

# AABInternational

<b>INSERT INSTITUTIONAL OR COLLEGE/SCHOOL LOGO HERE</b>	<b>INSERT UNIVERSITY NAME</b>  <b>The Ohio State University</b>
	<b>Center for Aviation Studies</b>
	<b>B.S. in Aviation with Professional Pilot</b>
<b>8-21-18</b>	<b>COMPLIANCE WITH AABI POLICY 3.4.2</b>

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

## **Program Education Goals and Objectives:**

It is the intent of the faculty and staff of the Center for Aviation Studies that within the first few years after graduation:

- 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.

***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.

**Assessment Plan**  
**Center for Aviation**  
**Studies**  
**The Ohio State University**



**THE OHIO STATE**  
**UNIVERSITY**

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**The College of Engineering**  
**2017**

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## **Assessment Program Overview**

This assessment plan is 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 Center for Aviation Studies assessment program is administered by the Curriculum and Assessment Manager. 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 Curriculum and Assessment Manager 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.

### **Assessment Committee**

- CAS Curriculum and Assessment Manager
- Academic Advisor
- Flight Education Representative
- Faculty/Lecturer Representative

## **Mission and Vision Statements**

### **The Ohio State University**

We exist to advance the well-being of the people of Ohio and the global community through the creation and dissemination of knowledge.

### **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.

### **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 be 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**

CAS follows AABI's identified general and aviation core outcomes for each of its core courses, across all five degree programs. CAS has mapped the general and core outcomes to each core course and has determined what 'level' the course is taught at (introductory, reinforcing, and expert). The Curriculum Committee maintain a separate database with the curriculum map and requires each instructor to verify/update the information on a yearly basis.

### **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.

## **Assessment Techniques**

The assessment process is ongoing throughout the academic year. Data is collected and analyzed continuously throughout the CAS and used to foster better student learning outcomes. The following techniques are used to gather both direct and indirect feedback on students learning. While the Curriculum and Assessment Manager is responsible for maintain and updating the assessment plan, CAS faculty, lecturers, staff, and students, all have input into the assessment process.

### **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.

The following are the questions that are asked of the students:

1. Please tell us three things that you believe the Center for Aviation Studies is doing well.
2. Describe three areas for improvement (include any ideas for solutions).
3. Would you recommend the program to incoming first-year students? Why or why not?
4. Did you participate in any of the Center's activities (e.g. Industry Night, Mock Interviews, etc.)? Were they valuable to your educational experience as an undergraduate why or why not?
5. Did you participate in any of the Center's student organizations (AHP, AAAE, WAI, etc.)? If not why?
6. Did you feel like the courses you took in Aviation were relevant to your desired degree and career aspirations (be specific)? Please provide details.
7. Were materials and resources available to you and were they sufficient (private pilot specific)?
8. Please provide feedback on the Center for Aviation Studies instructional staff (provide details):
  - a. Were they knowledgeable about the topics they taught?
  - b. How was their teaching style?

## **Random 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.

The following are the questions that are asked of the students:

1. Please tell us three things that you believe the Center for Aviation Studies is doing well.
2. Describe three areas for improvement (include any ideas for solutions).
3. Would you recommend the program to incoming first-year students? Why or why not?
4. Did you participate in any of the Center's activities (e.g. Industry Night, Mock Interviews, etc.)? Were they valuable to your educational experience as an undergraduate why or why not?
5. Did you participate in any of the Center's student organizations (AHP, AAAE, WAI, etc.)? If not why?
6. Did you feel like the courses you took in Aviation were relevant to your desired degree and career aspirations (be specific)? Please provide details.
7. Were materials and resources available to you and were they sufficient (private pilot specific)?
8. Please provide feedback on the Center for Aviation Studies instructional staff (provide details):
  - a. Were they knowledgeable about the topics they taught?
  - b. How was their teaching style?

## **Course Exams and Assignments**

Course exams and assignments will be used on a scheduled basis to lead faculty discussion and collaboration on students learning in the context of the specified outcomes.

At the end of each semester all individuals who had a teaching assignment are required to submit an “End of Course Round-Up” to the CAS Curriculum and Assessment Manager. The End of Course Round-Up includes the following information:

- Syllabus
- Number of students
- Distribution of grades and averages
- List of assessment techniques
- Student Evaluation of Instruction (SEI) forms

The Curriculum and Assessment Manager will use these End of Course Round-Up forms to track and review the course, student performance, and the assessment of the student learning outcomes.

Each year the Curriculum and Assessment Committee will select two aviation core courses and one flight certification course to undergo a more formal course review. This course review will ensure that the course is adequately teaching the outcomes and objectives provided to AABI. Creating such a schedule will ensure that the eight aviation core courses and four flight certification courses are reviewed by the assessment committee every four years.

The instructor who was most recently assigned to teach the course will be required present a full report to the assessment committee to include the following:

- Syllabus
- Historical student enrollments
- Historical Grade Distributions
- List of all Assessment Techniques
- Samples of SEI's
- Evidence of teaching and assessment of the AABI General Outcomes, AABI Core Outcomes and AABI Program Criteria
- Examples of high, medium and low grades on exams, papers and homework

The purpose of such an evaluation is to provide a more in-depth review and evaluation of the course, leveraging historical data and reviews assess the need for course changes and to strategize remedies.

## **Mid-semester Student Survey**

CAS developed a survey that all aviation students take during the middle of the semester. This is an extremely brief survey (6 questions total), to gauge how the semester is generally going for students, and to offer them the opportunity to share any concerns they might have about aviation courses they are currently taking. The following questions are asked:

- 1) Which program are you currently enrolled in?
- 2) What year are you in school?

