**Sinclair Community College**

**Continuous Improvement Annual Update 2017-18**

**Please submit to your Division Assessment Coordinator / Learning Liaison for feedback no later than March 1, 2018**

**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 1, 2018**

**Department:** **SME - 0568 - Automotive Tech**

Year of Last Program Review: FY 2014-2015

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| **GOALS** | **Status** | **Progress or Rationale for No Longer Applicable** |
| The automotive department would like to continue to explore opportunities to expand or program offerings in:   1. Diesel Technology 2. Automotive Collision 3. Bachelor’s Degree in Automotive Technology 4. Autonomous Car training | In progress X  Completed  No longer applicable | 1. Training with RTA has not made any progress over the past year, and it does not appear there will be a partnership in the near future. We have put a diesel course through CMT and it is being offered as a special topics course until it is approved for fall 2017. Additionally, we have put in a diesel/ag operator certificate into CMT for fall 2017. There is still significant interest for medium/heavy duty diesel. The FST fire science lab would be an adequate lab to get this program started. A diesel stakeholders meeting was convened in fall of 2017. Ten - twelve local medium and heavy duty employers in the region attended, including Dayton RTA whom would like to see this program operate. The chair met with the SME dean and Provost in late 2017 to bring this imitative to their attention, in case there is movement on FST moving to Centerville LC. 2. The collision program has not made any progress. We had the ability to buy equipment from Stebbins at a significant discount but it was decided with no space to put the equipment it was not necessary. 3. The chair has met with the consultant for the bachelor’s degree and pending legislation approval AUT is a pick for the SME division. No more progress due to lack of progress within the state of Ohio. No update for AUT bachelor’s, but the chair still thinks this should be a priority. I would hate for Columbus State to pick this program up before us. 4. The autonomous car grant has been submitted to NSF as of 3/1/17 and we are answering follow-up questions that NSF has requested.   We have received $750,000 from NSF for a three year grant and will be delivering a summer institute in late July with GM, FCA, Honda, and Toyota. This is a first of its kind in the nation. |

