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 SAINT LOUIS UNIVERSITY. — EST. 1818 —	<h2>Saint Louis University</h2>
March 19, 2018	Parks College of Engineering, Aviation and Technology
	Bachelor of Science in Aeronautics Concentration in Flight Science
	Compliance with AABI Policy 3.4.2

Framed by our institutional Mission, SLU's University-wide undergraduate student learning outcomes define the essential educational expectations for all graduates, regardless of major.

Program Mission and Educational Goals:

Saint Louis University Mission Statement:

The Mission of Saint Louis University is the pursuit of truth for the greater glory of God and for the service of humanity. The University seeks excellence in the fulfillment of its corporate purposes of teaching, research, health care and service to the community. It is dedicated to leadership in the continuing quest for understanding of God's creation and for the discovery, dissemination and integration of the values, knowledge and skills required to transform society in the spirit of the Gospels. As a Catholic, Jesuit University, this pursuit is motivated by the inspiration and values of the Judeo-Christian tradition and is guided by the spiritual and intellectual ideals of the Society of Jesus.

In support of its mission, the University:

- Encourages and supports innovative scholarship and effective teaching in all fields of the arts; the humanities; the natural, health and medical sciences; the social sciences; the law; business; aviation; and technology.
- Creates an academic environment that values and promotes free, active and original intellectual inquiry among its faculty and students.
- Fosters programs that link University resources to local, national and international communities in collaborative efforts to alleviate ignorance, poverty, injustice and hunger; extend compassionate care to the ill and needy; and maintain and improve the quality of life for all persons.
- Strives continuously to seek means to build upon its Catholic, Jesuit identity and to promote activities that apply its intellectual and ethical heritage to work for the good of society as a whole.

- Welcomes students, faculty and staff from all racial, ethnic and religious backgrounds and beliefs and creates a sense of community that facilitates their development as men and women for others.
- Nurtures within its community an understanding of and commitment to the promotion of faith and justice in the spirit of the Gospels.
- Wisely allocates its resources to maintain efficiency and effectiveness in attaining its mission and goals.

Mission Statement of the Department of Aviation Science:

The mission of the Department of Aviation Science is to actively engage in the fulfillment of the University's mission so that our students are formed as global citizens who are intellectually, technically, and ethically prepared to be responsible leaders in their profession and their community.

The Aviation Science Department supports the mission of the University through its undergraduate programs by providing students with appropriate curricula and educational experiences. The curricula remain current by implementing a continuous assessment process which includes pertinent stakeholders such as employers, alumni, faculty and students.

Program Educational Objectives (PEOs):

The program educational objectives have been formulated and implemented to graduate professional pilots who meet the missions of the program, Parks College of Engineering, Aviation and Technology, and Saint Louis University. These objectives are focused on the development of graduates who have had exceptional academic experiences at a Jesuit Catholic university, and who are prepared to serve the local, national, and international community by advancing the quality of human life. The program educational objectives for the Bachelor of Science degree offered by the Department of Aviation Science are listed below. These objectives have been developed with input from the faculty, staff, as well as constituents, including students, alumni, and employers.

Program educational objectives are narrow, specific statements that describe what students are expected to know and to be able to do by the time of graduation from the degree program. This definition is consistent with Saint Louis University's assessment requirements. The program educational objectives for the bachelor's degree in Aeronautics are listed below.

- **Program Educational Objective: Knowledge**
Graduates of the Flight Science program will demonstrate broad **knowledge** in the following fundamental subject areas:
 - Mathematics
 - Physics
 - Chemistry
 - Philosophy
 - Psychology
 - Theology
 - Ethics
 - English Composition and Literature

Graduates of the Aeronautics degree program will demonstrate their ability to build upon their fundamental **knowledge** in mathematics, sciences, and liberal arts to analyze, synthesize, and evaluate contemporary problems in the Aeronautics domain. The overall areas covered in the program include the following:

- Professional Orientation
- Aircraft Design, Operation, and Maintenance
- Aviation Safety and Human Factors
- Safety Management Systems
- National and International Aviation Law and Regulations
- Airports, Airspace, and Air Traffic Control
- Meteorology and Environmental Issues
- Aerodynamics
- Economics of Air Transportation
- Culminating Senior Project
- A cohesive Set of Approved Electives (a minor or a certificate is **STRONGLY** encouraged)

- **Program Educational Objective: Skills**

Graduates of the Aeronautics program will demonstrate proficiency in the following skills:

- **Aircraft piloting** skills to achieve a Commercial Pilot certificate with Instrument and Multiengine ratings (if applicable to the student.)
- Oral, Written, and Team **Communication** skills to plan, execute, and present team projects in a peer-review setting.
- **Research** skills to collect data via appropriate literature searches, apply appropriate analytical techniques, synthesize professional-quality reports, and present the research results.
- **Critical thinking** and **Analytical** skills to solve problems.
- **Decision-making** skills to evaluate and proactively resolve flight-related challenges.
- **Team Building** skills that apply interpersonal communication skills and decision-making skills to resolve conflicts, manage challenges, and build high-performing teams.

