**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 - 0574 - Aviation Technology**

Year of Last Program Review: FY 2010-2011

Year of Next Program Review: FY 2017-2018

**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| **GOALS** | **Status** | **Progress or Rationale for No Longer Applicable** |
| Expand pilot training to better meet industry demand for new pilots | In progress  Completed  No longer applicable | We have submitted the application package to the FAA for approval of our Professional Pilot & Airway Science AAS degree (APPAO.S.AAS) to qualify for the flying hour reduction associated with the new Restricted Airline Transport Pilot Certificate. We have added helicopter training as a separate track in this degree. We are in the process of becoming an affiliate partner in PSA airlines aviation cadet program. Enrollment in our professional pilot program continues to grow. |
| Find the right formula for satisfying the extremely high demand for Flight Attendants | In progress  Completed  No longer applicable | The major difficulty we face is our certificate is not a prerequisite for being hired by an airline. The demand for flight attendants is so high that airlines are hiring people off the street. Despite this we are still enrolling enough students each semester to run classes and should have 12 graduates in 2015-16. Our part-time instructor is an active flight attendant with a major airline, and is actively working on recruiting as well. |
| Publicize the Flight Dispatcher program to attract more candidates to this "hidden profession" | In progress  Completed  No longer applicable | This program is still facing difficulties with low enrollment and few classes ran in 2013-14. Through active recruiting we successfully ran all classes in 2015-16 and will have 7 graduates. We have hired a new adjunct faculty member with strong ties to the industry who is helping us recruit. We are actively promoting the program to existing AVT students as an add-on certificate to our degree programs. We are also promoting it at career fairs, college days and other outreach events. |
| Relocate the Aircraft Maintenance program into the Wright Airplane Factories to double or triple its enrollment. | In progress  Completed  No longer applicable | We have completed the move of the Maintenance School into Building 13 and obtained FAA approval to conduct classes there. Enrollment has increased by 20%. |
| Closely track industry developments and quickly change to provide appropriate training. Recent examples are: composite materials for aircraft structures; "glass" cockpit instrumentation vs. old electromechanical gauges; changes in FAA licensure to streamline pilot training; changes in air traffic control from ground-based analog radar to space-based digital satellite systems such as GPS | In progress  Completed  No longer applicable | The FAA's reduction in flying hours required for the restricted Airline Transport Pilot Certificate graduates of approved degree programs has resulted in a greater value for these degrees.. Getting our Professional Pilot & Airway Science AAS degree (APPAO.S.AAS) degree program approved by the FAA is a high priority. We have also initiated a comprehensive effort to develop articulation agreements with the aviation bachelor’s degree programs at Ohio universities.  The FAA is still considering dropping the 1,900+ hour training requirement for aviation maintenance students to 1,500 hours or possibly moving to a competency base model. When and if the new rules are implemented, we will revise our Aviation Maintenance program to reduce the number of credit hours and the time required for completion.  The rapid changes in UAS require us to constantly evaluate both government and industry requirements to ensure our programs remain up to date and relevant. The final FAA rules on the commercial operation of small unmanned vehicles are due to be published in late 2016 and will undoubtedly require program revisions. |

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** |
| Document program learning outcomes for each program within the department and evidence of student learning within each program. | In progress  Completed  No longer applicable | Assessment of student learning is achieved with a variety of written tests, projects and practical evaluations. The measured overall success rates for students dramatically increased in 2014-15 and stands at 86.7%. This is well above both the collegewide and SME rates. Our first time pass rates for all FAA practical tests was 91%. The number of certificates and degrees awarded increased from 35 to 58. All of these measures continue to indicate successful student learning in our programs. |
| Incorporate formative assessment throughout the program to provide more information about students’ progressive mastery of key concepts and skills. Identify reasons for attrition and develop strategies to improve retention. | In progress  Completed  No longer applicable | Students' progressive mastery of key concepts and skills is tracked in every course through written, oral, and practical examinations (especially those courses prescribed by the FAA), written assignments, and oral presentations. We continue to suffer attrition in our Professional Pilot program primarily due to the high expense. However, we have also noted that the open nature of our flying scheduling has contributed to some student’s lack of progress. We have instituted a more structured scheduling process to promote student completion. |
| Evaluate the scope of programs the department is offering in light of available resources. Although the quantity and quality of work accomplished by this relatively small department is quite impressive, sustaining the growing workload evident in recent years may not be feasible. | In progress  Completed  No longer applicable | This is still an area of significant concern. The loss of one full-time faculty in 2014 to become a contract adjunct faculty has reduced the department’s capability to expand on existing programs and to react to FAA, VA and industry driven changes. Total AVT FTE grew by 15% in the past year with significant growth in all our major areas of study and the number of sections offered. The current full-time/part-time faculty ratio is 14.7%. The department will be unable to sustain its growth without additional full time faculty members. |
| Evaluate the viability of the flight attendant program in its present form. Explore whether a continuing education versus credit model is more appropriate and whether a blend of online and face-to-face instruction may better meet the needs of prospective students and employers. | In progress  Completed  No longer applicable | We are re-evaluating the feasibility of online study for some of the coursework to attempt to revitalize this program. Continuing the program as credit based is our goal as our students seem to appreciate the fact they can earn college credit. To date we have met the needs of prospective employers with very positive informal feedback on the quality of our graduates. |
| Track graduates and their success in employment and further study. | In progress  Completed  No longer applicable | Tracking the success of our graduates is an ongoing challenge. We attempted to promote Sinclair’s graduate survey this year by reaching out to AVT graduates through emails and phone calls and had very little success. Our tracking process relies on word of mouth. We plan on developing an AVT tracking database of our graduates and will attempt to maintain communication with our alumni through emails and social media. |