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** |
| The Automotive Department has extremely impressive assessment practices in place - other departments on campus could benefit from learning about what they are doing. The department is strongly encouraged to share their approach to assessment with other departments through workshops and presentations at Fall Faculty Professional Development Day, through the CTL, and in other venues. | In progress X  Completed  No longer applicable | The department is trying to implement rubrics to assess general education outcomes in our capstone AUT 2250 course. Once we get our own department assessment aligned with the new LMS and feel it is worthy, we will be glad to share with other departments on campus.  Since, the last annual update, I have found the report function of the rubrics is not very user friendly, which is difficult to retrieve the data. However, we continue to use this tool to assess and evaluate general education outcomes. |
| There are a number of opportunities for new programs that this department is considering offering, and the Review Team strongly recommends that the department continue exploring these opportunities. The diesel program partnership with RTA is particularly promising, and the department should continue its current aggressive work laying the foundation for this partnership. Programs in collision repair and emergency vehicle repair are also possibilities, and the department should consider the potential demand, costs, and possible partnerships that would be associated with these new programs. | In progress X  Completed  No longer applicable | Please see the above information in section 1. |
| The department should document the timing and demand for housing needs, and use that documentation to begin developing arrangements with local apartments or motels to house the students who come to the program from distant parts of the country. The department made a compelling case that housing is needed - a schedule should be developed that displays a timeline over the course of an academic year for when housing would be needed and when there would be transitions of students rotating in and out. The department may be able to arrange ongoing housing arrangements for its students based on this schedule. While it may be difficult for students to find rental agreements for only 8 weeks on their own, if Sinclair has a block of apartments/rooms set aside for these students that based on a schedule of transitions between students, Sinclair may be able to provide students with improved housing opportunities. Any arrangements that the department is able to work out will need to be coordinated with Business Services. | In progress X  Completed  No longer applicable | The department chair and SME dean met with Wright State housing director Dan Bertos to discuss possibilities. He would allow SCC AUT students to stay on campus, however Wright State students are first priority. With increasing housing needs at Wright State, SCC AUT students were unable to take advantage of this in 2015 fall or 2016 spring. Dan’s recommendation was to have the Sinclair Foundation work with a local agency to help get Sinclair preferred housing in downtown Dayton area. The chair feels more support from Sinclair will be needed for this recommendation to be successful.  In addition to last year’s comments, I would add that we now have three students staying at the extended stay Hawthorne Suites. These seem to be a decent option for students that need housing, but not the best option.  Same for 2016-2017. Dan B at WSU and UD housing have both declined having AUT students staying on their campus during the school year.  No update, except we are still currently using Hawthorne Suites north. University of Dayton and WSU do not want to help. I spoke with Scott Markland and sub 503c could operate locally to provide assistance if the Board of Trustees and college was seriously interested. |
| While this was not discussed in the meeting with the department, the Review Team noted that a recommendation from the previous Program Review directed the department to increase the diversity of its faculty. This remains a challenge for the department, one that should continue to be addressed. The department may want to consider whether the Grow Our Own program provides an opportunity to increase the diversity of faculty in the department. This is an issue that will need to be addressed in coming years and cannot be ignored. | In progress X  Completed  No longer applicable | Currently we have hired a female student worker, who is performing wonderfully. As mentioned in the review, the department relies on qualified candidates applying for these positions. Often the requirements for the lab technician and full time faculty rolls are so stringent that we only receive a few applicants. Any ideas from the college to increase applicants is appreciated.  Since the last update, we replaced a lab technician position. Unfortunately, no minorities applied for this position in 2017.  2017-2018 – We hired a great young man, Mauro Herrea a young Hispanic man whom is enrolled in our program. I am not sure what will come of this, but he has been a great individual to employ and staff. |
| The self-study noted the challenges that non-attendance and absenteeism present to student success, and the department should be commended for the steps it has already taken to address this. Additional steps may become possible with the transition to the new Learning Management System in Summer 2015, and as the Lift! Initiative begins implementation. While the Early Alert system is not currently available for the department, these other tools will allow for the early identification of students who are not attending, and will allow for targeted interventions with these students. Perhaps faculty in the department could serve in a "success coach" role, contacting students with attendance issues early in the term. The department may want to consider a collaborative, team-based approach where faculty in the department work together to identify and contact students whose attendance is problematic. Perhaps time could be set aside in some department meetings to discuss individual students and what has been done to reach out to them, helping to establish this as a formalized process in the department. | In progress  Completed  No longer applicable X | It is pertinent that students take ownership in the success of their own education. The department continually stresses the importance of attendance at the beginning of every course and has a stated attendance policy for the department Student Guide. Students are required to sign and date this document and turn it into their instructor that they understand the policies and the expectations of our program.  Since the last update I have tried an idea from Assistant Professor Troy Singleton to have review sessions 5 minutes before the class start time for a quiz that will follow at the beginning of the course. This has been very successful in my summer and fall courses. I will be highly recommending other faculty to try this in upcoming courses of their own.  Same as above for 2017.  Same for 2018 |
| The department noted the relatively low success rates of the Electrical course, and described some excellent strategies that have already been developed to address this. The department is encouraged to assess the impact of the videos that are being developed for the course, and is likewise encouraged to consider whether a prerequisite might be appropriate for this course. | In progress X  Completed  No longer applicable | The department is currently working on seeing what impact the videos had on this course. Hopefully we can compare 14-15 to 15-16 data.  2017 - The course success rate does not show any impact based on the videos.  2018 - The course success rate does not show any impact based on the videos. |
| The department is encouraged to consider and explore online and hybrid offerings. While there are clearly some courses in Automotive that would be inappropriate as online offerings, there may be other courses where it may be a possibility. Hybrid courses may allow the department to shift some content to online, while still giving students the hands-on experience that the discipline relies on heavily. Hybrid courses may also help reduce problems with attendance - students may be more willing to attend class when there are fewer classes to attend and when they are able to receive some of the content online an a more flexible basis. | In progress X  Completed  No longer applicable | The department is looking at offering AUT 1111 (Management) in a hybrid or on-line format in the future. Furthermore, it is likely some of the AUT courses for our proposed bachelor’s degree will be a hybrid course or an on-line format.  No change for 2017. However, the department uses the LMS for gradebook and attendance tracking department wide.  No change for 2018. Other departments and classes with large enrollments typically get priority and rightfully so. |
| Finally, Sinclair has recently begun offering 6000 level course non-credit offerings for students who are not seeking a degree, but still want to avail themselves of educational experiences. Could non-credit automotive courses be developed for individuals who are seeking basic non-professional level skills? How cost-prohibitive would this be? | In progress X  Completed  No longer applicable | The department offers training through advisory partners currently in the evening. There is the possibility we could look at offering these classes as 6000.  The department offered an Advanced Steering and Suspension course through workforce that was relatively low attended in 2016. I am not sure there is enough interest.  2017 – The department has changed AUT 1100 Basic Automotive Systems to Consumer Automotive Systems to draw more enrollment.  2018- There has not been enough enrollment to run AUT 1100. |