- **Program Educational Objective: Abilities**

In general, graduates of the Aeronautics degree program will have the ability to succeed in life, regardless of their chosen career field. They will demonstrate the following key abilities:

- They will be able to **learn to learn**; therefore, they will be able to acquire new knowledge, solve new problems, and adapt to new environments.
- They will maintain their **curiosity** for new knowledge, their **imagination** for innovative solutions, and their **creativity** in applying their knowledge and skills in novel ways.
- They will develop their ability to **self-motivate** and **dedicate** themselves to every endeavor with **passion**.
- They will apply **sound ethical judgment** in their personal and professional lives marked by integrity and trust.
- They will strive to **serve others** in their personal, professional, and communal responsibilities.

- **Program Educational Objective: Attitude**

Ultimately, the graduates of the Aeronautics degree program are products of a Jesuit university. As such, they will demonstrate the following attitudes:

- They will **respect the universality**—the inclusiveness—of a variety of intellectual disciplines that synergistically enrich each other as well as the multitude of spiritual paths that open one’s mind to the transcendent.
- They will strive toward service to their fellow human beings as **men or women for others** and in so doing; they will strive to apply their technical knowledge and skills for the betterment of humanity.
- Always give more =>**MAGIS**. These graduates will be whole-heartedly charged to make a contribution toward their family, their organization, and their society—they will be inspired to choose to **do what is most needed** among the multitude of things that they are trained, skilled, prepared or gifted to do

Program Objectives Assessment Timeline and Data Collection

The assessment of Program Educational Objectives involves ongoing data collection throughout the academic year and specific analysis by the department during each fall and spring semester. See Table 1 for the types of information collected for assessment purposes.

Table 1. Assessment Timeline and Data Collected		
<i>Stakeholder Group</i>	<i>Type of Data Collected</i>	<i>When Data is Collected</i>
Alumni	Survey	Summer
Students	Guided Discussion	Fall & Spring
	Course Evaluations	Fall & Spring
	Seniors	Exit Interview/Survey
	Course Success	Fall & Spring
Faculty & Staff	Discussion	Continuous
	Outcomes	Summer/Winter Retreats
Academic Advisors	Guided Discussions	Summers

Assessment Methods

A variety of assessment methods are employed to determine how well the program is achieving both the program educational objectives and the program outcomes. These include both direct and indirect measures and assessments. The following is a brief description of each of these methods. See Figure 1 for a model of the assessment process utilized by the department.

- **Graduation Exit Survey and Interviews**

During their final semester, graduating seniors are asked to fill out a multi-page survey asking many questions about their opinions of the Aviation Science program. A number of these are directly related to their perception of their achievement of the program’s learning outcomes. While these self-reported results do not demonstrate actual achievement of any

outcome, they are useful as an indication of the graduates' level of confidence in performing outcome-related tasks. As such, evidence of a potential weakness in graduates' abilities might be identified. Each senior is invited to meet with the department chair, who may ask for further details based on some of their comments provided.

- **Employer and Internship (or Practicum) Surveys**

This survey is sent to all entities that are known to have hired an Aviation Science graduate from the program in the preceding five years or employed the student within an internship position. Many of the questions are directly tied to program educational outcomes and allow employers to rate how well program students are displaying those attributes or skills. Upper-division students who serve as aviation instructors in practicum courses will be assessed by their student teaching supervisors. While not a direct measure, this instrument is still considered particularly valuable in determining what the graduates are able to do upon entering the profession.

- **Alumni Survey**

Surveys of alumni are conducted by Career Services of Saint Louis University and provide data about employment of graduates and alumni satisfaction. Graduating students of the University are surveyed each year by the Office of the Provost. Graduates are asked about how well the academic program prepared them for employment or graduate study. Other questions are tied directly to educational outcomes, identifying how well graduates feel those outcomes were achieved. Surveys also provide some employment information, such as self-reported salary ranges and job titles.

