

Assessment Plan
Center for Aviation Studies
The Ohio State University



THE OHIO STATE
UNIVERSITY

2020-2022

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Assessment Program Overview

This assessment plan was written and implemented by the Faculty, Lecturers, Instructors and Staff of the Center for Aviation Studies (CAS). This plan was put into place to satisfy the requirements of the Aviation Accreditation Board International (AABI), the College of Engineering, and The Ohio State University to ensure the continued success of the graduates of the aviation academic degree program.

The Assistant Director Academics and Program Assessment administers the Center for Aviation Studies assessment program. This individual is tasked with ensuring that all elements of the assessment plan remain up to date and reflect the current needs of the Center for Aviation Studies.

The Assistant Director Academics and Program Assessment will rely on the faculty, lecturers, and staff within the College of Engineering, the Fisher College of Business, and the College of Arts and Sciences to assist with the process of implementing the Assessment Plan and collecting the data as needed. Details on the assessment tools and their appropriate timelines are listed in the following pages.

Curriculum Committee

- Assistant Director, Academics and Program Assessment
- Assistant Director, CAS
- Academic Program Coordinator
- Program Manager
- Faculty/Lecturer Representatives(s)
- In consultation with the Director of Flight Education

Mission Statements

The Ohio State University

The university is dedicated to:

- Creating and discovering knowledge to improve the well-being of our state, regional, national and global communities;
- Educating students through a comprehensive array of distinguished academic programs;
- Preparing a diverse student body to be leaders and engaged citizens;
- Fostering a culture of engagement and service.

We understand that diversity and inclusion are essential components of our excellence.

The College of Engineering

We create, transfer and preserve knowledge in the disciplines of engineering and architecture for the purpose of enhancing economic competitiveness regionally, nationally and globally.

Fisher College of Business

OUTREACH: Enhance Fisher's and Ohio State's outreach efforts by connecting with businesses and civic organizations around leadership. We do this by developing engagement and communication activities that are meant to reach leaders 'where they are' and using approaches that they find engaging and useful.

STUDENT DEVELOPMENT: Provide unrivaled leadership development for our students. We do this by scaling leadership development so as to achieve the greatest good for the greatest number and by offering signature programs which deliver deep, immersive, transformational experiences for those students.

RESEARCH: Support leadership scholarship and make it more relevant and accessible to those who can benefit from the knowledge. We do this by publishing and helping to support research (especially interdisciplinary and practice-oriented research), training new scholars on how to teach leadership, and leading the field of leadership toward more relevance in an age where most learn about leadership through 'airport books' and TED talks.

CONNECTION: Collaborate with Ohio State units and programs to create a more integrated campus. We do this by elevating existing leadership content and providing experiential, evidence-based pedagogy.

College of Arts and Sciences

The College of Arts and Sciences will be a recognized leader, on campus and beyond; in teaching and learning, research and creative activity, and outreach and engagement.

The Center for Aviation Studies

The mission of the Center for Aviation Studies is to incorporate engineering, business, and behavioral philosophies into a multi-disciplinary approach to the many components of the aviation industry, supporting world class flight education programs, academic degree programs, research initiatives, and outreach activities on local, regional, national, and international levels.

Aviation Program Specific

Bachelor of Science degree in Aviation with the Professional Pilot Specialization, College of Engineering

The mission of the program is to produce well rounded professional pilots with a background in engineering and aviation coursework that culminates in an Instrument rated Commercial Pilot Certification and either a Multi-engine rating or Certified Flight Instructor certificate. This curriculum is based upon math, science and engineering fundamentals and is designed to nurture students' abilities to participate in the global aviation industry as an ethical practitioner of their field. Students will be able to communicate effectively to solve problems in a diverse environment and instilled with a desire for continued lifelong learning of skills and knowledge to help advance the aviation industry. Graduates of this program will be trained and certified to join the industry as a professional pilot.

