**Sinclair Community College**

**Continuous Improvement Annual Update 2016-17**

**Please submit to your Division Assessment Coordinator / Learning Liaison for feedback no later than March 1, 2017**

**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, 2017**

**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| **GOALS** | **Status** | **Progress or Rationale for No Longer Applicable** |
| Expand pilot training to better meet industry demand for new pilots | In progress  Completed  No longer applicable | Enrollment in our professional pilot program continues to grow and we are operating very near to the maximum capacity of the program based on aircraft availability. The new helicopter track in APPAO.A.AAS has been very popular. We are very close to finalizing the agreement with PSA Airlines to be an affiliate partner in their Aviation Cadet program. |
| Find the right formula for satisfying the extremely high demand for Flight Attendants | In progress  Completed  No longer applicable | The major difficulty we face is our certificate is not a prerequisite for being hired by an airline.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. Although we ran classes each term we only had 3 graduates in 2015-16. Determining the reason for the low enrollment/completion numbers is a priority. Our part-time instructor is a 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the Flight Dispatcher program to attract more candidates to this "hidden profession" | In progress  Completed  No longer applicable | This program is still facing difficulties with low enrollment despite an extremely robust job market. Through active recruiting we successfully ran all classes in 2015-16 and had 6 graduates. We have had a lot of faculty turnover but successfully hired another new adjunct faculty member to teach the FAA test preparation courses. We are actively promoting the program to existing AVT students as an add-on certificate to our degree programs. |
| 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 | We have been unable to obtain approval from the FAA for our professional pilot degree (APPAO.S.AAS) graduates to receive the reduction in flying hours required for the restricted Airline Transport Pilot Certificate. This based on the way the rule was written, not any deficiency in our program. This makes our program less competitive with approved schools. We have also initiated a comprehensive effort to develop articulation agreements with the aviation bachelor’s degree programs at Ohio universities and have made some progress.  The FAA will release a new rule in 2017 dropping the 1,900+ hour training requirement for aviation maintenance students and possibly moving to a competency base model. When the new rule is implemented, we will be required to revise our entire Aviation Maintenance curriculum to be in compliance.  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 were released 2016 and required 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 rose again in 2015-16 and stands at 87.5. Our first time pass rates for all FAA practical tests rose to 92.6%. In spite of large increases in the number of completing students (certificates and degrees awarded increased from 58 to 95), success rates continue to be above both division and college averages. |
| 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 and the challenging nature of the program. 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 an area of major concern. 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 department has only two TT faculty and one ACF. The current full-time/part-time faculty ratio is 18%. This lack of full time faculty has reduced the department’s capability to expand on existing programs and to react to FAA, VA and industry driven changes. 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. We plan on requesting a report from RAR on student transfers. |

**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) |
| Information Literacy | **2016-2017** | AVT 1105 |  | Data was not collected during this past year. It will be collected in Fall 17. |
| **NEXT YEAR:** | | | | |
| Computer Literacy | **2017-2018** |  |  |  |

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**.