- 3) Please rate your overall experience in the aviation program this semester?
- 4) Please elaborate on your rating above (text box)
- 5) Please list which aviation courses you are currently enrolled in this semester.
- 6) Please share any additional feedback that might be helpful for the CAS Curriculum Committee. (Feel free to share course specific information).

Responses from this survey are then shared (at a staff meeting) out to the staff, faculty, and lectures of the Center, while maintaining the anonymity of the students who responded. During the meeting, the group determined the most effective way to either gain more information, or to address the concerns of the students. Typically one survey does not lead to a specific change, but it does lead to the Center requesting additional information in order to further investigate any issues/concerns.

### **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.

## Stage Check Review and FAA Written Examinations: (Used to assess Professional Pilot Specialization students)

A Post-Stage Check review form will be required to be filed out by the evaluator and turned into the Director of Flight Education and the Curriculum and Assessment Manager at the completion of each Stage Check. This form will record data about the students' performance during the oral and practical exams, as well as their score on the FAA written exam. It will also list any topic areas from the FAA written test and the Practical Test Standards in which the student was found to be deficient.

This information will be evaluated every year to view stage check completion rates and identify any trends in decreasing student proficiency rates so that appropriate modifications can be made to the Pilot Certification Courses.

### Assessment Timeline

	September	October	November	December	January	February	March	April	May
Senior Exit Survey								X	
AVN 4500 Capstone	X	X	X	X	X	X	X	X	
Random Focus Groups			X					X	
Industry Advisory Board		X						X	
Faculty Oversight Committee			X					X	
Mid Semester Student Survey		X					X		
End of course Round-Up				X					X
Course Exams and Assignments	X	X	X	X	X	X	X	X	X
Stage Check Review	X	X	X	X	X	X	X	X	X

## **The Center for Aviation Studies Advisory Boards**

The Center for Aviation Studies recognizes that it needs to include more voices and knowledge in the continued development of its program. In response to the recognition of this need the staff, faculty, and lecturers have determined a regular meeting schedule which will aid in this process. There will be eight meetings total during the academic year; two for CAS faculty and staff, two for the Faculty Oversight Committee, two for the Industry Advisory Board, and two with the Center for Aviation Studies Student Association (CASSA). These eight meetings will occur once a month and the focus will be solely on the review and feedback of CAS academic programs and processes.

Due to the nature of these meetings occurring one a month, CAS will receive regular feedback towards its academic program from a variety of stakeholders, allowing CAS to be able to monitor and implement changes more rapidly.

### **Aviation Industry Advisory Board**

The Center for Aviation Studies has recently given one of the lecturing staff the additional role of acting as the Industry Relations Coordinator on behalf of CAS. This individual, in response to the AABI Site visit in 2016, has begun to assess and redevelop the CAS Industry Advisory Board.

Currently the Industry Relations Coordinator and the Director of the Center for Aviation Studies, are in the process of selecting twenty individuals with a variety of expertise from across the industry. Within that IAB there will be an Executive Board of approximately six members who will be responsible for providing direct feedback to CAS. The remaining members will be tasked with reviewing specific aspects of the program that align to their area of expertise. The IAB will convene for the first time during spring semester 2017.

### **Faculty Oversight Committee**

Every spring semester the Aviation Industry Advisory Board will meet to assess the departmental goals, and determine if any changes need to be made to ensure that students are prepared for a career in the aviation industry. Membership on this board is determined by the Assessment Committee. Members are appointed for a two-year term.

### **Aviation Alumni Society**

In addition to the aforementioned advisory boards, CAS regularly receives feedback from The Aviation Alumni Society Board. This meets three times per year to discuss the issues relevant to the alumni of the Ohio State aviation program. The CAS Director is a member of this board and can thus report to the Assessment Committee any information in which the Alumni feel the CAS can improve its curriculum and produce more well-rounded graduates.



## **Closing the Loop**

### **Results of Assessment**

The end product of using this assessment plan should result in more significant learning for our students, a better overall educational program and 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. The Curriculum and Assessment Manager shares the results of the various assessments and solicits feedback during monthly staff meetings.

### **Dissemination of Assessment Results**

Results are shared with CAS staff, faculty, lecturers, and staff on an ongoing basis throughout the semester. The Curriculum Committee meets on a bi-weekly basis and will discuss the results of the various assessment tools, based upon the timeline mentioned above. Once the committee has had a chance to review the results, the information is provided during a staff meeting for further review and discussion.

### **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 amongst the curriculum committee. This plan is a flexible, working document that will need to be revised to uphold its purpose and usefulness to the Center, its students, and other relevant constituents.

**Graduation:**

The first table indicates the number of students who graduated from one of the five different aviation academic program plans over the last four academic years. The second table lists the total number of students who completed the Air Transportation agree and how many completed the Private Pilot Specialization.

*Total number of graduates across all degree plans (all years are Autumn-Summer)*

<b>14-15</b>	<b>15-16</b>	<b>16- 17</b>	<b>17-18</b>
36	35	38	50

*Total number of graduates across all degree plans (all years are Autumn-Summer)*

	<b>14-15</b>	<b>15-16</b>	<b>16- 17</b>	<b>17-18</b>
ENG	6	11	12	9
ENG W/ Pilot	3	1	4	2

**Types of Employment:**

The majority of our Center for Aviation Studies graduates end up in the following kinds of positions, primarily for airlines or corporate aviation companies.

- Flight Instructors
- Regional Airline Pilot (PSA, Republic, Endeavor, Envoy, SkyWest, etc.)
- Air Traffic Controller
- Training Department
- Analysts
- Schedulers
- Airport planning
- Airport business managers