Bachelor of Arts degree in Social Sciences: Air Transportation with the Professional Pilot Specialization, College of Arts and Sciences

The mission of the program is to produce well rounded professional pilots with a background in the liberal arts and aviation coursework that culminates in an Instrument rated Commercial Pilot Certification and either a Multi-engine rating or Certified Flight Instructor certificate. This curriculum focuses on the global transportation system with a special emphasis on air transportation and is designed to nurture and develop students' abilities to participate in the global aviation industry as an ethical practitioner of their field. Students will be able to communicate effectively to solve problems in a diverse environment and instilled with a desire for continued lifelong learning of skills and knowledge to help advance the aviation industry. Graduates of this program will be trained and certified to join the industry as a professional pilot.

Bachelor of Science degree in Aviation, College of Engineering

The mission of the program is to produce well-rounded aviation professional with a background in engineering systems and aviation coursework. This curriculum is based upon math and science fundamentals and is designed to nurture and develop a students' abilities to participate in the global aviation industry as an ethical practitioner of their field. Students will be able to communicate effectively to solve problems in a diverse environment and instilled with a desire for continued lifelong learning of skills and knowledge to help advance the aviation industry. Graduates of this program will be prepared to find employment in the industry in analytical positions such as fleet optimizer or network analyst.

Bachelor of Arts degree in Social Sciences: Air Transportation, College of Arts and Sciences

The mission of the program is to produce well-rounded aviation professional with a background in the liberal arts and aviation coursework. This curriculum focuses on the global transportation system with a special emphasis on air transportation and is designed to nurture and develop a students' abilities to participate in the global aviation industry as an ethical practitioner of their field. Students will be able to communicate effectively to solve problems in a diverse environment and instilled with a desire for continued lifelong learning of skills and knowledge to help advance the aviation industry. Graduates of this program will be prepared to find employment in the industry in positions such as route planner or scheduler.

Bachelor of Science degree in Business Administration: Specialization in Aviation Management, Fisher College of Business

The mission of the program is to produce well-rounded aviation managers with a background in business administration and analytics. This curriculum is centered on business fundamentals as applied to aviation concepts and is designed to nurture and develop a students' abilities to participate in the global aviation industry as an ethical practitioner of their field. Students will be able to communicate effectively to solve problems in a diverse environment and instilled with a desire for continued lifelong learning of skills and knowledge to help advance the aviation industry. Graduates of this program will be prepared to gain employment as entry-level managers at airports, airlines, and other aviation companies.

Program Educational Objectives

The following four aviation program objectives were derived by the CAS faculty, lecturers, instructors and staff. These objectives will serve as the basis for our assessment activities. These objectives were created with assistance from the College of Engineering.

- Graduates of the program will be employed in the aviation profession or applying their aviation knowledge to their chosen career.
- Graduates with an interest in advanced studies in aviation will be pursuing, or have completed additional studies.
- Graduates will engage in life-long learning and apply new ideas and technology as the field of aviation evolves.
- Graduates will be informed, involved community members and responsible professionals.

Program Outcomes

AABI General Outcomes

The AABI general outcomes are derived from the Accreditation Criteria Manual section 3.3.1.

Aviation programs must demonstrate that graduates are able to:

- 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 needs for life-long learning;
- g. Assess 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.

AABI Aviation Core Outcomes

Aviation programs demonstrate that their graduates are able to:

1. Describe the professional attributes, requirements, or certifications, and planning applicable to aviation careers.
2. Describe the principles of aircraft design, performance and operating characteristics; and the regulations related to the maintenance of aircraft and associated systems.
3. Evaluate aviation safety and the impact of human factors on safety.
4. Discuss the impact of national and international aviation law, regulations and labor issues on aviation operations.
5. Explain the integration of airports, airspace, and air traffic control in managing the National Airspace System.
6. Discuss the impact of meteorology and environmental issues on aviation operations.