- **Federal Aviation Administration (FAA) Knowledge and Practical Exams**

The FAA knowledge and practical exams (oral and flight) are standardized, national exams for the certification of pilots. Knowledge exams are available each semester at the Parks College PSI/Cats Testing Center. These exams represent evaluations of performance. Passage of these exams is a critical step on the path to becoming a professional pilot. The student is requested to submit their scores to the course instructors.

- **Capstone Course Results**

Primary courses in the program (ASCI 4022 Jet Transport Flying Techniques II) are used to complete the students' "capstone" experience. These courses are intended to be taken toward the end of a student's program of learning and are designed to require the students to integrate many topics, aptitudes, attitudes, values, knowledge and skills from previous coursework. As such, their performance in these courses can provide useful information regarding the knowledge, behaviors, and skills they are able to demonstrate.

- **Faculty Input**

In addition to the opportunities mentioned above for faculty to provide input, the faculty as a whole is periodically surveyed for input regarding achievement of one or more program outcomes, as well as for other issues that pertain to the achievement of program graduates. This survey may be informal, during a faculty meeting, or in a more formal written survey instrument. This is also a means of collecting information regarding any class-level assessment of individual faculty performance, the results of which may be useful to the faculty in general.

- Simulations**
 The student's abilities are measured in a created situation that approximates a "real world" setting. Simulation, especially in flight training device labs, provides a means of evaluating student skill development.
- Locally Developed Exams**
 Faculty designed tests are utilized for individual coursework evaluation and program improvement. The approach to testing is geared to specific goals, objectives, and outcomes relevant to the Aeronautics degree program. In many cases, the Oxford ATPL series of textbooks and other sources such as oral exam preparation guides have been used in developing course tests to provide a representative sample of industry standard questions for evaluation and assessment.
- Student Volunteer or Organizational Activities**
 Levels of student participation in service to others may provide measures of motivation and contributions to organizations and society. Participation levels in local student organizations will be tracked.
- Other Assessment Methods**
 Other processes may be utilized to evaluate the achievement of learning outcomes and the program educational objectives. Among these are enrollment trends, retention studies and graduation rates, use of external jurors or evaluators, and student input.

