AABInternational

PURDUE UNIVERSITY	**Purdue University**
	Purdue Polytechnic Institute, School of Aviation & Transportation
	Bachelor of Science in Professional Flight Technology Bachelor of Science in Aviation Management
October 31, 2019	Compliance with AABI Policy 3.4.2

For each AABI-accredited program, AABI Policy 3.4.2 requires institutions to accurately publish on the program's public website, a report of student achievement data including the following information, updated annually:

- The objectives of each accredited program
- Program assessment measures employed
- Graduation rates
- Rates and types of employment of graduates

Purdue University's School of Aviation and Transportation Technology has two AABI-accredited programs:

- Bachelor of Science in Professional Flight Technology
- Bachelor of Science in Aviation Management

This document presents program objectives, assessment methods employed, graduation rates and rates and types of employment for each accredited degree program.

Mission Statements

Purdue University Mission Statement

Founded in 1869, Purdue has shared the land-grant ideal laid out under the 1862 Morrill Act of providing access to a liberal, practical education to the public. Purdue is a recognized member of the American Association of Universities (AAU), the Association of Public and Land-Grant Universities (APLU), and Universities Research Association (URA). Purdue has earned the Carnegie Foundation for the Advancement of Teaching Elective Community Engagement Classification. The Carnegie Foundation recognized Purdue for its dedication to engagement, through which the University uses its resources to improve the quality of life of Indiana citizens and people throughout the world. Purdue was recognized for engagement achievements in areas including economic development, P-12 education, community service and lifelong learning.

School and Program Mission Statements

The mission of the School of Aviation and Transportation Technology complements and strongly supports the missions of Purdue University in serving the citizens of the State of Indiana, the nation, and the world, through learning, discovery, and engagement activities. Specifically, the

School's mission statement is as follows:

- *The mission of the School of Aviation and Transportation Technology is to prepare the next generation of leaders and change agents for the transportation sector.*

Consistent with the mission of the School, the mission of the Professional Flight Technology program is as follows:

- *The mission of the Professional Flight program is to prepare the next generation of professional pilots and leaders in flight operations.*

Similarly, consistent with the mission of the School, the mission of the Aviation Management program is as follows:

- *The mission of the Aviation Management program is to prepare the next generation of airline and airport executives.*

Program Educational Objectives (PEOs)

Bachelor of Science in Professional Flight

The mission of the Professional Flight program is supported by the following five Program Educational Objectives:

- PEO 1 - Effectively apply technical knowledge, problem-solving techniques, and hands-on skills in traditional and emerging technologies of flight operations.
- PEO 2 - Be active and effective participants in on-going professional development, professional growth and increasing professional responsibility.
- PEO 3 - Foster effective communication and networking with industry professionals in order to convey ideas to technical and non-technical individuals.
- PEO 4 - Work effectively in teams to resolve open-ended problems.
- PEO 5 - Work within the accepted standards of professionalism in a multi-cultural environment.

Bachelor of Science in Aviation Management

The mission of the Professional Flight program is supported by the following five Program Educational Objectives:

- PEO 1 -Effectively apply technical knowledge, problem-solving techniques, and hands-on skills in traditional and emerging areas of aviation management.
- PEO 2 -Be active and effective participants in ongoing professional development, professional growth, and increasing professional responsibility.
- PEO 3 -Effectively communicate ideas to technical and non-technical people.
- PEO 4 -Work effectively in teams.
- PEO 5 -Work within the accepted standards of professionalism.

Program Assessment Measures Employed

Introduction

The School of Aviation and Transportation Technology worked with the faculty teaching in the Professional Flight and Aviation Management programs, as well as Dr. Robert Herrick and Ms. Ada Uche (faculty and staff leaders at the Polytechnic level), who are Polytechnic-wide liaisons for the University's online assessment tracking system (TracDat, now known as Nuventive Improve) to develop the assessment plan by which the academic programs would be assessed. The need for a new assessment plan was driven by Purdue University's internal assessment needs and by feedback received from the Aviation Accreditation Board International's (AABI) site visit in October 2017. The School's academic program concentrations in Professional Flight and Aviation Management have been accredited by AABI, but after the 2017 Self-study, the School acknowledged that it had the opportunity to leverage the University-wide adoption of Nuventive Improve system and thereby improve its assessment and continuous improvement process as well as prepare for the Higher Learning Commission's (institutional regional accreditor) visit in 2019. The School's academic program assessment plan utilizes the AABI student learning outcomes as the metrics against which the two AABI-accredited academic programs are to be assessed.

This assessment plan requires the School to meet at least twice per year to assess the B.S. in Professional Flight and B.S. in Aviation Management programs. The School faculty collects direct and indirect measures of evidence developed in program courses to show the level of student achievement in determining how well students meet the student learning outcomes.

The School's faculty met to discuss the evidence and assess the student achievement of the program's student learning outcomes on 10/05/17, 10/10/17, 10/12/17, and 10/17/17. Additionally, as part of the assessment process, the School developed a "Graduating Senior Exit Survey." The need for program revisions, if any, are noted. Once the TracDat/Nuventive Improve system is operational, all these data will be transferred to the new online system.