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

**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?**

**Currently there are no courses in any AVT program curriculum which meets this requirement. As is the case with many of Sinclair’s other programs which are narrowly focused on technical areas of study, adding this general education outcome will require curriculum revision. We will require assistance I identifying an appropriate course to achieve this competency.**

**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 Methods  Used | What were the assessment results?  (Please provide brief summary data) |
| A basic knowledge and operation of aircraft electrical power production and distribution systems; basic knowledge of wiring diagrams, load analysis/math, repair and troubleshooting. | AVT 1113,  AVT 2122, AVT 2132, AVT 1133, AVT 1131, AVT 1106,  AVT 1218, SCC 1101, MAT 1110, PHY 1106, PHY 1107 | FY2014-15 | written exams, oral exams, practical exams, lab worksheets | In FY2013-14 for AVT 1113, 2132 and 1106 the average course success rate was 79.5%.  In FY2014-15 for AVT 1113, 1131, 1133, 1218 and 2132 the average course success rate was 94.6%. |
| An understanding of federal and international regulations governing aircraft maintenance and documentation requirements as they relate to each area of expertise, weight and balance requirements, and ground operations and servicing of the aircraft. | AVT 1116, AVT 1118,  AVT 1107,  AVT 1133,  AVT 2132,  AVT 2143, AVT 2237,  ENG 1101, MET 1131, COM 2211, Arts/Hum Elective | FY2014-15 | written exams, oral exams, practical exams, lab worksheets | In FY2013-14 for AVT 1116, 1107, 2132, and 2237 the average course success rate was 89.2%.  In FY2014-15 for AVT 1116, 1118, 1107, 1133, 2132, 2143 and 2237 the average course success rate 93.6%. |
| A basic knowledge of the composition of materials, the forming of metallic and non-metallic structures used in aircraft construction, repair, materials and processes, corrosion control, inspection methods of those materials and proper rigging. | AVT 1135,  AVT 1213,  AVT 1136,  AVT 2236,  AVT 2237, | FY2014-15 | written exams, oral exams, practical exams, lab worksheets | In FY2013-14 for AVT 1213, 1136, and 2237the average course success rate was 89.9%.  In FY2014-15 for AVT 1213, 2236, and 2237 the average course success rate was 93.1%. |
| The ability to operate, inspect, repair and service critical safety and utility systems of the aircraft such as fuel and atmospheric systems. | AVT 1106,  AVT 1107  AVT 1218,  AVT 1214 | FY2014-15 | written exams, oral exams, practical exams, lab worksheets | In FY2013-14 for AVT 1106, 1107, and 1214 average course success rate was 96.7%.  In FY2014-15 for AVT 1107 and 1214 average course success rate was 98.3%. |
| The required operation, inspection, troubleshooting, repair, and updating of instruments, communications, navigation, and automatic dependent broadcast systems and in-flight passenger systems | AVT 1133,  AVT 2132,  AVT 1214,  AVT 1218 | FY2014-15 | written exams, oral exams, practical exams, lab worksheets | In FY2013-14 for AVT 2132 and 1214 the average course success rate was 88.4%.  In FY2014-15 for AVT 1133, 2132 and 1218 the average course success rate was 92.3%. |
| A basic knowledge of the materials, parts and processes of the reciprocating engine in developing power, components of the reciprocating engines and their preventive maintenance, maintenance and airworthiness inspections. | AVT 1131,  AVT 1135,  AVT 1118,  AVT 1128,  AVT 2138,  AVT 2122, AVT 2126, AVT 2237 | FY2014-15 | written exams, oral exams, practical exams, lab worksheets | In FY2013-14 for AVT 1128, 2126, 2138 and 2237 the average course success rate was 83.9%.  In FY2014-15 for AVT 1128, 2126, 2138 and 2237 the average course success rate was 93.02%. |
| A basic knowledge of the composition of materials, forming of metallic and non-metallic structures used in aircraft construction, repair, materials and processes, corrosion control, inspection methods of those materials and proper rigging. | AVT 2126,  AVT 1128,  AVT 1213,  AVT 2138, AVT 1135 | FY2014-15 | written exams, oral exams, practical exams, lab worksheets | In FY2013-14 for AVT 1128, 1213, and 2126 the average course success rate was 81.5%.  In FY2014-15 for AVT 1128, 1213, and 2138 the average course success rate was 92.7%. |
