AABInternational

SAINT LOUIS UNIVERSITY EST. 1818	**Saint Louis University**
June 21, 2018	Parks College of Engineering, Aviation and Technology
	Bachelor of Science in Aeronautics Concentration in Aviation Management

Department of Aviation Science

Annual Undergraduate Assessment Report

2017 – 2018

B.S. in Aeronautics, Concentration in Aviation Management

To perform the undergraduate program assessment of the B.S. in Aeronautics Aviation Management concentration, the Department of Aviation Science performed an undergraduate program assessment and individual course assessments and at the end of the fall 2017 and spring 2018 semesters. This process included the program-level SLO's which were scheduled to be assessed at the end of the fall 2017 and spring 2018 semesters as well as the assessment of individual courses to meet certain Student Learning Outcomes (SLO's) as determined by the department.

The program-level SLO's assessed during the 2017-2018 academic year were:

Fall 2017

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.

Spring 2018

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.

Results of the fall 2017 undergraduate program assessment of program-level SLO's

The following program-level SLO'S assessed after the fall 2017 semester were:

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.

Program-level SLO	Recommendation
A. Apply mathematics, science, and applied sciences to aviation related disciplines	There were no prior recommendations from previous program-level assessments of this SLO to assess during this cycle. The department used the results of the ASCI 4650 Economics of Air Transportation course as evidence of student ability to meet this program-level SLO. The department determined that students have satisfactorily met this program-level SLO and makes no recommendation for improvement at this time. In future assessment cycles the department will assess if course-level recommendations/improvements have improved student performance in this SLO.
B. Analyze and interpret data	There were no prior recommendations from previous program-level assessments of this SLO to assess during this cycle. The department used the results of the ASCI 4650 Economics of Air Transportation course as evidence of student ability to meet this program-level SLO. The department determined that students have satisfactorily met this program-level SLO and makes no recommendation for improvement at this time. In future assessment cycles the department will assess if course-level recommendations/improvements have improved student performance in this SLO.
C. Work effectively on multi-disciplinary and diverse teams	There were no prior recommendations from previous program-level assessments of this SLO to assess during this cycle. The department used the results of the ASCI 4350 Team Resource Management and 4650 Economics of Air Transportation courses as evidence of student ability to meet this program-level SLO. The department determined that students have satisfactorily met this program-level SLO and makes no recommendation for improvement at this time. In future assessment cycles the department will assess if course-level recommendations/improvements have improved student performance in this SLO.

NOTE: The performance indicator rubrics and evidence as provided by the instructor and indirect measures of student surveys of the courses listed above which were used by the department to assess the academic program can be found in ***Appendix A: Fall 2017 Aviation Management Program and Course Assessment Data***, of this report.

The department will work to ensure that all full-time and adjunct faculty submit evidence of student work in their respective courses to enable the department to perform a more thorough assessment of this program/concentration.

Results of the spring 2018 undergraduate program assessment of program-level SLO's

The following program-level SLO'S assessed after the spring 2018 semester were:

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.

Program-level SLO	Recommendation
D. Make professional and ethical decisions.	There were no prior recommendations from previous program-level assessments of this SLO to assess during this cycle. The department used the results of the ASCI 4250 Applied Ethics and Standards course as evidence of student ability to meet this program-level SLO. The department determined that students have satisfactorily met this program-level SLO and makes no recommendation for improvement at this time. In future assessment cycles the department will assess if course-level recommendations/improvements have improved student performance in this SLO.
E. Communicate effectively, using both written and oral communication skills.	There were no prior recommendations from previous program-level assessments of this SLO to assess during this cycle. The department used the results of the ASCI 4350 Team Resource Management and ASCI 4650 Economics of Air Transportation courses as evidence of student ability to meet this program-level SLO. The department determined that students have satisfactorily met this program-level SLO and makes no recommendation for improvement at this time. In future assessment cycles the department will assess if course-level recommendations/improvements have improved student performance in this SLO.
F. Engage in and recognize the need for life-long learning.	There were no prior recommendations from previous program-level assessments of this SLO to assess during this cycle. The department used the results of the ASCI 1010 Professional Orientation and ASCI 4350 Team Resource Management courses as evidence of student ability to meet this program-level SLO. The department determined that students have satisfactorily met this program-level SLO and makes no recommendation for improvement at this time. In future assessment cycles the department will assess if course-level recommendations/improvements have improved student performance in this SLO.