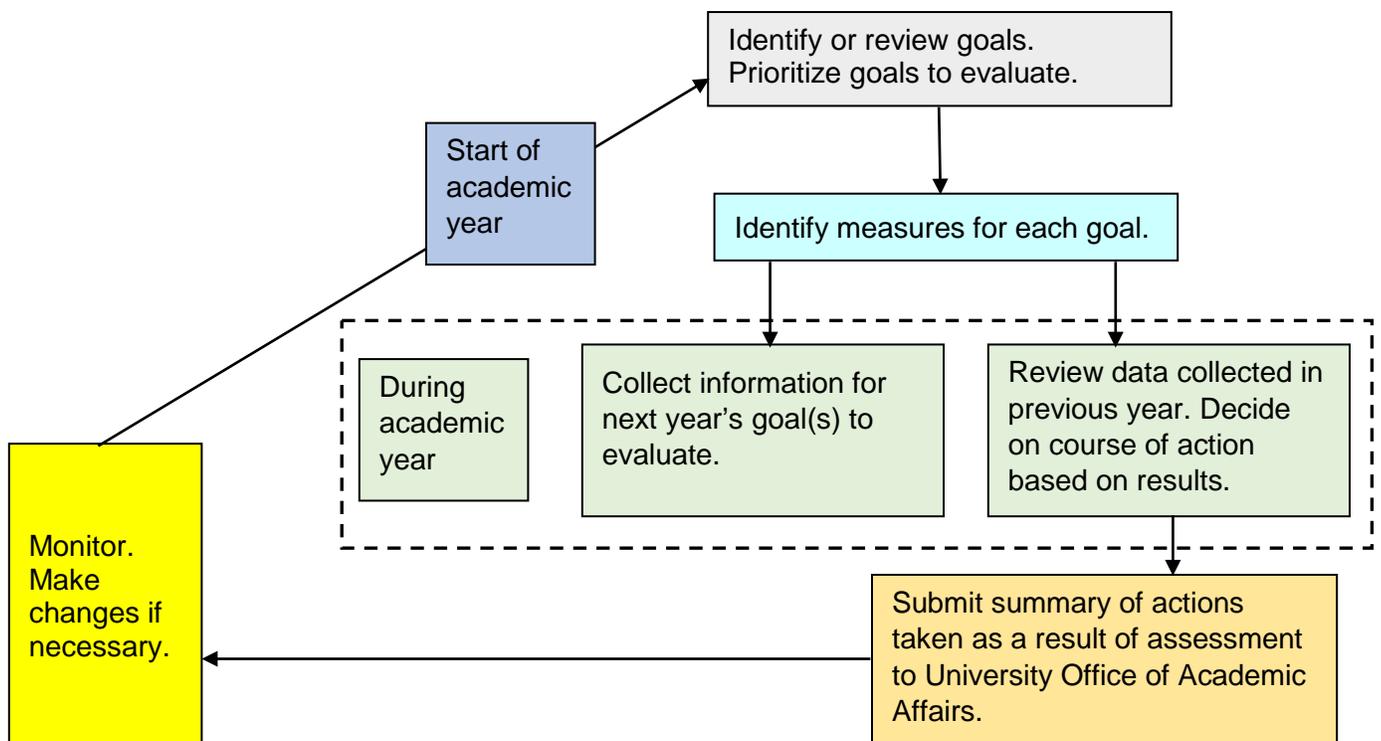


Figure 1: Model of Continuous Assessment of Academic Concentrations

Evaluating the Achievement of Program Educational Objectives

Evaluation of program education objectives is an ongoing process. Data is collected from our diverse group of stakeholders that share an interest in the academic degree programs. During the summer, a survey will be available to alumni detailing the adequacy of the program objectives. Demographic information within the dataset will include the graduation date and position related information. An agenda item for the Faculty Retreats held each summer and winter will be discussion of program educational outcomes and as necessary the consideration of any proposals.

Once a revision has been identified and approved at the department level changes are forwarded to various college and University level committees for approval prior to implementation. (See Figure 1)

Assessment of Program Student Learning Outcomes:

The Department of Aviation Science is accredited by the **Aviation Accreditation Board International (AABI)**. As such, the department utilizes the AABI Student Learning Outcomes in its continuing assessment process. The AABI Student Learning Outcomes are:

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

The Department of Aviation Science has developed a matrix by which all undergraduate courses taught by the department will be assessed to determine if the courses successfully fulfill the student learning outcome requirements. Additionally, the department has developed a Program Assessment Plan by which a subset of courses is assessed to determine whether programmatic changes are required.

Department of Aviation Science

Program Student Learning Outcome Assessment Matrix of Undergraduate Courses

Undergraduate Courses	Program 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
ASCI 1010 Professional Orientation					X		X				
ASCI 1010 Professional Orientation (SPS)					X		X				
ASCI 1300 Aviation Weather	X	X						X			
ASCI 1510 The Air Transportation System							X	X			
ASCI 1510 The Air Transportation System (SPS)							X	X			
ASCI 1850 Safety Management Systems		X		X				X		X	
ASCI 1850 Safety Management Systems (SPS)		X		X				X		X	
ASCI 2200 Concepts in Aerodynamics	X	X						X			
ASCI 2250 Aviation and Airport Security							X	X	X	X	
ASCI 2250 Aviation and Airport Security (SPS)							X	X	X	X	
ASCI 2750 Accident Investigation		X								X	
ASCI 2750 Accident Investigation (SPS)		X								X	
ASCI 3010 Jet Transport Systems I								X		X	
ASCI 3020 Jet Transport Systems II								X		X	
ASCI 3050 Ops & Business Environ of Aviation							X			X	X
ASCI 3050 Ops & Bus Environ of Aviation (SPS)							X			X	X
ASCI 3062 Turbine Aircraft Transition	X		X					X			
ASCI 3100 Air Carrier Operations				X							X
ASCI 3100 Air Carrier Operations (SPS)				X							X
ASCI 4012 Jet Flying Techniques I	X	X	X		X	X		X		X	X
ASCI 4013 Jet Flying Techniques I Laboratory											
ASCI 4022 Jet Flying Techniques II	X	X						X	X		
ASCI 4023 Jet Flying Techniques II Laboratory											
ASCI 4050 Human Factors		X	X	X	X			X		X	