| The inspection and overhaul of propeller and component systems for reciprocating engines. | AVT 2129,  AVT 2122,  AVT 2237 | FY2014-15 | written exams, oral exams, practical exams, lab worksheets | In FY2013-14 for AVT 2129, 2122 and 2237 the average course success rate was 82.8%.  In FY2014-15 for AVT 2129 and 2237 the average course success rate was 93.5%. |
| The operation, inspection, troubleshooting, repair, safety systems, electrical systems, installation of turbine engines, components and documentation. | AVT 2219,  AVT 2139,  AVT 2122 | FY2014-15 | written exams, oral exams, practical exams, lab worksheets | In FY2013-14 for AVT 2122 and 2139 the average course success rate was 85.3%.  In FY2014-15 for AVT 2219 and 2139 the average course success rate was 93.5%. |
| The required operation before overhaul, teardown, buildup, overhaul, inspection, installation of turbine engine or components and documentation. | AVT 2219,  AVT 2139,  AVT 2122,  AVT 2143 | FY2014-15 | written exams, oral exams, practical exams, lab worksheets | In FY2013-14 for AVT 2122, 2143 and 2139 Average course success rate was 87.8%.  In FY2014-15 for AVT 2219, 2143 and 2139 Average course success rate was 95.9%. |
| Apply aviation theory, business and leadership principles to serve in the capacity of an aviation business professional in airline and corporate operations, engineering and manufacturing. | AVT 1119 AVT 1140 AVT 1141  AVT 2242  AVT Lower and Upper Level Electives  ENG 1101  MAT 1470  MAT 1570  PHY 1411  MET 1201  ECO 2160 | FY2014-15 | written exams, writing assignments, oral presentations, case studies | In FY2013-14 for AVT 1119, 1140, 1141, and 2242 the average course success rate was79.5%.  In FY2014-15 for AVT 1119, 1140, 1141, and 2242 the average course success rate was 78.7%. (This decline in success was due solely to a poor success rate in AVT 2242 which was a small, independent study section) |
| Exemplify a high standard of ethical and professional behavior. | AVT 1105  AVT 1140  AVT 2125  AVT 1141  AVT 1245  AVT 2700  AVT Lower and Upper Level Electives  SCC 1101  COM 2206 |  | written exams, writing assignments, oral presentations, case studies | In FY2013-14 for AVT 1105, 1140, 1141, 1245, and 2700 the average course success rate was 87.9%.  In FY2014-15 for AVT 1105, 1140, 1141, 1245, and 2700 the average course success rate was 88.3%. |
| Demonstrate a thorough knowledge of Federal Aviation Regulations and their application in aviation business operations. | AVT 1140  AVT 2146  AVT 2240  AVT 2242  AVT Lower and Upper Level Electives | FY2014-15 | written exams, writing assignments, oral presentations, case studies | In FY2013-14 for AVT 1140, 2146, 2240, and 2242 the average course success rate 72.2%.  In FY2014-15 for AVT 1140, 2146, 2240, and 2242 the average course success rate 82.1%. |
| Comprehend and apply aviation theory, business and leadership principles to serve in the capacity of a professional pilot in airline and corporate operations. | AVT 1110 AVT 1124 AVT 1170  AVT 1224  AVT 2250  AVT 2263  AVT 2266  AVT 2258  AVT 2269  AVT 1119  AVT 1254  AVT 2211  AVT 2247  ENG 1101  MAT 1470  MAT 1570  PHY 1141  MET 1201 | FY2014-15 | written exams, writing assignments, oral presentations, oral exams, practical exams | In FY2013-14 for AVT 1110, 1170, 1224, 2250, 2263, 2266, 2269, 1119, 1254, 2211, and 2247 the average course success rate was 83.9%.  In FY2014-15 for AVT 1110, 1170, 1224, 2250, 2258, 2266, 2269, 1119, 1254 and 2211 the average course success rate was 90.5%. |
| Demonstrate a thorough knowledge of aviation standards and their application acting as a professional pilot in aviation business operations. | AVT 1241  AVT 2240  AVT 2242  AVT 2146  ENG 1101  MET 1201 |  | written exams, writing assignments, oral presentations, case studies | In FY2013-14 for AVT 1241, 2240, 2242, and 2146 the average course success rate was 69.5%.  In FY2014-15 for AVT 1241, 2240, 2242, and 2146 the average course success rate was 71.0%. |
| **Are changes planned as a result of the assessment of program outcomes? If so, what are those changes?** | We are not planning to make any additional changes. We will continue to monitor success rates. | | | |
| **How will you determine whether those changes had an impact?** |  | | | |