For all AABI student learning outcomes being assessed, the School discussed the level at which students should be considered as having "exceeded expectations." The consensus arrived at was to set a goal of 85% of the students performing at the "meets expectations" level or better. The School will determine if any programmatic changes are required to enable the remaining 15% of students to improve their performance. The School will determine what, if any, programmatic changes are necessary to increase the possibility of more students achieving at the set goal.

The direct and indirect measures developed in courses were assessed to show student achievement in the program's student learning outcomes. The artifacts collected to assess student learning outcomes were assessed on a scale of 0 to 4, with 0 equal to "does not meet expectations," 1 equal to "needs improvement," 2 equal to "meets expectations," 3 equal to "exceeds expectations," and 4 equal to "greatly exceeds expectations."
This assessment report and all suggested program improvements identified by the assessment, will be provided to the School stakeholders, including students and the School's Industry Advisory Board, and the School faculty and staff.

Adequacy and Relevance of PEOs
The process for evaluating the adequacy and relevance of the current Professional Flight Program Educational Objectives utilizes data collected from:

1. The Purdue Center for Career Opportunity (CCO) *telephone surveys* regarding employment and salary for May PRO FLT graduates;
2. Input from the PRO FLT Industrial Advisory Board;
3. Results of *Qualtrics surveys* of PRO FLT seniors, recent PRO FLT program graduates, SATT faculty members, and known PRO FLT employers.

Similarly, the process for evaluating the adequacy and relevance of the current Aviation Management Program Educational Objectives utilizes data collected from:

1. The Purdue Center for Career Opportunity (CCO) *telephone surveys* regarding employment and salary for May AVIA MGMT graduates;
2. Input from the AVIA MGMT Industrial Advisory Board;
3. Results of *Qualtrics surveys* of PRO FLT seniors, recent AVIA MGMT program graduates, SATT faculty members, and known AVIA MGMT employers.

Student Learning Outcomes
There are 11 Purdue Program Outcomes and 11 AABI General Learning Outcomes. Table 1 presents the cross-mapping of these two sets of outcomes for the B.S. in Professional Flight program and Table 2 presents a similar mapping for the B.S. in Aviation Management program.). A scan of Table 1 and Table 2 reveals that all Purdue Program Outcomes as well as AABI General Outcomes are addressed through various courses across the respective curriculum. Also, all the outcomes are addressed in multiple courses. When the same outcome is addressed in multiple courses, the specific tools and techniques used to assess these outcomes vary and so do the proficiency levels.

In October 2017, the School Head met individually with three faculty members teaching in the undergraduate programs. Two faculty members taught required courses in the core curriculum and one taught required courses in the Professional Flight program. One of the faculty members teaching required core courses also taught two required courses in the Aviation Management program. The School Head discussed the overall program assessment process and reviewed with the faculty the mapping of program level learning outcomes with specific course content, evaluation measures, student performance in Spring 2017 semester, and any changes that might be necessary in the future. A series of one-on-one meetings allowed for effective use of faculty members' time as well as in-depth discussion of the assessment process.

<u>October 10, 2017: Meeting with Professor Thomas Carney (Professional Flight)</u>
AABI General Student Learning Outcomes Discussed: a, b, d, g, h, i, j
Courses Discussed: AT 32500 Advanced Aviation Meteorology
AT 32700 Advanced Transport Flight Operations

<u>October 12, 2017: Meeting with Professor Michael Nolan (Aviation Management)</u>
AABI General Student Learning Outcomes Discussed: b, c, e, f, g, h ,i, j
Courses Discussed: AT 10000 Introduction to Aviation Technology
AT 25200 Aviation Projects

AT 36200 Aviation Operations

October 17, 2017: Meeting with Professor Brian Dillman (Professional Flight)
AABI General Student Learning Outcomes Discussed:
Courses Discussed: AT 14400 Private Pilot Lectures
AT 49800/49501 Aviation Technology Capstone

Table 1. Cross-mapping of Purdue program outcomes and AABI general outcomes for the B.S. in Professional Flight program

B.S. in Professional Flight	AABI General Outcomes										
Purdue Program Outcomes	a. Apply knowledge of mathematics, science and applied sciences to aviation related disciplines	b. Analyze and interpret data	c. Work effectively on multidisciplinary projects	d. Make professional and ethical decisions	e. Communicate effectively, using both written and oral communication skills	f. Engage in and recognize the need for lifelong learning	g. Assess contemporary issues	h. Use the techniques, skills, and modern technology necessary for professional practice	i. Asses the national and international aviation environment	j. Apply pertinent knowledge in identifying and solving problems	k. Apply knowledge of business sustainability to aviation business
A. Is an aviation professional with a thorough understanding of professional certification and career management				X		X	X	X	X		
B. Demonstrates a broad-based knowledge of the aviation industry as an integrated transportation system							X		X	X	X
C. Demonstrates an understanding of aviation safety and human factors	X	X						X		X	
D. Demonstrates and understanding of aircraft performance and design, systems, operations, and maintenance	X	X	X	X		X	X	X	X	X	
E. Demonstrates knowledge of safe operations within the international airport, airspace and air traffic management system			X		X		X	X	X	X	X
F. Demonstrates an understanding of national and international law, regulation and labor issues			X	X	X	X	X	X	X		X
G. Demonstrates an understanding of meteorology and environmental issues	X	X		X			X	X		X	X
H. Demonstrates the ability to think clearly and analytically		X			X					X	
I. Demonstrates effective skills in communication, leadership and organization			X	X	X			X			
J. Is prepared to compete in a number of flight-related occupational areas within the aerospace industry	X	X	X	X	X	X	X	X	X	X	X
K. May be eligible for appropriate levels of Federal Aviation Administration certification	X			X				X	X	X	