ASCI 4050 Human Factors (SPS)		X	X	X	X			X		X	
ASCI 4250 Professional Ethics and Standards				X	X	X	X			X	X
ASCI 4250 Prof. Ethics and Standards (SPS)				X	X	X	X			X	X
ASCI 4350 Team Resource Management			X		X	X				X	
ASCI 4800 International Aviation		X	X		X	X			X	X	
ASCI 4800 International Aviation (SPS)		X	X		X	X			X	X	
ASCI 4900 Senior Seminar	X	X		X			X				
ASCI 4900 Senior Seminar (SPS)	X	X		X			X				
ASCI 4450 Aviation Law		X		X	X	X	X		X		
ASCI 4450 Aviation Law (SPS)		X		X	X	X	X		X		
ASCI 4650 Economics of Air Transportation	X	X	X		X		X	X	X	X	X
ASCI 4650 Econ. of Air Transportation (SPS)	X	X	X		X		X	X	X	X	X
FSCI 1150 Flight I								X		X	
FSCI 1250 Basic Flight Foundations								X			
FSCI 1550 Flight 2								X		X	
FSCI 1560 Flight 2 Transition								X		X	
FSCI 2150 Flight 3								X		X	
FSCI 2250 Instrument Flight Foundations	X							X			
FSCI 2550 Flight 4								X		X	
FSCI 2650 Navigation Foundations	X							X			
FSCI 3550 Flight 5								X		X	
FSCI 3700 Principles of Flight Instruction I								X		X	
FSCI 3750 Flight Instruction Prep I								X		X	

Program Assessment Plan

Program: Bachelor of Science in Aeronautics with a Concentration in Flight Science

Department: Aviation Science

College/School: Parks College of Engineering, Aviation and Technology

Date: March 19, 2018

Primary Assessment Contact: Stephen Magoc, Chairperson

Note: Each cell in the table below will expand as needed to accommodate your responses.

#	Program Learning Outcomes	Assessment Mapping	Assessment Methods	Use of Assessment Data
	<p>What do the program faculty expect all students to know, or be able to do, as a result of completing this program?</p> <ul style="list-style-type: none"> ▪ <i>Note: These should be measurable, and manageable in number (typically 4-6 are sufficient).</i> 	<p>From what specific courses (or other educational/professional experiences) will artifacts of student learning be analyzed to demonstrate achievement of the outcome? Include courses taught at the Madrid campus and/or online as applicable.</p>	<p>What specific artifacts of student learning will be analyzed? How, and by whom, will they be analyzed?</p> <ul style="list-style-type: none"> ▪ <i>Note: the majority should provide direct, rather than indirect, evidence of achievement.</i> <p>Please note if a rubric is used and, if so, include it as an appendix to this plan.</p>	<p>How and when will analyzed data be used by faculty to make changes in pedagogy, curriculum design, and/or assessment work?</p> <p>How and when will the program evaluate the impact of assessment-informed changes <i>made in previous years</i>?</p>
A	<p>Apply mathematics, science, and applied sciences to aviation related disciplines.</p>	<p>The data from the following courses will be used to assess if the undergraduate programs fulfill this student learning outcome:</p> <p>ASCI 4022 Jet Flying Techniques II</p>	<p>Direct Measures: The student learning outcome will be assessed using data from:</p> <p>The final LOFT scenario flight exam (videotaped and monitored by the course instructor and an additional faculty member) will be obtained from the ASCI 4022 course.</p> <p>Indirect Measures: End-of course student surveys.</p>	<p>Assessment of the program learning outcome will be assessed on a two-year cycle. The assessment results will be analyzed by the department faculty using a rubric applied to the student data obtained from the courses listed to determine whether the students can apply mathematics, science, and applied science to aviation disciplines.</p> <p>Recommendations for curriculum pedagogy and/or assessment revisions will be made by the department faculty at to allow for appropriate implementation.</p> <p>Reviews of the impact of any such program changes will be conducted</p>