NOTE: The performance indicator rubrics and evidence as provided by the instructor and indirect measures of student surveys of the courses listed above which were used by the department to assess the individual courses can be found in ***Appendix B: Spring 2018 Aviation Management Undergraduate Program Assessment Data***, of this report.

The department will work to ensure that all full-time and adjunct faculty submit evidence of student work in their respective courses to enable the department to perform a more thorough assessment of this program/concentration.

Results of the fall 2017 undergraduate program assessment of individual courses

Course Number	Course Name	Recommendation based on the Assessment Process
ASCI 1010-01	Professional Orientation (On-site)	Provide better examples of oral presentation techniques/styles to improve the group presentations. Devote additional time to topics covered.
ASCI 1010-10	Professional Orientation (Online)	Provide better examples of oral presentation techniques/styles to improve the student presentations; consider requiring students to provide an audio/visual presentation to be able to determine oral communication skills.
ASCI 1300-01	Aviation Weather (On-site)	None.
ASCI 1300-10	Aviation Weather (Online)	None.
ASCI 4050-01	Human Factors (On-site)	None.
ASCI 4050-10	Human Factors (Online)	None.
ASCI 4250-01	Prof. Ethics & Standards (On-site)	As in any seminar setting, the students developed over the course of the semester to higher-level thinking skills. In the first four seminars students struggled with identifying the dilemmas and ethical principles or discussions lead to trivial or inappropriate solutions. Following mid-term break the final six sessions saw students meeting or exceeding expectations. Recommendations for fall 2018 course offering: (1) Revise/improve/update the seminar topics (2) consider addressing the issue of “moral hazard” (3) consider addressing the issue of “ethical relativism”
ASCI 4250-10	Prof. Ethics & Standards (Online)	None.
ASCI 4450-01	Aviation Law (On-site)	All students orally presented two case briefs in the course. However, no rubric was developed to measure these oral case briefs. This course did not fully address this learning outcome. For fall 2018 course offering: (1) Revise/improve/update the seminar topics to ensure oral and written communication skills are evidenced and measured (2) Assign and develop a rubric for “case briefs” (3)Assign and develop a rubric for a “research paper”
ASCI 4450-10	Aviation Law (Online)	None.

NOTE: The performance indicator rubrics and evidence as provided by the instructor and indirect measures of student surveys of the courses listed above which were used by the department to assess the academic program can be found in ***Appendix A: Fall 2017 Aviation Management Undergraduate Program Assessment Data***, of this report.

Results of the spring 2018 undergraduate program assessment of individual courses

Course Number	Course Name	Recommendation based on the Assessment Process
ASCI 1510-01	The Air Transportation System	In the future, a rubric will be incorporated with the essays and homework assignments. Additionally, many in-class discussions and readings were related to contemporary issues, but they were not documented. In the future, pictures of student's presentations on the board will be taken and incorporated into the assessment.
ASCI 1850-01	Safety Management Sys. (On-site)	The instructor determined that the strategy for developing rubrics to evaluate whether the instructor was successful in achieving certain metrics was somewhat ill-advised. Rather than including these assignments as distinct and separate or including the material within the context of a test, the instructor decided to assign them as optional homework assignments. The incentive for the students was a few additional points added to their grade. Regrettably, only a handful of students responded. The data provided in the above table is fictitious but represents my understanding of the potential outcomes. The instructor utilized an assignment that attempted to capture the outcomes in a narrative form. The instructor's thought process was that while a quantitative assessment would provide precision, a qualitative assessment would better enable the instructor to better understand how well the students understood the data. Overall, the instructor was surprised by the appearance spread in the quality of the work submitted. Recommendations: 1. Assessment materials will be required as opposed to optional 2. The instructor will consider additional quantitative measures to obtain more precision Similar to other outcome rubrics in this report, SLO D was evaluated using an optional, qualitative assignment. Consequently, the number of assignments that were returned was somewhat disappointing. Of the relatively small number of returns n=7, I was somewhat disappointed with the results of this (SLO D) assessment. Students seem to have a hard time articulating the meaning of both professionalism and ethical behavior. Although this course is taught in the freshman year of both the Flight Science and Aviation Management programs, the instructor had higher expectations given the discussions in class regarding professionalism and ethical behavior. Recommendations: 1. Additional discussion of the roles of professionalism and ethics in aviation 2. One or more take-home assignments aimed at reinforcing a better understanding of professionalism and ethics. 3. Assessment materials will be required as opposed to optional 4. I will consider additional quantitative measures to obtain more precision