Table 2. Cross-mapping of Purdue program outcomes and AABI general outcomes for the B.S. in Aviation Management program

B.S. in Aviation Management	AABI General Outcomes										
Purdue Program Outcomes	a. Apply knowledge of mathematics, science and applied sciences to aviation related disciplines	b. Analyze and interpret data	c. Work effectively on multidisciplinary projects	d. Make professional and ethical decisions	e. Communicate effectively, using both written and oral communication skills	f. Engage in and recognize the need for lifelong learning	g. Assess contemporary issues	h. Use the techniques, skills, and modern technology necessary for professional practice	i. Asses the national and international aviation environment	j. Apply pertinent knowledge in identifying and solving problems	k. Apply knowledge of business sustainability to aviation business
A. Is an aviation professional with a thorough understanding of professional certification and career management				X		X	X	X	X		
B. Demonstrates a broad-based knowledge of the aviation industry as an integrated transportation system							X		X	X	X
C. Demonstrates an understanding of aviation safety and human factors	X	X						X		X	
D. Demonstrates and understanding of aircraft performance and design, systems, operations, and maintenance	X	X	X	X		X	X	X	X	X	
E. Demonstrates knowledge of safe operations within the international airport, airspace and air traffic management system			X		X		X	X	X	X	X
F. Demonstrates an understanding of national and international law, regulation and labor issues			X	X	X	X	X	X	X		X
G. Demonstrates an understanding of meteorology and environmental issues	X	X					X				X
H. Demonstrates the ability to think clearly and analytically		X			X					X	
I. Demonstrates effective skills in communication, leadership and organization			X	X	X			X			
J. Is prepared to compete in a number of management-related occupational areas within the aerospace industry	X	X	X	X	X	X	X	X	X	X	X
K. May be eligible for appropriate levels of Federal Aviation Administration certification	X			X				X	X	X	

Outcomes, evaluation methods and feedback loop for the B.S. in Professional Flight program

AABI Student Learning Outcome	Evaluation Method	Feedback Loop
A. Apply mathematics, science, and applied sciences to aviation related disciplines	Data from the following courses will be used to assess if the undergraduate programs fulfill this student learning outcome: AT 32500 Aviation Meteorology AT 32700 Adv. Transport Flt. Ops **Direct Measures**: The student learning outcome will be assessed using data from: 1. Multiple-choice final exam scores related to the application of mathematics, science, and applied sciences to aviation related disciplines for each student will be obtained from the AT 32500 course. 2. Multiple-choice midterm exam scores related to the application of mathematics, science, and applied sciences to aviation related disciplines for each student will be obtained from the AT 32700 course **Indirect Measures:** 1. End-of course student surveys.	The assessment results will be analyzed once per year by the School faculty through the use of a rubric applied to the student data obtained from the courses listed to determine whether the students are capable of applying mathematics, science, and applied science to aviation disciplines. Recommendations for curriculum pedagogy and/or assessment revisions will be made by the School faculty at least once per year to allow for appropriate implementation. Reviews of the impact of any such program changes will be conducted at least once per year and the records of these reviews will be maintained by the School.
B. Analyze and interpret data	Data from the following courses will be used to assess if the undergraduate programs fulfill this student learning outcome: AT 32500 Aviation Meteorology AT 32700 Adv. Transport Flt. Ops **Direct Measures**: The student learning outcome will be assessed using data from: 1. Multiple-choice final exam scores related to analysis and interpretation of data for each student will be obtained from the AT 32500 course. 2. Multiple-choice final midterm scores related to analysis and interpretation of data for each student will be obtained from the AT 32700 course. **Indirect Measures:** 1. End-of course student surveys.	The assessment results will be analyzed once per year by the School faculty through the use of a rubric applied to the student data obtained from the courses listed to determine whether the students are capable of analyzing and interpreting data. Recommendations for curriculum pedagogy and/or assessment revisions will be made by the School faculty at least once per year to allow for appropriate implementation. Reviews of the impact of any such program changes will be conducted at least once per year and the records of these reviews will be maintained by the School.

AABI Student Learning Outcome	Evaluation Method	Feedback Loop
C. Work effectively on multi-disciplinary and diverse teams	The following courses will be used to assess if the undergraduate programs fulfill this student learning outcome: AT 49800 AT Capstone AT 22300 Human Factors for Flight Crews **Direct Measures**: The student learning outcome will be assessed using data from: The results of a student group project and the senior design presentation and poster project (monitored by the course instructor and other faculty members) will be obtained from the AT 49800 course. The final results of three case studies and associated presentations (monitored by the course instructor and additional faculty members) will be obtained from the AT 22300 course. **Indirect Measures:** 1. End-of course student surveys. 2. Assessment by external evaluators.	The assessment results will be analyzed once per year by the department faculty through the use of a rubric applied to the student data obtained from the courses listed to determine whether the students are capable working effectively on multi- disciplinary and diverse teams. Recommendations for curriculum pedagogy and/or assessment revisions will be made by the department faculty at least once per year to allow for appropriate implementation. Reviews of the impact of any such program changes will be conducted at least once per year and the records of these reviews will be maintained by the department.
D. Make professional and ethical decisions	Data from the following courses will be used to assess if the undergraduate programs fulfill this student learning outcome: AT 32500 Aviation Meteorology AT 32700 Adv. Transport Flt. Ops **Direct Measures**: The student learning outcome will be assessed using data from: 1. Multiple-choice final exam scores related to professionalism and ethical decision-making for each student will be obtained from the AT 32500 course. 2. Multiple-choice final exam scores related to professionalism and ethical decision-making for each student will be obtained from the AT 32700 course **Indirect Measures:** 1. End-of course student surveys.	The assessment results will be analyzed once per year by the School faculty through the use of a rubric applied to the student data obtained from the courses listed to determine whether the students are capable of making professional and ethical decisions. Recommendations for curriculum pedagogy and/or assessment revisions will be made by the School faculty at least once per year to allow for appropriate implementation. Reviews of the impact of any such program changes will be conducted at least once per year and the records of these reviews will be maintained by the School.