				during the following year and the records of these reviews will be maintained by the department and reported to the Dean of Parks College of Engineering, Aviation and Technology and to Saint Louis University's Office of the Provost.
B	Analyze and interpret data.	<p>The data from the following courses will be used to assess if the undergraduate programs fulfill this student learning outcome:</p> <p>ASCI 4022 Jet Flying Techniques II</p>	<p>Direct Measures: The student learning outcome will be assessed using data from:</p> <p>The final LOFT scenario flight exam (videotaped and monitored by the course instructor and an additional faculty member) will be obtained from the ASCI 4022 course.</p> <p>Indirect Measures: End-of course student surveys.</p>	<p>Assessment of the program learning outcome will be assessed on a two-year cycle. The assessment results will be analyzed by the department faculty using a rubric applied to the student data obtained from the courses listed to determine whether the students can analyze and interpret data.</p> <p>Recommendations for curriculum pedagogy and/or assessment revisions will be made by the department faculty at to allow for appropriate implementation.</p> <p>Reviews of the impact of any such program changes will be conducted during the following year and the records of these reviews will be maintained by the department and reported to the Dean of Parks College of Engineering, Aviation and Technology and to Saint Louis University's Office of the Provost.</p>
C	Work effectively on multi-disciplinary and diverse teams.	<p>The following courses will be used to assess if the undergraduate programs fulfill this student learning outcome:</p> <p>ASCI 4350 Team Resource Mgt.</p>	<p>Direct Measures: The student learning outcome will be assessed using data from:</p> <p>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 ASCI 4350 course.</p> <p>Indirect Measures: End-of course student surveys.</p>	<p>Assessment of the program learning outcome will be assessed on a two-year cycle. The assessment results will be analyzed by the department faculty using a rubric applied to the student data obtained from the courses listed to determine whether the students can work effectively on multi-disciplinary and diverse teams.</p> <p>Recommendations for curriculum pedagogy and/or assessment revisions will be made by the department faculty at to allow for appropriate implementation.</p> <p>Reviews of the impact of any such program changes will be conducted during the following year and the records of these reviews will be maintained by the department and reported to the Dean of Parks College of Engineering, Aviation and Technology and to Saint Louis</p>

				University's Office of the Provost.
D	<p>Make professional and ethical decisions.</p>	<p>The following course will be used to assess if the undergraduate programs fulfill this student learning outcome:</p> <p>ASCI 4250 Prof. Ethics and Standards</p>	<p>Direct Measures: The student learning outcome will be assessed using data from:</p> <p>The results of embedded questions in quizzes; mid-term examinations, final examinations, case studies and evidence of the student knowledge of course topics found in the research paper requirement of the course will be obtained from the ASCI 4250 course.</p> <p>Indirect Measures: End-of course student surveys.</p> <p>Student awareness of the Parks College's Academic Integrity Policy.</p> <p>Department level aggregate data of violations of the Academic Integrity Policy.</p>	<p>Assessment of the program learning outcome will be assessed on a two-year cycle. The assessment results will be analyzed by the department faculty using a rubric applied to the student data obtained from the courses listed to determine whether the students can make professional and ethical decisions.</p> <p>Recommendations for curriculum pedagogy and/or assessment revisions will be made by the department faculty at to allow for appropriate implementation.</p> <p>Reviews of the impact of any such program changes will be conducted during the following year and the records of these reviews will be maintained by the department and reported to the Dean of Parks College of Engineering, Aviation and Technology and to Saint Louis University's Office of the Provost.</p>
E	<p>Communicate effectively, using both written and oral communication skills.</p>	<p>The following courses will be used to assess if the undergraduate programs fulfill this student learning outcome:</p> <p>ASCI 4350 Team Resource Mgt.</p>	<p>Direct Measures: The student learning outcome will be assessed using data from:</p> <p>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 ASCI 4350 course.</p> <p>Indirect Measures: End-of course student surveys.</p>	<p>Assessment of the program learning outcome will be assessed on a two-year cycle. The assessment results will be analyzed by the department faculty using a rubric applied to the student data obtained from the courses listed to determine whether the students can communicate effectively, using both written and oral communication skills.</p> <p>Recommendations for curriculum pedagogy and/or assessment revisions will be made by the department faculty at to allow for appropriate implementation.</p> <p>Reviews of the impact of any such program changes will be conducted during the following year and the records of these reviews will be maintained by the department and reported to the Dean of Parks College of Engineering, Aviation and Technology and to Saint Louis University's Office of the Provost.</p>
F	<p>Engage in and recognize the need for life-long learning.</p>	<p>The following courses will be used to assess if the undergraduate programs fulfill this student learning outcome:</p>	<p>Direct Measures: The student learning outcome will be assessed using data from:</p>	<p>Assessment of the program learning outcome will be assessed on a two-year cycle. The assessment results will be analyzed by the department faculty using</p>