Program Criteria

Aviation Management

Each program MUST provide evidence that graduates possess the necessary knowledge, skills and attitudes to competently and ethically function as a manager in the aviation industry. Each program may be oriented toward a segment of the industry, such as airlines, general aviation or airports; or towards a specific area, such as flight operations management or aircraft maintenance management, or may be of a general nature. Additionally, each program MUST provide evidence that its graduates demonstrate competency in program goals.

Each program MUST provide evidence of a significant culminating upper division experience in aviation management. Examples of a culminating experience include a capstone course, an internship, or a special project that builds on prior course work. Evidence may include student portfolios and other records of student achievement.

Aviation Studies

Each program MUST provide evidence that graduates possess the necessary knowledge, skills, and attitudes to competently and ethically function as a professional in the aviation industry.

The Aviation Studies option provides baccalaureate courses in a coherent sequence to prepare the graduate for a position in the aviation industry and aviation related government agencies, requiring either broad or specialized educational preparation. Each program MUST provide evidence that its graduates demonstrate competency in program goals.

Each program MUST provide evidence of a significant culminating upper division experience in aviation studies. Examples of a culminating experience include a capstone course, an internship, or a special project that builds on prior course work. Evidence may include student portfolios and other records of student achievement.

Flight Education

Each program MUST provide evidence that graduates possess the necessary knowledge, skills and attitudes to competently and ethically function as professional pilots in the aviation industry.

Classroom and laboratory topics MUST lead to appropriate national certification. The program goals MUST include certification/licensure as a Commercial Pilot with an instrument rating, and multiengine land rating or flight instructor. Each program MUST provide evidence that its graduates demonstrate competency in program goals.

Each program MUST provide evidence of a significant culminating upper division experience in flight education. Examples of a culminating experience include a capstone course, an internship, or a special project that builds on prior course work. Evidence may include student portfolios and other records of student achievement.

Continuous Assessment and Improvement

In accordance with the Aviation Accreditation Board International (AABI) Criterion 3.10 Continuous Assessment and Improvement: Each program MUST have an assessment process that includes a written plan with documented results. This process MUST incorporate relevant evidence used to regularly assess the program. The results of the assessment MUST be used to effect continuous improvement of the program.

Continuous Assessment Goals 2021-2022

Assessment Area	Assessment Goal
Students	Does the Corrective Action Plan provide additional resources to help students move through the flight program more effectively and efficiently?
Program Mission and Educational Goals	Reviewed by the External Aviation Advisory Board on a biennial basis.
Student Learning Outcomes	Reviewed each semester
Curriculum	To create and implement a plan to review the aviation curriculum biennial basis, using data that is collected twice annually.
Faculty and Staff	The Center for Aviation Studies has asked each faculty and staff member to outline professional development opportunities that they wish to accomplish over the next year, 2021-2022.
Facilities, Equipment, and Services	Flight Education created a plan to evaluate the current and future needs (over eight years) for aircraft and personnel to better service our students.
Aviation Safety Culture	1) Are students in Flight Education better understanding safety culture and is this system having an impact on their decision-making skills. 2) Does the SMS Risk Management tool align with safety reports that are submitted?
Relations with Industry	To charter a more diverse and inclusive external advisory board that will provide program level feedback to OSU Aviation.

Assessment Tools:

Senior Exit Survey

Once a year, at the end of Aviation 4500: Capstone, traditionally in spring semester, the Curriculum and Assessment Manager will provide a senior exit survey to the faculty or lecturer of record for the course. The purpose of the exit survey is to gain a better understanding for the student experience within the Center for Aviation Studies. Based upon the responses that are received, CAS will be able to assess any areas of concern or continue to improve ideas which are successful. The primary purpose of such a survey is to collect feedback on the academic program that cannot be ascertained through performance on the course alone.

Focus Groups

In addition to the feedback provided to CAS from the Senior Exit Survey, CAS will offer the opportunity for students (first-year-junior standing) to participate in a random focus group. These groups will meet during the spring semester with two members from the Assessment Committee. The questions that are given to the graduating seniors provide the guidance for discussion with the Focus Groups.