AABI Student Learning Outcome	Evaluation Method	Feedback Loop
E. Communicate effectively, using both written and oral communication skills	The following courses will be used to assess if the undergraduate programs fulfill this student learning outcome: AT 49800 AT Capstone AT 22300 Human Factors for Flight Crews **Direct Measures**: The student learning outcome will be assessed using data from: The results of a student group project and the senior capstone presentation and poster project (monitored by the course instructor and other faculty members) will be obtained from the AT 49800 course. The final results of three case studies and associated presentations (monitored by the course instructor and additional faculty members) will be obtained from AT 22300. **Indirect Measures:** 1. End-of course student surveys.	The assessment results will be analyzed once per year by the department faculty through the use of a rubric applied to the student data obtained from the courses listed to determine whether the students are capable of communicating effectively, using both written and oral communication skills. Recommendations for curriculum pedagogy and/or assessment revisions will be made by the department faculty at least once per year to allow for appropriate implementation. Reviews of the impact of any such program changes will be conducted at least once per year and the records of these reviews will be maintained by the department.
F. Engage in and recognize the need for life-long learning	The following courses will be used to assess if the undergraduate programs fulfill this student learning outcome: AT 10000 Introduction to Aviation Tech AT 14400 Private Pilot Lectures AT 24900 Instrument Pilot Lectures AT 25400 Commercial Pilot Lectures AT 47500 Aviation Law **Direct Measures**: The student learning outcome will be assessed using data from: The results of embedded questions in quizzes, tests and the final exam and of the student group presentations will be obtained from the AT 10000, AT 144000, AT 24900, and AT 25400 courses. The results of legal case studies will include discussion about the significant of lifelong learning (monitored by the course instructor and other faculty members) will be obtained from the AT 47500 course. **Indirect Measures:** 1. End-of course student surveys.	The assessment results will be analyzed once per year by the department faculty through the use of a rubric applied to the student data obtained from the courses listed to determine whether the students are capable of engaging in and recognizing the need for life-long learning. Recommendations for curriculum pedagogy and/or assessment revisions will be made by the department faculty at least once per year to allow for appropriate implementation. Reviews of the impact of any such program changes will be conducted at least once per year and the records of these reviews will be maintained by the department.

AABI Student Learning Outcome	Evaluation Method	Feedback Loop
G. Assess contemporary issues	Data from the following courses will be used to assess if the undergraduate programs fulfill this student learning outcome: AT 32700 Adv. Transport Flt. Ops AT 47500 Aviation Law **Direct Measures**: The student learning outcome will be assessed using data from: Multiple-choice final exam scores related to assessment of contemporary issues for each student will be obtained from the AT 32700 course. Legal case studies will focus on contemporary issues in aviation. The results of legal case study reports will include analysis of contemporary issues and their significance to the future of aviation. These data will be obtained from the AT 47500 course. **Indirect Measures:** 1. End-of course student surveys.	The assessment results will be analyzed once per year by the School faculty through the use of a rubric applied to the student data obtained from the courses listed to determine whether the students are capable of assessing contemporary issues. Recommendations for curriculum pedagogy and/or assessment revisions will be made by the School faculty at least once per year to allow for appropriate implementation. Reviews of the impact of any such program changes will be conducted at least once per year and the records of these reviews will be maintained by the School.
H. Use the techniques, skills, and modern technology necessary for professional practice	Data from the following courses will be used to assess if the undergraduate programs fulfill this student learning outcome: AT 32500 Aviation Meteorology AT 32700 Adv. Transport Flt. Ops **Direct Measures**: The student learning outcome will be assessed using data from: 1. Multiple-choice final exam scores related to use of techniques, skills, and modern technology necessary for professional practice for each student will be obtained from the AT 32500 course. 2. Multiple-choice final exam scores related to use of techniques, skills, and modern technology necessary for professional practice for each student will be obtained from the AT 32700 course **Indirect Measures:** 1. End-of course student surveys.	The assessment results will be analyzed once per year by the School faculty through the use of a rubric applied to the student data obtained from the courses listed to determine whether the students are capable of using the techniques, skills, and modern technology necessary for professional practice. Recommendations for curriculum pedagogy and/or assessment revisions will be made by the School faculty at least once per year to allow for appropriate implementation. Reviews of the impact of any such program changes will be conducted at least once per year and the records of these reviews will be maintained by the School.