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

For the FY 2016-17 Annual Update, departments are asked to provide assessment results for **Information Literacy**.

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| **General Education Outcomes** | Year assessed or to be assessed. | Course identified by the department where this outcome could be assessed | Assessment Methods  Used | What were the assessment results?  (Please provide brief summary data) |
| |  |  |  |  | | --- | --- | --- | --- | | **THIS YEAR’S ASSESSMENT RESULTS** |  |  |  | | | | | |
| Computer Literacy | **2017-2018** | AUT 2250 | Linked outcomes to eLearn rubric. | |  |  | | --- | --- | | Students were evaluated as Shop Foreman and Service Manager where they typically have the most use of the computer in AUT 2250.  Able to appropriately use computer and software system (computer literacy) | | | Excellent | 75 %   6 assessments scored Excellent on Able to appropriately use computer and software system (computer literacy)https://elearn.sinclair.edu/d2l/img/0/Framework.GraphBar.background.gif?v=10.6.12.5941-210 | | Above expectations | 13 %   1 assessments scored Above expectations on Able to appropriately use computer and software system (computer literacy)https://elearn.sinclair.edu/d2l/img/0/Framework.GraphBar.background.gif?v=10.6.12.5941-210 | | Meets expectations | 13 %   1 assessments scored Meets expectations on Able to appropriately use computer and software system (computer literacy)https://elearn.sinclair.edu/d2l/img/0/Framework.GraphBar.background.gif?v=10.6.12.5941-210 | | Needs improvement | 0 %   0 assessments scored Needs improvement on Able to appropriately use computer and software system (computer literacy)https://elearn.sinclair.edu/d2l/img/0/Framework.GraphBar.background.gif?v=10.6.12.5941-210 | | Unsatisfactory | 0 %   0 assessments scored Unsatisfactory on Able to appropriately use computer and software system (computer literacy)https://elearn.sinclair.edu/d2l/img/0/Framework.GraphBar.background.gif?v=10.6.12.5941-210 | | Did not meet criteria | 0 %   0 assessments scored Did not meet criteria on Able to appropriately use computer and software system (computer literacy) | |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | **LAST YEAR’S ASSESSMENT RESULTS** |  |  |  |  | | | | | |
| Information Literacy | **2016-2017** | AUT 2250 | Linked information literacy outcomes to eLearn rubric for AUT 2250 course. | Students were evaluated in two areas. RO Information and Invoice information.  RO Information  Excellent 29 %  Above expectations 43 %  Meets expectations 29 %  Invoice Information  Excellent 43 %  Above expectations 14 %  Meets expectations 43 % |

**AVAILABLE GENERAL EDUCATION RUBRIC DATA FOR STUDENTS IN YOUR DEPARTMENT’S PROGRAMS:**

The Program Outcomes for the degrees are listed below. Responses from previous years are provided 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**.

