

Program-Level Assessment: Annual Report

Program: Aeronautics	Department: Aviation Science
Degree or Certificate Level: B.S.	College/School: Parks College
Date (Month/Year): June 2020	Primary Assessment Contact: Stephen Magoc
In what year was the data upon which this report is based collected? Fall 2019 and Spring 2020	
In what year was the program’s assessment plan most recently reviewed/updated? Spring 2020	

1. Student Learning Outcomes

Which of the program’s student learning outcomes were assessed in this annual assessment cycle?

The following student learning outcomes were assessed in this assessment cycle.

- A. Apply mathematics, science, and applied sciences to aviation-related disciplines.
- B. Analyze and interpret data.
- C. Work effectively on multi-disciplinary and diverse teams.
- D. Make professional and ethical decisions.
- E. Communicate effectively, using both written and oral communication skills.
- F. Engage in and recognize the need for life-long learning.

2. Assessment Methods: Student Artifacts

Which student artifacts were used to determine if students achieved this outcome? Please identify the course(s) in which these artifacts were collected. Clarify if any such courses were offered a) online, b) at the Madrid campus, or c) at any other off-campus location.

Student artifacts such as assignments and test form the following courses were used to determine if students met the outcomes.

Fall 2019 Courses	Spring 2020 Courses
ASCI 1010 Professional Orientation	ASCI 1850 Safety Management Systems
ASCI 2200 Concepts in Aerodynamics	ASCI 2250 Aviation and Airport Security
ASCI 4012 Jet Flying Techniques I	ASCI 3020 Jet Transport Systems II
ASCI 4050 Human Factors	ASCI 3100 Air Carrier Systems
ASCI 4250 Professional Ethics and Standards	ASCI 4022 Jet Flying Techniques II
ASCI 4450 Aviation Law	ASCI 4023 Jet Flying Techniques II Laboratory
FSCI 1250 Basic Flight Foundations	ASCI 4050 Human Factors
	ASCI 4250 Professional Ethics and Standards
	ASCI 4450 Aviation Law
	ASCI 4650 Economics of Air Transportation
	ASCI 4800 International Aviation
	ASCI 4900 Senior Seminar

3. Assessment Methods: Evaluation Process

What process was used to evaluate the student artifacts, and by whom? Please identify the tools(s) (e.g., a rubric) used in the process and include them in/with this report.

The department faculty (Drs. Stephen Belt, Terrence Kelly and Gajapriya Tamilselvan, and Mr. Stephen Magoc) met to discuss the results and findings of student artifacts. The department faculty used course assessment forms and examples of student artifacts in the evaluation.

See Appendix A for the course assessment forms used for the evaluation of the courses and artifacts.

Additionally, the assessment process used by the department has been revised as follows.

- The department has revised the course matrix used to assess the undergraduate student learning outcomes. Changes were made to courses that are used to assess various student learning outcomes.
- The department changed the method used to perform the overall assessment of the student learning outcomes. Previously, the department used only those courses taught in the previous semester to assess a student learning outcome. The department now uses all courses identified by the matrix to assess each student learning outcome.

See Appendix B for the revised student learning outcome/course matrix and the revised assessment plan.

4. Data/Results

What were the results of the assessment of the learning outcomes? Please be specific. Does achievement differ by teaching modality (e.g., online vs. face-to-face) or on-ground location (e.g., STL campus, Madrid campus, other off-campus site)?

Student Learning Outcome: A. Apply mathematics, science, and applied sciences to aviation-related disciplines.

Although the assessment reveals that students meet the objectives of this student learning outcome, the department will more aggressively test, provide additional assignments and monitor student progress.

Student Learning Outcome: B. Analyze and interpret data.

The assessment reveals that the students meet the objectives of this student learning outcome. The department will continue to monitor this student learning outcome for ways to make continuous improvement.

Student Learning Outcome: C. Work effectively on multi-disciplinary and diverse teams.

Although the assessment reveals that students meet the objectives of this student learning outcome, the department determined that it needs to improve the assessment of any team-based assignment or project required in any course.