AABI Student Learning Outcome	Evaluation Method	Feedback Loop
I. Assess the national and international aviation environment	Data from the following courses will be used to assess if the undergraduate programs fulfill this student learning outcome: AT 32700 Adv. Transport Flt. Ops **Direct Measures**: The student learning outcome will be assessed using data from: 1. Multiple-choice final exam scores related to the assessment of national and international aviation environment for each student will be obtained from the AT 32700 course. **Indirect Measures:** 1. End-of course student surveys.	The assessment results will be analyzed once per year by the School faculty through the use of a rubric applied to the student data obtained from the courses listed to determine whether the students are capable of assessing the national and international aviation environment. Recommendations for curriculum pedagogy and/or assessment revisions will be made by the School faculty at least once per year to allow for appropriate implementation. Reviews of the impact of any such program changes will be conducted at least once per year and the records of these reviews will be maintained by the School.
J. Apply pertinent knowledge in identifying and solving problems	Data from the following courses will be used to assess if the undergraduate programs fulfill this student learning outcome: AT 32500 Aviation Meteorology AT 32700 Adv. Transport Flt. Ops **Direct Measures**: The student learning outcome will be assessed using data from: 1. Multiple-choice final exam scores related to the application of pertinent knowledge in identifying and solving problems for each student will be obtained from the AT 32500 course. 2. Multiple-choice final exam scores related to the application of pertinent knowledge in identifying and solving problems for each student will be obtained from the AT 32700 course **Indirect Measures:** 2. End-of course student surveys.	The assessment results will be analyzed once per year by the School faculty through the use of a rubric applied to the student data obtained from the courses listed to determine whether the students are capable of applying pertinent knowledge in identifying and solving problems. Recommendations for curriculum pedagogy and/or assessment revisions will be made by the School faculty at least once per year to allow for appropriate implementation. Reviews of the impact of any such program changes will be conducted at least once per year and the records of these reviews will be maintained by the School.

AABI Student Learning Outcome	Evaluation Method	Feedback Loop
K. Apply knowledge of business sustainability to aviation issues.	The following course will be used to assess if the undergraduate programs fulfill this student learning outcome: AT 203 Aviation Operations Management **Direct Measures**: The student learning outcome will be assessed using data from: The final results of the airline simulation project and associated class presentations (monitored by the course instructor and additional faculty members) will be obtained from the AT 20300 course. **Indirect Measures:** 1. End-of course student surveys.	The assessment results will be analyzed once per year by the department faculty through the use of a rubric applied to the student data obtained from the course listed to determine whether the students are capable of applying knowledge of business sustainability to aviation issues. Recommendations for curriculum pedagogy and/or assessment revisions will be made by the department faculty at least once per year to allow for appropriate implementation. Reviews of the impact of any such program changes will be conducted at least once per year and the records of these reviews will be maintained by the department.

B.S. in Professional Flight

Student Learning Outcome Matrix

Undergraduate Courses B.S. in Professional Flight	Student Learning Outcomes										
	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-life learning	G. Asses contemporary issues	H. Use the techniques, skills and modern technology necessary for professional practice	I. Assess the national and international aviation environment	J. Apply pertinent knowledge in identifying and solving problems	K. Apply knowledge of business sustainability to aviation issues
AT 10000 Introduction to Aviation Technology						X					
AT 10200 Aviation Business											X
AT 10300 Aerospace Vehicle Propulsion											
AT 14400 Private Pilot Lectures						X					
AT 20200 Aerospace Vehicle Systems Design…											
AT 20300 Aviation Operations Management											X
AT 22300 Human Factors for Flight Crews			X		X						
AT 24900 Instrument Flight Lectures						X					
AT 25400 Commercial Flight Lectures						X					
AT 32500 Advanced Aviation Meteorology	X	X		X				X		X	
AT 32700 Advanced Transport Flight Operations	X	X		X			X	X	X	X	
AT 38800 Large Aircraft Systems			X				X			X	
AT 47500 Aviation Law						X	X				
AT 49800 AT Capstone			X		X						

Outcomes, evaluation methods and feedback loop for the B.S. in Aviation Management program

AABI Student Learning Outcome	Evaluation Method	Feedback Loop
A. Apply mathematics, science, and applied sciences to aviation related disciplines	Data from the following courses will be used to assess if the undergraduate programs fulfill this student learning outcome: AT 14400 Private Pilot Lectures AT 41200 Aviation Finance **Direct Measures**: The student learning outcome will be assessed using data from: 1. Multiple-choice final exam scores related to the application of mathematics, science, and applied sciences to aviation related disciplines for each student will be obtained from the AT 14400 course. 2. Multiple-choice midterm exam scores related to the application of mathematics, science, and applied sciences to aviation related disciplines for each student will be obtained from the AT 41200 course **Indirect Measures:** 1. End-of course student surveys.	The assessment results will be analyzed once per year by the School faculty through the use of a rubric applied to the student data obtained from the courses listed to determine whether the students are capable of applying mathematics, science, and applied science to aviation disciplines. Recommendations for curriculum pedagogy and/or assessment revisions will be made by the School faculty at least once per year to allow for appropriate implementation. Reviews of the impact of any such program changes will be conducted at least once per year and the records of these reviews will be maintained by the School.
B. Analyze and interpret data	Data from the following courses will be used to assess if the undergraduate programs fulfill this student learning outcome: AT 10300 Aerospace Vehicle Propulsion AT 42100 Managerial Economics in Aviation **Direct Measures**: The student learning outcome will be assessed using data from: 1. Multiple-choice final exam scores related to analysis and interpretation of data for each student will be obtained from the AT 10300 course. 2. Multiple-choice final midterm scores related to analysis and interpretation of data for each student will be obtained from the AT 42100 course. **Indirect Measures:** 1. End-of course student surveys.	The assessment results will be analyzed once per year by the School faculty through the use of a rubric applied to the student data obtained from the courses listed to determine whether the students are capable of analyzing and interpreting data. Recommendations for curriculum pedagogy and/or assessment revisions will be made by the School faculty at least once per year to allow for appropriate implementation. Reviews of the impact of any such program changes will be conducted at least once per year and the records of these reviews will be maintained by the School.

