**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 - 0560 - Advanced Intelligence**

Year of Last Program Review: FY 2010-2011

Year of Next Program Review: FY 2016-2017

**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| **GOALS** | **Status** | **Progress or Rationale for No Longer Applicable** |
| Series of core courses were implemented in the winter of 2010.  | In progress [ ] Completed [ ] No longer applicable [x]  | All the programs were converted to semesters for Fall 2012. |
| With the completion of program realignment special attention was paid to make adjustments to course materials to better match the program outcomes.  | In progress [ ] Completed [x] No longer applicable [ ]  | This was accomplished when all the programs were converted to semesters       |

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| **RECOMMENDATIONS** | **Status** | **Progress or Rationale for No Longer Applicable** |
| No report or comments could be found for reporting.  | In progress [ ] Completed [x] No longer applicable [ ]  | This report completes the requirement. |

**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?**

[ ] **Yes** [x] **No If yes, please list the course:**

**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** [x] **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** [x] **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?**

**In the ATI program there are no classes where the students master Cultural Diversity & Global Citizenship. We will add MET 2711 to our ATI program to provide complete coverage of the topics. No assistance is required.**

**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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| **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) |
| Demonstrate knowledge of collection and analysis methodology for intelligence from various sources. | EGR 1121, EGR 1122, EGR 2270 | 2014-2015 | Homework assignments have the student through experiential learning show and demonstrate they understated the concepts and exams.      | The ATI courses EGR 1121 and EGR 1122 have a very high success rate of 91% for FY 12-13 and 100% for FY 13-14      |
| Demonstrate understanding of various aspects of phenomenology of radar and non-imaging radar systems. | EGR 1201, EGR 1202EGR 1211 | 2015-2016 | Quizzes, Tests, briefs on intelligence topics,  |       The ATI courses EGR 1201 and EGR 1202 have a very high success rate of 80% for FY 13-14 and 100% for FY 14-15  |
| Demonstrate understanding of geophysical, materials, nuclear radiation and radio frequency. | EGR 1212, GEO 1107 | 2015-2016 | Paper and presentation |       The ATI courses EGR 1201 and EGR 1202 have a very high success rate of 100% for FY 13-14 and 100% for FY 14-15 |
| Apply principles of physics, chemistry and mathematics to analyze technical data. | MET 1131, OPT 1198, EET 1158, MAT 1280, MAT 1290, PHY 1104, PHY 1131 | 2013-2014 | Labs, quizzes and exams       | Math and physics apply more to analyzing data than does chemistry in our programs. Math success rate in MAT 1280 and MAT1290 are running around 62% while PHY 1131 is running 71% and PHY 1104 is running 81%. A strong math base contributes to the success in the physics courses. EET 1158 success rate is 92%. Good strong math and physics skills contribute to the high success rate of this class. |
| Demonstrate and communicate knowledge of international relations. | ENG 1101, COM 2211, PLS 2220,HIS 2219, PHI 2207 | 2015-2016 |       |       |

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| **Are changes planned as a result of the assessment of program outcomes? If so, what are those changes?**  |  |
| **How will you determine whether those changes had an impact?**  |  |

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**Department:** **SME - 0561 - Electronic Tech**

Year of Last Program Review: FY 2010-2011

Year of Next Program Review: FY 2016-2017

**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** |
| Series of core courses were implemented in the winter of 2010.  | In progress [ ] Completed [ ] No longer applicable [x]  | All the programs were converted to semesters for Fall 2012. |
| With the completion of program realignment special attention was paid to make adjustments to course materials to better match the program outcomes.  | In progress [ ] Completed [x] No longer applicable [ ]  | This was accomplished when all the programs were converted to semesters       |
| Realigned the program to teach less history and more up to date technology by offering new courses as electives, EET 156-Alternate Energy Sources, EET 256-Fuel Cells, EET 157- RFID Technology. EET 281-PLCs was made a required course for the program due to the changing needs of the local industry and as recommended by the EET Advisory Committee. | In progress [ ] Completed [x] No longer applicable [ ]  | This was accomplished when all the programs were converted to semesters. All courses were reviewed. The material that was not relevant today was removed and new material introduced. Technical electives continue to change. RFID and NANO technology are offered as well as Advanced PLCs. We will continue to recruit new members to our advisory committee to review our curriculum and to plan for the future. As technology changes we need to change with it.  |