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| **Program Outcomes** | To which course(s) is this program outcome related? | Year assessed or to be assessed. | Assessment Methods  Used | What were the assessment results?  (Please provide brief summary data) |
| Apply effective customer communication skills in an automotive service environment. Apply good management skills in operating an automotive service business. Develop and analyze an automotive business facility layout. Demonstrate business computer skills. | AUT 1111  COM 2206  ENG 1101  AUT 1170  AUT 1171  AUT 1172  AUT 1173 | Assess in FY 12-13 | Linked outcomes to eLearn rubric. To be implemented March 1- May 1 of 2016. | |  |  |  | | --- | --- | --- | | 2017 Service Manager Rubric - Communicates through oral communication effectively with customers | |  | | Excellent | 75 %   6 assessments scored Excellent on Communicates through oral communication effiectively with customershttps://elearn.sinclair.edu/d2l/img/0/Framework.GraphBar.background.gif?v=10.6.12.5941-210 |  | | Above expectations | 25 %   2 assessments scored Above expectations on Communicates through oral communication effiectively with customershttps://elearn.sinclair.edu/d2l/img/0/Framework.GraphBar.background.gif?v=10.6.12.5941-210 |  | | Meets expectations | 0 %   0 assessments scored Meets expectations on Communicates through oral communication effiectively with customershttps://elearn.sinclair.edu/d2l/img/0/Framework.GraphBar.background.gif?v=10.6.12.5941-210 |  | | Needs improvement | 0 %   0 assessments scored Needs improvement on Communicates through oral communication effiectively with customershttps://elearn.sinclair.edu/d2l/img/0/Framework.GraphBar.background.gif?v=10.6.12.5941-210 |  | | Unsatisfactory | 0 %   0 assessments scored Unsatisfactory on Communicates through oral communication effiectively with customershttps://elearn.sinclair.edu/d2l/img/0/Framework.GraphBar.background.gif?v=10.6.12.5941-210 |  | | Did not meet criteria | 0 %   0 assessments scored Did not meet criteria on Communicates through oral communication effiectively with customers |  |   2013 Averages - 84%  2012 Averages - 85%  2011 Averages - 85.%  2010 Averages - 84% |
| Demonstrate knowledge of social and human skill sets in supporting community, work and/or the college experience. | OTM (Art/Hum)  AUT 1170  AUT 1171  AUT 1172  AUT 1173  SOC 1101  AUT 2250 | Assess in FY 13-14 | Linked outcomes to eLearn rubric. To be implemented March 1- May 1 of 2016. | **Students scored on average 98%. (See General Education Outcomes tab for data.)** |
| Diagnose and repair automatic transmission/transaxle systems, torque converters and 4 wheel drive/all wheel drive systems. | AUT 2241 | Assessed in FY 11-12 | ASE Student certification Autos exam | 2017 Average cohort- 78%  2016 Averages – 68%  2015 Averages – 63%  2014 Averages – 70%  2013 Averages - 65%  2012 Averages - 65%  2011 Averages - 66%  2010 Averages - 59%  Student scores have been gradually increasing. We believe the scores will level off near the 75% range. |
| Diagnose and repair heating and air conditioning systems including automatic climate-control systems. | AUT 1146 | Assessed in FY 11-12 | ASE Student certification HVAC exam | 2017 Average cohort- 73%  2016 Averages – 66%  2015 Averages – 67%  2014 Averages – 73%  2013 Averages - 72%  2012 Averages - 71%  2011 Averages - 72%  2010 Averages - 66%  Student scores have been gradually increasing. We believe the scores will level off near the 80% range. |
| Diagnose and repair manual transmission systems, drivelines and differentials. | AUT 1142 | Assess in FY 12-13 | ASE Student certification Drivetrains exam | 2017 Average cohort- 74%  2016 Averages – 63%  2015 Averages – 61%  2014 Averages – 82%  2013 Averages - 63%  2012 Averages - 66%  2011 Averages - 64%  2010 Averages - 55%  Student scores have been gradually increasing. We believe the scores will level off near the 85% range. |
| Diagnose automotive electrical and accessory system problems. Utilize DVOM meters, scopes and other electrical testing equipment to troubleshoot battery, charging and hybrid propulsion systems. | AUT 1114  AUT 2214 | Assessed in FY 10-11 | ASE Student certification Electrical exam | 2017 Average cohort- 77%  2016 Averages – 68%  2015 Averages – 77%  2014 Averages – 76%  2013 Averages - 75%  2012 Averages - 73%  2011 Averages - 70%  2010 Averages - 70%  Student scores have been gradually increasing. We believe the scores will level off near the 80% range. |
| Diagnose fuel injection, delivery and emission control systems. | AUT 1115  AUT 2215 | Assessed in FY 10-11 | ASE Student certification Engine Performance exam | 2017 Average cohort- 73%  2016 Averages – 59%  2015 Averages – 63%  2014 Averages – 75%  2013 Averages - 72%  2012 Averages - 73%  2011 Averages - 69%  2010 Averages - 69%  Student scores have been gradually increasing. We believe the scores will level off near the 80% range. |
| Diagnose/repair brake, anti-lock and power booster systems. Diagnose/repair suspension and steering components. Perform vehicle alignments. | AUT 1165  AUT 1116 | Assessed in FY 11-12 | ASE Student certification Brakes exam | 2017 Average cohort- 84%  2016 Averages – 65%  2015 Averages – 72%  2014 Averages – 78%  2013 Averages - 73%  2012 Averages - 72%  2011 Averages - 71%  2010 Averages - 67%  Student scores have been gradually increasing. We believe the scores will level off near the 80% range. |
| Perform entry-level engine overhaul, precision measurements; perform machining and engine mechanical service. | AUT 1102  AUT 1108  CAM 1109 | Assessed in FY 12-13 | ASE Student certification Engines exam | 2017 Average cohort- 86%  2016 Averages – 71%  2015 Averages – 73%  2014 Averages – 80%  2013 Averages - 71%  2012 Averages - 74%  2011 Averages - 77%  2010 Averages - 71%  Student scores have been gradually increasing. We believe the scores will level off near the 85% range. We plan on incorporating data from our dealer interns to see what impact it has on the data. The drop in 2015 seems to be caused by one student’s abnormally low results. Student grades are not impacted based on their passing scores, so the student may not have taken them seriously. Currently, we have a faculty looking at the correlation from test score percentage to course grade.  2017 – The 2017 scores show a significant increase. This is because this cohort group worked at a service facility for the 2 years as an intern while earning the AAS compared to the previously groups whom did not intern. This difference illustrates that on the job training helps students scores. |
| Utilize scan tools, scopes, DVOM meters and other test equipment in troubleshooting engine and Diagnose and repair automatic transmission/transaxle systems, torque converters and 4-wheel drive/all-wheel drive systems. |  |  |  |  |