AABI Student Learning Outcome	Evaluation Method	Feedback Loop
C. Work effectively on multi-disciplinary and diverse teams	The following courses will be used to assess if the undergraduate programs fulfill this student learning outcome: AT 25200 Aviation Projects AT 49501 AT Capstone **Direct Measures**: The student learning outcome will be assessed using data from: 1. The results of a student group project related to contemporary problems in the aviation industry will be obtained from the AT 25200 course 2. The results of a student group project and the senior design presentation and poster project (monitored by the course instructor and other faculty members) will be obtained from the AT 49501 course. **Indirect Measures:** 1. End-of course student surveys. 2. Assessment by external evaluators.	The assessment results will be analyzed once per year by the department faculty through the use of a rubric applied to the student data obtained from the courses listed to determine whether the students are capable working effectively on multi- disciplinary and diverse teams. Recommendations for curriculum pedagogy and/or assessment revisions will be made by the department faculty at least once per year to allow for appropriate implementation. Reviews of the impact of any such program changes will be conducted at least once per year and the records of these reviews will be maintained by the department.
D. Make professional and ethical decisions	Data from the following courses will be used to assess if the undergraduate programs fulfill this student learning outcome: AT 25200 Aviation Projects AT 48100 Aviation Law **Direct Measures**: The student learning outcome will be assessed using data from: 1. Multiple-choice final exam scores related to professionalism and ethical decision-making for each student will be obtained from the AT 25200 course. 2. Multiple-choice final exam scores related to professionalism and ethical decision-making for each student will be obtained from the AT 48100 course **Indirect Measures:** 1. End-of course student surveys.	The assessment results will be analyzed once per year by the School faculty through the use of a rubric applied to the student data obtained from the courses listed to determine whether the students are capable of making professional and ethical decisions. Recommendations for curriculum pedagogy and/or assessment revisions will be made by the School faculty at least once per year to allow for appropriate implementation. Reviews of the impact of any such program changes will be conducted at least once per year and the records of these reviews will be maintained by the School.

AABI Student Learning Outcome	Evaluation Method	Feedback Loop
E. Communicate effectively, using both written and oral communication skills	The following courses will be used to assess if the undergraduate programs fulfill this student learning outcome: AT 25200 Aviation Projects AT 49501 AT Capstone **Direct Measures**: The student learning outcome will be assessed using data from: 1. The results of a student group project and presentations (monitored by the course instructor and other faculty members) will be obtained from the AT 22300 course. 2. The final results of the student group project, presentation, and poster (monitored by the course instructor and additional faculty members) will be obtained from AT 49501. **Indirect Measures:** 1. End-of course student surveys.	The assessment results will be analyzed once per year by the department faculty through the use of a rubric applied to the student data obtained from the courses listed to determine whether the students are capable of communicating effectively, using both written and oral communication skills. Recommendations for curriculum pedagogy and/or assessment revisions will be made by the department faculty at least once per year to allow for appropriate implementation. Reviews of the impact of any such program changes will be conducted at least once per year and the records of these reviews will be maintained by the department.
F. Engage in and recognize the need for life-long learning	The following courses will be used to assess if the undergraduate programs fulfill this student learning outcome: AT 10000 Introduction to Aviation Tech AT 14400 Private Pilot Lectures AT 47500 Aviation Law **Direct Measures**: The student learning outcome will be assessed using data from: 1. The results of embedded questions in quizzes, tests and the final exam and of the student group presentations will be obtained from the AT 10000, AT 144000, and AT 25400 courses. 2. The results of legal case studies will include discussion about the significant of lifelong learning (monitored by the course instructor and other faculty members) will be obtained from the AT 47500 course. **Indirect Measures:** 1. End-of course student surveys.	The assessment results will be analyzed once per year by the department faculty through the use of a rubric applied to the student data obtained from the courses listed to determine whether the students are capable of engaging in and recognizing the need for life-long learning. Recommendations for curriculum pedagogy and/or assessment revisions will be made by the department faculty at least once per year to allow for appropriate implementation. Reviews of the impact of any such program changes will be conducted at least once per year and the records of these reviews will be maintained by the department.