Similar to the Senior Exit Survey, the Focus Groups are designed to engage students in the academic program from first-year through their junior year. It is random because students can self-select to participate in the Focus Group.

Course Exams and Assignments

Are the primary tools for evaluating success on the AABI General and Core Outcomes. Each semester up to three of the AABI Core and General Outcomes are selected for review. Faculty teaching a course that is directed at an outcome being reviewed are tasked with providing evidence at the conclusion of the semester to the Assistant Director for Academics and Program Assessment. 80% of students must be demonstrating that they are 'passing' that outcome with an 80% or higher. If evidence demonstrates that students are not being successful on a particular topic, then the Assistant Director and the Faculty member have a discussion about what changes need to be made in order to raise that passing percentage.

Capstone Projects

Aviation 4500: Capstone is the culminating upper-level experience for graduating seniors within the Aviation Major. This course is project based with students participating as a group, to solve, or address, real-world aviation problems. The objective of the course is to leverage the aviation education students have received from CAS and applying it to a project that mimics assignments encountered on the job.

Corrective Action Plan-Flight Education

The Center for Aviation Studies and Flight Education Department created and Compliance program, including a student Corrective Action Plan. This was done in an effort to respond to the needs of students; in an effort to help students move through the program more effectively and efficiently. The Corrective Action Plan process is reviewed at the completion of each semester.

Flight Education Strategic Plan

Flight Education has developed a facilities and personnel plan over the next 8 years in response to the significant amount of growth that OSU has experienced. Within this document is a strategy to expand the aircraft for teaching and the personnel of the department, including flight instructors. This plan is evaluated on an ongoing basis as they continually evaluate the growth of the program.

External Aviation Advisory Board

The External Aviation Advisory Board is tasked with providing feedback to the high level components of OSU Aviation, including (but not limited to), the program mission and educational goals, mission and vision statements, industry relations, curriculum and programmatic changes, among others.

Mid Semester Survey

Periodically the Center for Aviation Studies will distribute a mid-semester survey to the student body to collect feedback. This periodic check is done in support of the other methods of assessment data collection.

Risk Management Tool

The Flight Education Department, as a part of their safety management program, utilize a ‘Risk Management tool.’ This form is completed prior to each flight being dispatched to a student. They are required to respond to a variety of questions about the weather, and hazardous attitudes. The survey is assigned a certain level of points based upon the student response. Depending upon the number of points accumulated indicates whether or not an aircraft may be dispatched for a flight. This tool is used to help track and manage safety culture within the Flight Education Department.

Assessment Timeline

	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	As Needed (ongoing)
Senior Exit Survey				X				X		
AVN 4500 Capstone	X	X	X	X	X	X	X	X	X	
Focus Groups										X
External Aviation Advisory Board		X						X		
Mid Semester Student Survey										X
Course Exams and Assignments	X	X	X	X	X	X	X	X	X	
Corrective Action Plan				X					X	X
Risk Management tool										X
Flight Education Strategic Plan										X

Closing the Loop

Results of Assessment

Using this assessment plan should result in: a better overall educational program and learning environment for our students, and a more informed and connected faculty, lecturers, instructors and staff. All recommended changes to any of the aviation programs must be made based upon assessment results and will be tracked and reported annually to CAS faculty, lecturers, instructors and staff.

Assessment results will be shared on a regular basis to appropriate stakeholders, including, but not limited to, students, faculty, staff, the External Aviation Advisory Board, the three colleges, and other university administrators.

Assessment Plan Evaluation

It is vitally important that the above plan is subject to regular review to ensure that it is in fact assessing the center's goals, results are being distributed, and that results are impacting change. Evaluating the Assessment Plan will be done informally on a continual basis through discussions with target groups, and between committee members. This plan is a flexible, working document that will need to be revised to uphold its purposes and usefulness to the department and its students.