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** |
| No report or comments could be found for reporting.  | In progress [ ] Completed [x] No longer applicable [ ]  | This report completes the requirement. |

**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: Cultural Diversity and Ethics in a technical world are discussed and assessed in EET 1116. We will also be adding MET 2711 to the EET program to provide a more complete coverage of the topics.**

**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** [x] **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** [x] **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?**

**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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| **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) |
| Use various software packages to simulate, analyze and develop schematics and layouts of electronic circuits; technical communication skills for group work. | SCC 1101,EET1116, EET1150,EET1155, EET1131,ENG 1101,COM 2211 | 2012-2013 | Testing,Graded lab reports, Group projects | In EET 1116 MultiSim software is introduced to the students and used on multiple assignments that are graded. In EET 1150 and EET 1155. In EET 1150 student attainment = 67% for the students completing the projects.The analysis showed that a number of students did not complete the project. A continuous improvement plan will be developed to improve student success in this area.  |
| Demonstrate a commitment to address professional and ethical responsibilities, including a respect for diversity; impact of engineering technology solutions in a societal and global context. | EET 1116,EET 2278, PHI 2206 | 2015-2016 | For EET 1116 student complete a worksheet. For EET 2278 there is a written report. | New in Spring 16 EET 1116 students attained class average of 76%. New in Spring 16 for EET 2278, will assess in April |
| Apply principles of DC and AC circuits, analog and digital electronics, microcontroller fundamentals and circuit assembly for analysis, basic design, circuit simulation, problem solving, assembly, troubleshooting and repair of electrical and electronic systems. | SCC 1101, EET1150, EET1155, EET1131, EET2201, EET2261, EET 2270  | 2015-2016 | SME EET Proficiency Test in Capstone course | National average was 44% Sinclair students attained 45% class average |
| Apply principles of mathematics and physics to solve engineering technology problems. | EET1150, EET1155, EET2201, MAT 1280,MAT 1290,PHY 1131 | 2014-2015 | Class assignments graded test, laboratory assignments and homework.  | Assessment results: 80% master the various aspects of power of ten and engineering notation, 90% master Ohm’s law, 80% master series and parallel circuit analysis, 80% master Kirchoff’s voltage and current laws, 70% master basic complex circuit analysis. |
| Demonstrate programming skills using a graphical language, assembly language or ladder logic to create computer solutions of engineering problems. | EET 1164,EET2259, EET2281, EET2261 | 2014-2015 | For EET 2259 & EET 2261 Pre test and post test | EET 2259 Pre/PostLabVIEW (VIs) 85.71/85.71%Editing & debugging 14.29/100.00%Datatypes 28.57/100.00%Sub-VIs 28.57/57.14%Structures 0.00/100.00%Arrays & Clusters 42.86/85.71%Charts & Graphs 2.86/71.43%EET 2261 Pre/PostMicroprocessor arch. 7.69/75.00%Assembly language prog. 0.00/83.33%Bus structures and timing 7.69/50.00%Input/output interface 0.00/66.67%Interrupt-processed I/O 0.00/83.33%Microcontroller appl. 38.46/83.33%Microprocessor-based comm.7.69/66.67% |

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| **Are changes planned as a result of the assessment of program outcomes? If so, what are those changes?**  | Due to some low scores in the SME test we are changing the math pre-req for EET 1150 from MAT 1270 to MAT 1570. The test also identified areas of the curriculum that need more emphasis.MET 2711 will be added to the EET program. |
| **How will you determine whether those changes had an impact?**  | We will look at the test results in two years. |