AABI Student Learning Outcome	Evaluation Method	Feedback Loop
G. Assess contemporary issues	Data from the following courses will be used to assess if the undergraduate programs fulfill this student learning outcome: AT 41200 Aviation Finance AT 42100 Managerial Economics in Aviation AT 47500 Aviation Law **Direct Measures**: The student learning outcome will be assessed using data from: 1. Multiple-choice final exam scores related to assessment of contemporary issues for each student will be obtained from the AT 41200 and AT 42100 courses. **2.** Legal case studies will focus on contemporary issues in aviation. The results of legal case study reports will include analysis of contemporary issues and their significance to the future of aviation. These data will be obtained from the AT 47500 course. **Indirect Measures:** 1. End-of course student surveys.	The assessment results will be analyzed once per year by the School faculty through the use of a rubric applied to the student data obtained from the courses listed to determine whether the students are capable of assessing contemporary issues. Recommendations for curriculum pedagogy and/or assessment revisions will be made by the School faculty at least once per year to allow for appropriate implementation. Reviews of the impact of any such program changes will be conducted at least once per year and the records of these reviews will be maintained by the School.
H. Use the techniques, skills, and modern technology necessary for professional practice	Data from the following courses will be used to assess if the undergraduate programs fulfill this student learning outcome: AT 25200 Aviation Projects AT 48100 Aviation Safety Problems AT 49501 AT Capstone **Direct Measures**: The student learning outcome will be assessed using data from: 1. Multiple-choice final exam scores related to use of techniques, skills, and modern technology necessary for professional practice for each student will be obtained from the AT 25200 and AT 481 courses. 2. Artifacts in terms of Powerpoint presentations, posters, and papers will demonstrate the use of techniques, skills, and modern technology necessary for professional practice for each student will be obtained from the AT 49501 course	The assessment results will be analyzed once per year by the School faculty through the use of a rubric applied to the student data obtained from the courses listed to determine whether the students are capable of using the techniques, skills, and modern technology necessary for professional practice. Recommendations for curriculum pedagogy and/or assessment revisions will be made by the School faculty at least once per year to allow for appropriate implementation. Reviews of the impact of any such program changes will be conducted at least once per year and the records of these reviews will be maintained by the School.

	Indirect Measures: 3. End-of course student surveys.	
AABI Student Learning Outcome	Evaluation Method	Feedback Loop
I. Assess the national and international aviation environment	Data from the following courses will be used to assess if the undergraduate programs fulfill this student learning outcome: AT 25200 Aviation Projects AT 41200 Aviation Finance **Direct Measures**: The student learning outcome will be assessed using data from: 1. Multiple-choice final exam scores related to the assessment of national and international aviation environment for each student will be obtained from the AT 25200 and AT 41200 courses. **Indirect Measures:** 1. End-of course student surveys.	The assessment results will be analyzed once per year by the School faculty through the use of a rubric applied to the student data obtained from the courses listed to determine whether the students are capable of assessing the national and international aviation environment. Recommendations for curriculum pedagogy and/or assessment revisions will be made by the School faculty at least once per year to allow for appropriate implementation. Reviews of the impact of any such program changes will be conducted at least once per year and the records of these reviews will be maintained by the School.
J. Apply pertinent knowledge in identifying and solving problems	Data from the following courses will be used to assess if the undergraduate programs fulfill this student learning outcome: AT 25200 Aviation Projects AT 48100 Aviation Safety Problems **Direct Measures**: The student learning outcome will be assessed using data from: 1. Multiple-choice final exam scores related to the application of pertinent knowledge in identifying and solving problems for each student will be obtained from the AT 25200 course. 2. Multiple-choice final exam scores related to the application of pertinent knowledge in identifying and solving problems for each student will be obtained from the AT 78100 course **Indirect Measures:** 4. End-of course student surveys.	The assessment results will be analyzed once per year by the School faculty through the use of a rubric applied to the student data obtained from the courses listed to determine whether the students are capable of applying pertinent knowledge in identifying and solving problems. Recommendations for curriculum pedagogy and/or assessment revisions will be made by the School faculty at least once per year to allow for appropriate implementation. Reviews of the impact of any such program changes will be conducted at least once per year and the records of these reviews will be maintained by the School.

AABI Student Learning Outcome	Evaluation Method	Feedback Loop
K. Apply knowledge of business sustainability to aviation issues.	The following course will be used to assess if the undergraduate programs fulfill this student learning outcome: AT 10200 Aviation Business AT 20300 Aviation Operations Management AT 36200 Aviation Operations **Direct Measures**: The student learning outcome will be assessed using data from: 1. Multiple-choice final exam scores related to the application of pertinent knowledge in identifying and solving problems for each student will be obtained from the AT 10200 and AT 36200 courses. 2. The final results of the airline simulation project and associated class presentations (monitored by the course instructor and additional faculty members) will be obtained from the AT 20300 course. **Indirect Measures:** 1. End-of course student surveys.	The assessment results will be analyzed once per year by the department faculty through the use of a rubric applied to the student data obtained from the course listed to determine whether the students are capable of applying knowledge of business sustainability to aviation issues. Recommendations for curriculum pedagogy and/or assessment revisions will be made by the department faculty at least once per year to allow for appropriate implementation. Reviews of the impact of any such program changes will be conducted at least once per year and the records of these reviews will be maintained by the department.