**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) |
| 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 | FY2015-16 | written exams, writing assignments, oral presentations, case studies | In FY2014-15 for AVT 1119, 1140, 1141, and 2242 the average course success rate was 78.7%.  In FY2015-16 for AVT 1119, 1140, 1141, and 2242 the average course success rate was 80.37%. |
| Apply knowledge of cultural diversity to real world context by acknowledging, understanding, and engaging constructively within the contemporary world. |  |  |  |  |
| 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 FY2014-15 for AVT 1110, 1170, 1224, 2250, 2258, 2266, 2269, 1119, 1254 and 2211 the average course success rate was 90.5%.  In FY2015-16 for AVT 1110, 1170, 1224, 2250, 2258, 2266, 2269, 1119, 1254 and 2211 the average course success rate was 91.2%. |
| Demonstrate 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, | FY2015-16 | written exams, oral exams, practical exams, lab worksheets | In FY2014-15 for AVT 1213, 2236, and 2237 the average course success rate was 93.1%.  In FY2015-16 for AVT 1135, 1136, 2236and 2237 the average course success rate was 90.7%. |
| 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 | FY2017-18 | written exams, writing assignments, oral presentations, case studies | In FY2014-15 for AVT 1241, 2240, 2242, and 2146 the average course success rate was 71.0%.  In FY2015-16 for AVT 1241, 2240, 2242, and 2146 the average course success rate was 85.22%. |
| 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 FY2014-15 for AVT 1140, 2146, 2240, and 2242 the average course success rate 82.1%.  In FY2015-16 for AVT 1140, 2146, 2240, and 2242 the average course success rate 91%. |
| Demonstrate and execute tasks necessary to complete Unmanned Aerial Systems operations. This includes decision-making, data collections, mission planning, pre-flight and post flight briefing, navigating, crew resource management, command and control, and recovery of the Unmanned Aerial System. | AVT 2150  AVT 2151  AVT 2280 | FY2015-16 | written exams, writing assignments, oral presentations, case studies | In FY2015-16 for AVT 2150, 2151 and 2280 the average course success rate 96.7%. |
| Demonstrate 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, , MAT 1110, PHY 1106, PHY 1107 | FY2014-15 | written exams, oral exams, practical exams, lab worksheets | In FY2014-15 for AVT 1113, 1131, 1133, 1218 and 2132 the average course success rate was 94.6%.  In FY2015-16 for AVT 1113, 2122, 2132, 1133, 1131, 1128 and 1106 the average course success rate was 91.3%. |
| Demonstrate 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%. |
| Demonstrate knowledge 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 FY2014-15 for AVT 1116, 1118, 1107, 1133, 2132, 2143 and 2237 the average course success rate 93.6%.  In FY2015-16 for AVT 1116, 1118, 1107, 2132, 2143 and 2237 the average course success rate was 93.6%. |
| Demonstrate 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 FY2014-15 for AVT 1128, 2126, 2138 and 2237 the average course success rate was 93.02%.  In FY2015-16 for AVT 1128,1131, 1135, 2126, 2138, 2122, 2126 and 2237 the average course success rate was 93.2%. |
| Demonstrate knowledge of 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 FY2014-15 for AVT 2219 and 2139 the average course success rate was 93.5%.  In FY2015-16 for AVT 2122, 2219 and 2139 the average course success rate was 85.93%. |
| Demonstrate knowledge of 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 FY2014-15 for AVT 2219, 2143 and 2139 Average course success rate was 95.9%.  In FY2015-16 for AVT 2122, 2143, 2219 and 2139 Average course success rate was 88.8%. |
| Demonstrate knowledge of 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 FY2014-15 for AVT 1133, 2132 and 1218 the average course success rate was 92.3%.  In FY2015-16 for AVT 1133, 1218, 2132 and 1214 the average course success rate was 91.0%. |
| Demonstrate the ability to plan and execute mission strategies in regards to First Responder applications, Precision Agriculture and Geographic Information Systems (GIS). |  |  |  |  |
| Demonstrate 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 FY2014-15 for AVT 1107 and 1214 average course success rate was 98.3%.  In FY2013-14 for AVT 1106, 1107, 1218 and 1214 average course success rate was 91.0%. |
| Demonstrate 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 FY2014-15 for AVT 2129 and 2237 the average course success rate was 93.5%.  In FY2015-16 for AVT 2129, 2122 and 2237 the average course success rate was 91.1%. |
| 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 FY2014-15 for AVT 1105, 1140, 1141, 1245, and 2700 the average course success rate was 88.3%.  In FY2015-16 for AVT 1105, 1140, 1141,2125, 1245, and 2700 the average course success rate was 88.3%. |
| The ability to effectively locate, evaluate, and use information. |  | FY2017-18 |  |  |
| The application of higher order analytical and creative cognitive processes. |  |  |  |  |
| The creation of common understanding through the use of verbal and nonverbal messages in a variety of contexts. |  |  |  |  |
| The creation of understanding through composition and synthesis of the written word. |  |  |  |  |
| The ethical and appropriate use of computers, terminology, computer hardware, and computer software to complete tasks appropriate for the degree field at a level considered satisfactory to industry standards. |  |  |  |  |
| **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?** |  | | | |

**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.