



the aircraft instruments. This knowledge is essential given the high accident rate for pilots inadvertently flying into instrument meteorological conditions.

The local advisory committee has many representatives from the community. Wright Patterson Air Force Base, local airports, the Dayton Chamber of Commerce, and other aviation professionals participate. The Aviation program is fortunate to often have more than 30 members present at advisory council meetings.

The Aviation Technology program has partnered with the Science, Engineering Mathematics, and Aerospace Academy (SEMMA) to develop a pathway for Dayton area youth to pursue aerospace education. In addition, we have reached beyond the local region to Warren County where we have developed an articulation agreement to grant some college credit to their High School students that take the aviation program at Warren County Career Center. The Aviation Technology program has joined the Ohio Council on Aviation Education. Through this important organization of Ohio colleges, the birthplace of aviation is being promoted as the one of the premiere providers of aviation education in the state.

**II. Program Learning Outcomes:** A description of what you intend for students to know (cognitive), think/feel (affective), or do (psychomotor), when they have completed your degree program. A suggested manageable number of outcomes should be in the range of five to ten. Describe Program Learning Outcomes review activities.\*

An entry-level graduate with an Associate of Applied Science Degree in Aviation Technology from Sinclair Community College will be able to:

Learning Outcomes	Related Courses
1. Use analytical and scientific problem solving skills to model the physical environment and predict results using variable input data.	AVT 206, 247
2. Apply aeronautical knowledge to analyze aviation technology issues, determine solutions, and assess feasibility.	AVT 125, 205, 206, 211, 238, 240, 242, 245, 247
3. Present technical findings and results using industry approved publication guidelines and presentation methods.	AVT 205, 206, 211, 240, 242, 245, 247

**Learning Outcomes**

4. Explain the functional requirements and the duties of the occupational specialties employed by the aviation industry.

**Related Courses**

AVT 125, 211, 240, 242, 245

An entry-level graduate with an Associate of Applied Science Degree in Aviation Technology with the Professional Pilot Option from Sinclair Community College will be able to:

<b>Learning Outcomes</b>	<b>Related Courses</b>
1. Private pilots will apply basic aeronautical knowledge to solve navigation problems, determine weight and balance parameters, and interpret meteorological conditions in order to operate an aircraft in accordance with the regulations specified by the FAA.	AVT 110, 120, 124, 125, 257
2. Instrument pilots will master attitude instrument flying techniques, precisely control the aircraft solely by reference to the aircraft's instruments, and plan flight scenarios including the evaluation of weather phenomena.	AVT 160, 220, 224, 257
3. Commercial pilots will analyze aircraft performance capabilities, assess take-off and landing requirements, and operate complex aircraft with advanced avionics, constant speed propellers, and retractable landing gear.	AVT 125, 211, 205, 206, 238, 240, 242, 247, 250, 253, 263
4. Multi-engine pilots will master the complexities of multi-engine flight including the ability to respond appropriately to the loss of one engine. They will assess take-off, climb, and landing performance parameters for diverse runway and atmospheric conditions using aircraft performance tables.	AVT 211, 255, 256, 266
5. Certificated flight instructors will demonstrate the ability to teach aviation concepts and basic flight techniques to student pilots..	AVT 205, 211, 240, 242, 258, 259, 269

**III. Assessment Method(s):** A measurable indicator of success in attaining the stated learning outcome(s). The methodology should be both reliable and valid. Please describe in detail.

- a. **Formative Assessment Method(s) and Description:** a measurable indicator of student in-progress success in attaining the stated learning outcome(s).

Formative assessment is completed on a course-by-course basis. Courses use tests and projects to assess student learning. The AVT classes are limited in size to allow for hands-on coursework. Each course uses teamwork and simulation exercises to create a learning environment within the context of aviation. Students work in teams to solve problems like analysis of weather scenarios for flight operations.

- a. **Summative Assessment Method(s) and Description:** a measurable indicator of end-of-program success in attaining the stated program learning outcomes(s).

AVT faculty plan to carefully evaluate the *True Outcomes* assessment tool to determine where it can be used in the assessment of Aviation Technology students.

The Professional Pilots students demonstrate achievement of course objectives by adhering to strict FAA standards and passing practical examinations administered by the FAA.

**IV. Results:** A description of the actual results of overall student performance gathered from the summative assessment(s). (see III.b.)

Sinclair flight students consistently perform better than the national average for flight hours to complete FAA ratings. For example, the FAA reports that the average student pilot takes 75 hours to obtain their private pilot license. Sinclair students have consistently obtained their ratings after 50 or fewer hours of flying.

- V. Analysis/Actions:** From analysis of your summative assessment results, do you plan to or have you made any adjustments to your program learning outcomes, methodologies, curriculum, etc.? If yes, describe. If no, explain.

The program was overhauled in the summer of 2001 in order to improve learning outcomes, improve methodologies, and add to the curriculum. The new curriculum is being closely monitored to ensure that the new objectives are met. As required, additional improvements will be implemented. For example, AVT 270, Cooperative Education, was added as a required course to provide all students with an authentic job experience and socialization into the profession.

**VI. General Education:** Are you using any tool(s) to assess any of the three primary general education outcomes\* (communication, thinking, values/citizenship)? If so, describe.

- a. Where within the major do you assess written communication? Describe the assessment method(s) used. Describe assessment results if available.

Written communication skills are essential skills for Aviation Technology students as well as professional pilots. Written communication skills are emphasized and assessed in all non ground-school courses.

- b. Where within the major do you assess oral communication? Describe the assessment method(s) used. Describe assessment results if available.

Oral communication skills are essential skills for Aviation Technology students as well as professional pilots. Oral communication skills are emphasized and assessed in all non ground-school courses. For example in the Aviation Management course, student teams develop a business plan for an aviation business concept. Students must successfully provide both a written business plan as well as an oral presentation of the plan at the end of the class.

- c. Where within the major do you assess thinking? Thinking might include inventing new problems, seeing relationships and/or implications, respecting other approaches, demonstrating clarity and/or integrity, or recognizing assumptions. Describe the assessment method(s) used. Describe assessment results if available.

Students must demonstrate judgment and critical thinking skills in every course in the program.

- d. Where within the major do you assess values/citizenship/community? These activities might include behaviors, perspective, awareness, responsibility, teamwork, ethical/professional standards, service learning or community participation. Describe the assessment method(s) used. Describe assessment results if available.

These attributes are assessed in the required General Education courses. Within the AVT program, the Accident Investigation course and some of the flight courses also assist in the development of these values. Teamwork is emphasized in most courses within the program.