. | COM 2211 - MET 1131 - ENG 1101 | 2015 | Oral communication: real-world ethics case presentation graded by rubricWritten communication, final case graded by rubric | Real-world ethics case oral presentation: Average score: 87.6% (spring) 95.3% (fall)Students achieving 70% threshold: 91% (spring) 100% (fall)Final ethics case: Average score: 84% (spring) 88.2% (fall)Students achieving 91% threshold: 100% (spring) 100% (fall) |

Update below.

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| **Are changes planned as a result of the assessment of program outcomes? If so, what are those changes?**  | Recent and planned changes to the Integrated Project Capstone Courses:Capstone changed in lecture lab split from 2/4 to 2/6* Increases student lab time while keeping credit hours the same
* Student have more time to work in integrated teams
* Deemed efficient and will continue

Capstone courses were inconsistent, of pour quality and unfocused* Boot camp session with Graphic Design chair incorporated into class
* Poster board quality seen as improving
* Will most likely make change permanent

Capstone Students working with outside organizations lack milestones* In spring 2016, students will work with outside organization mid-semester to develop milestones
* In spring 2017, students will work with outside organizations week one to develop an outline for the entire semester with discipline due dates and milestones
* Work with partner schools, such as University of Dayton to align course offering days/times

Capstone students confused by binder requirements, not keeping all research / work to date* Name changed from binders to journals
* More coaching from faculty on purpose of keeping research work
* Plan to keep name change

Capstone students taking too many weeks to develop plans* Include a design charrette week one with industry professionals to jumpstart their design work
* Initial findings show that work has progressed more quickly
* Plan on keeping exercise in course
 |
| **How will you determine whether those changes had an impact?**  | Feedback from advisory board during Capstone midterm presentationsFeedback from advisory board members at Capstone Expo and dinner at end of semesterResults of accreditation efforts in October 2016.Feedback from self-study report for accreditation.Feedback from internship partners. |