B.S. in Aviation Management

Student Learning Outcome Matrix

Undergraduate Courses B.S. in Aviation Management	Student Learning Outcomes										
	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-life learning	G. Asses contemporary issues	H. Use the techniques, skills and modern technology necessary for professional practice	I. Assess the national and international aviation environment	J. Apply pertinent knowledge in identifying and solving problems	K. Apply knowledge of business sustainability to aviation issues
AT 10000 Introduction to Aviation Technology						X					
AT 10200 Aviation Business											X
AT 10300 Aerospace Vehicle Propulsion		X									
AT 14400 Private Pilot Lectures	X					X					
AT 20200 Aerospace Vehicle Systems Design…		X									
AT 20300 Aviation Operations Management		X									X
AT 25200 Aviation Projects			X	X	X			X	X	X	
AT 36200 Aviation Operations		X	X						X		X
AT 41200 Aviation Finance	X	X					X				
AT 42100 Managerial Economics in Aviation	X	X					X				
AT 47500 Aviation Law				X		X	X				
AT 48100 Aviation Safety Problems				X				X		X	
AT 49501 AT Capstone			X		X			X			

Graduation Rates

Number of Professional Flight Technology Degrees Granted

AY 2012-13	AY 2013-14	AY 2014-15	AY 2015-16	AY 2016-17	AY 2017-18	AY 2018-19
43	43	39	41	37	55	61

Professional Flight Technology	Graduation Rate		
	4-Year	5-Year	6-Year
2009	62.5%	78.6%	82.1%
2010	58.9%	78.4%	78.6%
2011	57.7%	75.0%	80.8%
2012	75.0%	83.9%	83.9%
2013	54.0%	74.0%	80.0%
2014	64.5%	79.0%	
2015	82.1%		

Number of Aviation Management Degrees Granted

AY 2012-13	AY 2013-14	AY 2014-15	AY 2015-16	AY 2016-17	AY 2017-18	AY 2018-19
49	36	54	48	37	34	41

Aviation Management	Graduation Rate		
	4-Year	5-Year	6-Year
2009	46.9%	65.6%	65.6%
2010	55.6%	70.4%	70.4%
2011	42.4%	57.6%	66.7%
2012	63.0%	77.8%	85.2%
2013	73.7%	84.2%	84.2%
2014	75.0%	85.0%	
2015	61.5%		

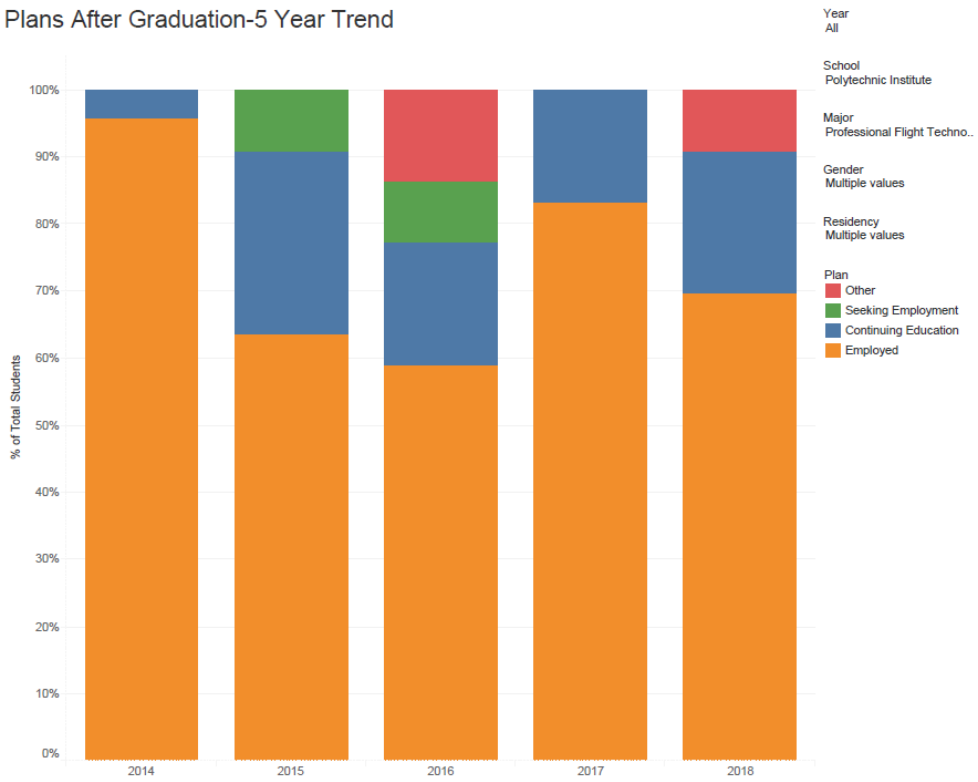
Average Salary (Professional Pilot)

2013 - $36,988
2014 - $40,695
2015 - $37,724
2016 - $40,378
2017 - $34,555

2018 - $50,555

Places of Employment (Professional Pilot)

Endeavor Air
U.S. Air Force
Great Plains Enterprises
Cardinal Wings Aviation
Republic Airlines
SkyWest Airlines
United Airlines
Frontier Airlines
Orange County Flight Center



Average Salary (Aviation Management)

2013 - $40,620
2014 - $35,465
2015 - $37,916
2016 - $47,390
2017 - $46,000
2018 - $36,133

Places of Employment (Aviation Management)

T’way Air
United Ground Express
United States Cold Storage, Inc.
Bloomington-Norman Airport Authority
United States Military Academy
JetBlue Airways Corporation
Republic Airlines