		SLO H was evaluated using an optional assignment to which the feedback was somewhat disappointing. The way in which the instructor graded the narrative/qualitative data was to use the “needs improvement,” “meets expectations,” or “exceeds expectations” as noted in the assessment rubric. The qualitative assessment does not necessarily provide me with sufficient granularity to develop a broad enough insight on the effectiveness of the course. Recommendations: 1. Assessment materials will be required as opposed to optional 2. The instructor will consider additional quantitative measures to obtain more precision.
ASCI 1850-01	Safety Management Sys. (Online)	None.
ASCI 2750-01	Accident Investigation	A block of questions from a semester test were used to determine the assessment of SLO B. In total 20, fill-in-the-blank questions were used to assess the student’s capability to analyze and interpret data related to federal regulations and Federal Aviation Administration guidance on accident investigations. Students who answered all questions correctly exceeded expectation. Students who missed up to 5-questions met expectations and any student who missed more than 5 questions would need improvement. (n=7) The method for assessing this outcome used only a single test and direct measurement. I see this is a weakness. Recommendations: 1. Add indirect measures of assessment 2. Conduct assessments at different points throughout the semester to measure change SLO J was assessed using a block of questions extracted from an examination. In this case the comprehensive Final Exam. A total of 12-questions assessed student performance surrounding their ability to apply pertinent knowledge in identifying and solving problems associated with aircraft accident investigation. Students who missed less than 2 questions Exceeded Expectations. Student who missed between 2 and 4 questions met expectations and any student who missed more than 5 questions would need improvement. (n=7). Recommendations: 1. Add indirect measures of assessment 2. Conduct assessments at different points throughout the semester to measure change
ASCI 3100-01	Air Carrier Operations (On-site)	Most students have some sense of the basic ethical (and legal) issues surrounding the FAA’s various tests for analyzing an operation.

		When presented with a website development scenario, most students are unable to identify the ethical principles involved and are unable to decide the correct action when presented with a scenario illustrating the development of a website that may be "acting" as an air carrier in common carriage in violation of the law and good ethical practices. Most students had a flawed analysis or insufficiently addressed the question: *"What is your interpretation of this scenario?"* For spring 2019 course offering: (1) Revise the approach to teaching chapter 1, "what is an air carrier?" (2) Consider addressing this SLO in a different topic/context within this course (3) Ensure this material is taught (repeated) in ASCI 4450 Aviation Law using court cases
ASCI 3100-10	Air Carrier Operations (Online)	Most students have some sense of the basic ethical (and legal) issues surrounding the FAA's various tests for analyzing an operation. When presented with a website development scenario, most students are unable to identify the ethical principles involved and are unable to decide the correct action when presented with a scenario illustrating the development of a website that may be "acting" as an air carrier in common carriage in violation of the law and good ethical practices. Most students had a flawed analysis or insufficiently addressed the question: "What is your interpretation of this scenario?" For spring 2019 course offering: (1) Revise the approach to teaching chapter 1, "what is an air carrier?" (2) Consider addressing this AABI learning outcome in a different topic/context within this course (3) Ensure this material is taught (repeated) in ASCI 4450 Aviation Law using court cases The Colgan Air Flight 3407 case--and the assigned questions--was used to highlight material from at least three textbook chapters and present the topics in a meaningful way; students learned how and why new regulations affecting virtually all units of an air carrier's operations were developed. Students were highly engaged in the topics. (1) This was a very effective vehicle for teaching students to identify, understand and reflect on today's issues that impact air carriers and their operational units. (2) Use the case again, with improvements, in the spring 2019 offering; for example, improve the "research questions" section. Questions were issued as an assignment to all students. Few students researched documents for evidence to support the responses to five questions. Many individuals were unable to apply previously learned facts and concepts to the five questions. Most students could not see the implications of sustainability for the regional air carrier industry and apply these to their future place within the industry.