Student Learning Outcome: D. Make professional and ethical decisions.

The assessment reveals that the students meet the objectives of this student learning outcome. The department will continue to monitor this student learning outcome for ways to make continuous improvement.

Student Learning Outcome: E. Communicate effectively, using both written and oral communication skills.

The assessment reveals that the students meet the objectives of this student learning outcome. The department will continue to monitor this student learning outcome for ways to make continuous improvement. In particular, with the possibility of blended or online course delivery, the department will work towards methods for students to show their abilities and the faculty to assess their work in such circumstances.

Student Learning Outcome: F. Engage in and recognize the need for life-long learning.

The assessment reveals that the students meet the objectives of this student learning outcome. The department will continue to monitor this student learning outcome for ways to make continuous improvement in engaging and recognizing the need for life-long learning.

The department determined that the move from in-person to online course delivery in the middle of the Spring 2020 semester did not have an effect on the students' abilities to meet the objectives of the student learning outcomes assessed in this cycle.

5. Findings: Interpretations & Conclusions

What have you learned from these results? What does the data tell you?

The data collected and discussed in the evaluation process told the department the following.

- There is a need to test more closely, create additional assignments, and monitor more closely the students' abilities to apply mathematics, science and applied science in aviation areas.
- The department needs to improve the course assessment of students working in teams in all courses which require teamwork activities.
- In all types of course delivery (in-person, online, blended) the department will work to improve the delivery and assessment of student work designed to have students communicate in written and oral formats.

6. Closing the Loop: Dissemination and Use of Current Assessment Findings

A. When and how did your program faculty share and discuss these results and findings from this cycle of assessment?

The department faculty (Drs. Stephen Belt, Terrence Kelly and Gajapriya Tamilselvan, and Mr. Stephen Magoc) met on-campus following the Fall 2019 (02/22/2020) and Spring 2020 (06/02/2020) semesters to discuss and evaluate the results and findings of the student artifacts.

B. How specifically have you decided to use findings to improve teaching and learning in your program? For example, perhaps you've initiated one or more of the following:

Changes to the Curriculum or Pedagogies

- Course content
- Teaching techniques
- Improvements in technology
- Prerequisites
- Course sequence
- New courses
- Deletion of courses
- Changes in frequency or scheduling of course offerings

Changes to the Assessment Plan

- Student learning outcomes
- Student artifacts collected
- Evaluation process
- Evaluation tools (e.g., rubrics)
- Data collection methods
- Frequency of data collection

Please describe the actions you are taking as a result of the findings.

The department will make changes to the course content and teaching techniques as well as the evaluation tools used in the curriculum so that students are better able to:

- Apply mathematics, science and applied science to aviation-related disciplines.
- Work effectively on multi-disciplinary and diverse teams.
- Communicate effectively, using both written and oral communication skills.

If no changes are being made, please explain why.

N/A

7. Closing the Loop: Review of Previous Assessment Findings and Changes

A. What is at least one change your program has implemented in recent years as a result of assessment data?

In a past assessment of Student Learning Outcome D – Make professional and Ethical Decisions, the department determined that for its students to meet the requirements of the student learning outcome changes in course content and teaching techniques were necessary. These changes were specifically made in courses ASCI 1850 Safety Management Systems and ASCI 4250 Professional Ethics and Standards. These changes included adding better examples of professional ethics as they relate to not only aviation, but in general to other industries.

B. How has this change/have these changes been assessed?

This change was assessed by the faculty during the Spring 2020 meeting. The assessment was conducted by assessing student performance in all courses identified in the Student Learning Outcome matrix. See Appendix B for a copy of the matrix of courses.

C. What were the findings of the assessment?

The department faculty found that the changes made to the courses have been successfully implemented and that students currently meet the student learning outcome.

D. How do you plan to (continue to) use this information moving forward?

Moving forward, the department will continue to monitor this student learning outcome to determine whether students continue to satisfy the requirements of the student learning outcome.

IMPORTANT: Please submit any assessment tools and/or revised/updated assessment plans along with this report.