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**Department:** **SME - 0572 - ElectroMechanical/Robotics**

Year of Last Program Review: FY 2010-2011

Year of Next Program Review: FY 2016-2017

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| Realigned the program to teach less history and more up to date technology by offering new courses as electives, EET 156-Alternate Energy Sources, EET 256-Fuel Cells, EET 157- RFID Technology. EET 281-PLCs was made a required course for the program due to the changing needs of the local industry and as recommended by the EET Advisory Committee. | In progress [x] Completed [ ] No longer applicable [ ]  | This was accomplished when all the programs were converted to semesters. All courses were reviewed. The material that was not relevant today was removed and new material introduced. Technical electives continue to change. RFID has been added to the ACT program. We will continue to recruit new members to our advisory committee to review our curriculum and to plan for the future. This is an ongoing process. As technology changes we need to change with it.  |

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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**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?**

[ ] **Yes** [x]

**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** [x] **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** [x] **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?**

**In the ACT program there are no classes where the students master Cultural Diversity & Global Citizenship. We will add MET 2711 to our ACT program to provide complete coverage of the topics. No assistance is required.**

**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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| **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) |
| Utilize computer software packages and write technical reports. | EGR 2278 EET 2282 EGR 1128EGR 1144  | 2012-2013 | Software- Labs RoboGuide In EGR 1128, RSLogix EET 2282Report- ERG 1144 and EGR 2278 | Software – Students attained 92% in the lab.Reports- Students attained 83% on technical reports. |
| Conduct simple mechanical repairs on typical electromechanical systems, from replacing wiring, fluid power valving, piping, electromechanical devices, and other items that were original to the equipment, to installing new system modifications, then returning the system to operational specifications. | SCC 1101, EGR 1128, EGR 1217, EET 1166, EGR 2231, EGR 2244 | 2016 - 2017 |       |       |
| Diagnose electronic system problems using appropriate test instrumentation, schematics, and technical reference manuals and determine if fault is electrical, electronic, software, or mechanical in nature. Recommend appropriate repair process and initiate repair. | EET 1120, EET 1198,EET 1139, EET 1166, EET 2281, EET 2282, EGR 2231 | 2014-2015 | EET 1120 Laboratory experiments diagnosing a pre-set but undisclosed fault in an assembly. Software aspects and repair are outside of course scope.EET 1166 Project is to build a functioning electrical panel. | EET 1120: 20% of 30 students were unable to complete satisfactorily. 50% showed adequate performance. 20% completed all successfully. Results are directly influenced by amount of related prior or current job or academic experience. Scaffolding can be used to improve success rate.EET 1166 80% of the time it does not work the first time. Students are given schematics, tools, and test equipment and spare part to make the repair.  |
| Repair electrical and electronic systems, from devices, subsystems, wiring/cabling to circuit board level, and return to correct operation after testing. | EET 1166, EGR 2231, EGR 2244 | 2012-2013 | Tests, labs, recommendations for department’s advisory board.  | Students needed better troubleshooting skills. The New software assesses the students speed and accuracy in troubleshooting virtual electric circuits, in all three courses “bugs” are placed in actual industrial panels, circuits, and equipment.  |
| Integrate electronic control equipment into typical small CIM environment so that overall system performs to specification. Equipment includes: discrete devices, PLCs, sensors, robot application programming, communication hardware/software, and computer related hardware. | EET 1198, MAT 1280, MAT 1290, EET 1166, EET 2281, EET 2282, EGR 2278 | 2016-2017 |       |       |
| Integrate into work cell the appropriate Fanuc robot for the application. Select necessary end-of-arm tooling, and develop/edit motion control program for the application, using available software features and/or options. | PHY 1131,EGR 1144, EGR 2252,EGR 2270, EGR 2278 | 2016-2017 |       |       |

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| **Are changes planned as a result of the assessment of program outcomes? If so, what are those changes?**  | MET2711 to be added to the program |
| **How will you determine whether those changes had an impact?**  |  |