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| **Are changes planned as a result of the assessment of program outcomes? If so, what are those changes?** | In spring of 2017 our cohort students that intern at local repair facilities throughout their program participated in the ASE student certifications. The result was equal or higher scores in every ASE area. The only significant difference between 2010-2017 data and our 2017 cohort data is the 2017 cohort data includes the internship experience where students are exposed to live work.  Currently, there is not a great option to incorporate live work in our program other than the 8 week capstone AUT 2250 Service Operations course where this group of students services faculty and staff vehicles of college employees. (See the optional chart below) |
| **How will you determine whether those changes had an impact?** | TBD. |

**OPTIONAL:**

Please use the space below to keep track of any annual data that your department wishes to maintain. This section is completely optional and will not be reviewed by the Division Assessment Coordinators.

NATEF End of Program Testing Average Percentage

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| AUT 2250 Spring course | Steer/Suspension | Brakes | Electrical | Engine Performance | Engines | Auto | Drivetrains | HVAC |
| 2010 | 69 | 67 | 70 | 69 | 71 | 59 | 55 | 66 |
| 2011 | 65 | 71 | 70 | 69 | 71 | 66 | 64 | 72 |
| 2012 | 70 | 72 | 73 | 73 | 74 | 65 | 66 | 71 |
| 2013 | 65 | 73 | 75 | 72 | 71 | 65 | 63 | 72 |
| 2014 | 65 | 78 | 76 | 75 | 80 | 70 | 82 | 73 |
| 2015 | 64 | 72 | 77 | 63 | 73 | 63 | 61 | 67 |
| 2016 | 57 | 65 | 68 | 59 | 71 | 68 | 63 | 66 |
| 2017 | 70 | 76 | 74 | 73 | 75 | 71 | 70 | 70 |
| 2017 comp cohort | 74 | 84 | 77 | 73 | 86 | 78 | 74 | 73 |