	ASCI 1010 Professional Orientation ASCI 4350 Team Resource Mgt.	<p>The results of embedded questions in quizzes, tests and the final exam and of the student group presentations will be obtained from the ASCI 1010 course.</p> <p>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 ASCI 4350 course.</p> <p>Indirect Measures: End-of course student surveys.</p>	<p>a rubric applied to the student data obtained from the courses listed to determine whether the students can engage in and recognize the need for life-long learning.</p> <p>Recommendations for curriculum pedagogy and/or assessment revisions will be made by the department faculty at to allow for appropriate implementation.</p> <p>Reviews of the impact of any such program changes will be conducted during the following year and the records of these reviews will be maintained by the department and reported to the Dean of Parks College of Engineering, Aviation and Technology and to Saint Louis University's Office of the Provost.</p>
G	<p>Assess contemporary issues.</p> <p>The following course will be used to assess if the undergraduate programs fulfill this student learning outcome:</p> <p>ASCI 4450 Aviation Law</p>	<p>Direct Measures: The student learning outcome will be assessed using data from:</p> <p>The scoring rubrics used to determine the results of student and group presentations of select case studies will be obtained from the ASCI 4450 course.</p> <p>Indirect Measures: End-of course student surveys.</p>	<p>Assessment of the program learning outcome will be assessed on a two-year cycle. The assessment results will be analyzed by the department faculty using a rubric applied to the student data obtained from the courses listed to determine whether the students can assess contemporary issues.</p> <p>Recommendations for curriculum pedagogy and/or assessment revisions will be made by the department faculty at to allow for appropriate implementation.</p> <p>Reviews of the impact of any such program changes will be conducted during the following year and the records of these reviews will be maintained by the department and reported to the Dean of Parks College of Engineering, Aviation and Technology and to Saint Louis University's Office of the Provost.</p>
H	<p>Use the techniques, skills, and modern technology necessary for professional practice.</p> <p>The following courses will be used to assess if the undergraduate programs fulfill this student learning outcome:</p> <p>ASCI 4022 Jet Flying Techniques II</p>	<p>Direct Measures: The student learning outcome will be assessed using data from:</p> <p>The final LOFT scenario flight exam (videotaped and monitored by the course instructor and an additional faculty member) will be obtained from the ASCI 4022 course.</p>	<p>Assessment of the program learning outcome will be assessed on a two-year cycle. The assessment results will be analyzed by the department faculty using a rubric applied to the student data obtained from the courses listed to determine whether the students can use the techniques, skills and modern technology necessary for professional practice.</p>

			<p>Indirect Measures: End-of course student surveys.</p>	<p>Recommendations for curriculum pedagogy and/or assessment revisions will be made by the department faculty at to allow for appropriate implementation.</p> <p>Reviews of the impact of any such program changes will be conducted during the following year and the records of these reviews will be maintained by the department and reported to the Dean of Parks College of Engineering, Aviation and Technology and to Saint Louis University's Office of the Provost.</p>
I	<p>Assess the national and international aviation environment.</p>	<p>The following courses will be used to assess if the undergraduate programs fulfill this student learning outcome:</p> <p>ASCI 4022 Jet Flying Techniques II</p>	<p>Direct Measures: The student learning outcome will be assessed using data from:</p> <p>The final LOFT scenario flight exam (videotaped and monitored by the course instructor and an additional faculty member) will come from the ASCI 4022 course.</p> <p>Indirect Measures: End-of-course student surveys</p>	<p>Assessment of the program learning outcome will be assessed on a two-year cycle. The assessment results will be analyzed by the department faculty using a rubric applied to the student data obtained from the courses listed to determine whether the students can assess the national and international environment.</p> <p>Recommendations for curriculum pedagogy and/or assessment revisions will be made by the department faculty at to allow for appropriate implementation.</p> <p>Reviews of the impact of any such program changes will be conducted during the following year and the records of these reviews will be maintained by the department and reported to the Dean of Parks College of Engineering, Aviation and Technology and to Saint Louis University's Office of the Provost.</p>
J	<p>Apply pertinent knowledge in identifying and solving problems.</p>	<p>The following courses will be used to assess if the undergraduate programs fulfill this student learning outcome:</p> <p>ASCI 4350 Team Resource Mgt.</p>	<p>Direct Measures: The student learning outcome will be assessed using data from:</p> <p>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 ASCI 4350 course.</p> <p>Indirect Measures: End-of course student surveys.</p>	<p>Assessment of the program learning outcome will be assessed on a two-year cycle. The assessment results will be analyzed by the department faculty using a rubric applied to the student data obtained from the courses listed to determine whether the students can apply pertinent knowledge in identifying and solving problems.</p> <p>Recommendations for curriculum pedagogy and/or assessment revisions will be made by the department faculty at to allow for appropriate implementation.</p>

				Reviews of the impact of any such program changes will be conducted during the following year and the records of these reviews will be maintained by the department and reported to the Dean of Parks College of Engineering, Aviation and Technology and to Saint Louis University's Office of the Provost.
K	Apply knowledge of business sustainability to aviation issues.	<p>The following course will be used to assess if the undergraduate programs fulfill this student learning outcome:</p> <p>ASCI 3100 Air Carrier Operations</p>	<p>Direct Measures: The student learning outcome will be assessed using data from:</p> <p>The results of embedded questions in quizzes; mid-term examinations, final examinations, and case studies will be obtained from the ASCI 3100 course.</p> <p>Indirect Measures: End-of course student surveys.</p>	<p>Assessment of the program learning outcome will be assessed on a two-year cycle. The assessment results will be analyzed by the department faculty using a rubric applied to the student data obtained from the courses listed to determine whether the students can apply knowledge of business sustainability to aviation issues.</p> <p>Recommendations for curriculum pedagogy and/or assessment revisions will be made by the department faculty at to allow for appropriate implementation.</p> <p>Reviews of the impact of any such program changes will be conducted during the following year and the records of these reviews will be maintained by the department and reported to the Dean of Parks College of Engineering, Aviation and Technology and to Saint Louis University's Office of the Provost.</p>

Additional Questions

1. On what schedule/cycle will faculty assess each of the above-noted program learning outcomes? (*It is not recommended to try to assess every outcome every year.*)

The program student learning outcomes will be assessed on a two-year cycle that allows for a complete assessment of all program student learning outcomes during the cycle.			
A. Apply mathematics, science, and applied sciences to aviation related disciplines.	Fall 2017	Fall 2019	Fall 2021
B. Analyze and interpret data.	Fall 2017	Fall 2019	Fall 2021
C. Work effectively on multi-disciplinary and diverse teams.	Fall 2017	Fall 2019	Fall 2021
D. Make professional and ethical decisions.	Spring 2018	Spring 2020	Spring 2022
E. Communicate effectively, using both written and oral communication skills.	Spring 2018	Spring 2020	Spring 2022
F. Engage in and recognize the need for life-long learning.	Spring 2018	Spring 2020	Spring 2022
G. Assess contemporary issues.	Fall 2018	Fall 2021	Fall 2022
H. Use the techniques, skills, and modern technology necessary for professional practice.	Fall 2018	Fall 2021	Fall 2022
I. Assess the national and international aviation environment.	Fall 2018	Fall 2021	Fall 2022
J. Apply pertinent knowledge in identifying and solving problems.	Spring 2019	Spring 2021	Spring 2023
K. Apply knowledge of business sustainability to aviation issues.	Spring 2019	Spring 2021	Spring 2023

2. Describe how, and the extent to which, program faculty contributed to the development of this plan.

The faculty of the Department of Aviation Science contributed to the development of the entire plan through a series of meetings and retreats.

3. On what schedule/cycle will faculty review and, if needed, modify this assessment plan?

Reviews of the impact of programmatic changes will be conducted at least once per year and the records of these reviews will be maintained by the department.

Graduation Rates – B.S. in Aeronautics, Concentration in Flight Science

New FT Freshmen Enrolled		Aeronautics Degrees Granted		Four Year Graduation Rate
Month/Year	Number	Month/Year	Number	
Aug. 2017	20	May 2021	--	--
Aug. 2016	19	May 2020	--	--
Aug. 2015	24	May 2019	--	--
Aug. 2014	18	May 2018	15	84.2%
Aug. 2013	11	May 2017	8	100.0%
Aug. 2012	16	May 2016	11	68.75%

Rates and Types of Employment of Graduates – B.S. in Aeronautics, Concentration in Flight Science

Yearly Graduates	# Graduates Contacted	# Graduates Responded	# Graduate School	# Employed	# Volunteering	# Military	# Unemployed Not Seeking	# Unemployed Seeking	# Satisfactorily Occupied	% Satisfactorily Occupied
2017	15	12	0	9	0	2	0	1	11	92%
2016	12	4	0	4	0	NR*	0	0	4	100%
2015	11	10	1	10	0	NR*	0	0	10	100%
2014	9	4	0	3	0	NR*	0	1	3	75%
2013	10	5	0	5	0	NR*	0	0	5	100%
2012	17	8	1	7	0	NR*	0	0	8	100%

*NR – Not Reported

Note: Prior to 2017, graduation rates and types of employment were compiled by the Saint Louis University Office of Institutional Research. Beginning in 2017 the data was compiled by Career Services in the University Student Success Center.

Places of Employment

U.S. Air Force	SkyWest Airlines	Boeing Aircraft Company
U.S. Army	ExpressJet Airlines	NetJets
U.S. Coast Guard	Trans States Airlines	American Airlines
Dept. Homeland Security	Republic Airlines	UPS
Garmin	Saint Louis University	United Airlines