		For spring 2019: (1) While this is a very useful topic and one introduced into this course for the first time, consider a different approach to addressing air carrier business models and sustainability. (2) Find a means of holding students accountable for research and developing their ability to apply facts and concepts to solve problems
ASCI 4350-01	Team Resource Management	The instructor noted that the development of a survey tool will better enable assessment of the student performance in this course.
ASCI 4650-01	Econ. of Air Transp. (On-site)	Quarterly simulation reports: By the end of the first fiscal year of simulation, students were able to identify and apply key mathematical/financial/operational concepts. The instructor changed back to a simulation software used in the past and noted a substantial difference in the student performance in the course. Metrics/Measures: Enhance the experience of comparative results by adding individual financial and operational metrics throughout the semester; rather than having all weighted measures at the beginning. Base this on instructor's learning objectives/topics as the semester develops.
ASCI 4650-10	Econ. Of Air Transp. (Online)	None.
ASCI 4800-01	International Aviation (On-site)	To improve the course outcome, the instructor suggests providing more class time on topics in which students need improvement so that more of the students will be capable of at minimum, meeting the expectations while reinforcing the abilities of those students currently meeting and exceeding expectations.
ASCI 4800-10	International Aviation (Online)	The instructor recommends that the tests include more essay questions to better assess the students' abilities to communicate using written communication. Online delivery of the course does not readily allow the instructor to assess the performance indicator, "delivery of an oral presentation." For future course delivery the instructor recommends exploring ways in which the students could record the presentation for delivery to the entire class and the instructor. The instructor recommends that the tests include more essay questions to better assess the students' abilities to assess the national and international environment.
ASCI 4900-01	Senior Seminar (On-site)	The Boeing MEDA Tool is a method for evaluating aircraft damage causality based on the underlying physics and human causes associated with an aircraft accident or incident. The form/method includes both a qualitative and quantitative assessment of damage and calculations surrounding the energy associated with the event. The tool is quite diverse and utilizes both science and applied science.

		That said, the instructor is of the opinion that the department should reconsider whether SLO A should be included within Senior Seminar. The mathematics and associated science are at a low level and suggesting the course adequately requires students to apply mathematics, science and applied science is less than ideal. For the Spring 2018 semester a test was given to students that included several questions regarding the META process. Rather than saving the copies of the exam, all I did was record the score and return the test to the students for their own keeping. Consequently, I am unable to assess SLO A this semester. I have provided the group of questions surrounding the MEDA Tool that were used on the test. Recommendations: 1. Reconsider whether ASCI 4900 should assess Outcome A 2. If the ASCI 4900 course continues to be used to assess SLO A, a more-robust method for evaluating the application of math and science must be considered. This senior level course intends to synthesize the undergraduate experience in an open discussion and presentation format. Generally, the students drive the conversation. It's a very small class this semester (n=3), consequently the breadth of conversation was somewhat limited. The formal assessment of SLO B was based on a single, open-ended question asked on a comprehensive final exam. The instructor fears that the scoring rubric is slightly skewed by his experience engaging these three students in conversation. In other words, the written responses quite frankly were not that good. However, when the instructor synthesizes the class discussions with their written submissions, the instructor is comfortable with the responses of two of the three students. Recommendations: 1. Develop a rubric that can be used to grade classroom conversations 2. Develop additional data points for measuring the course outcomes 3. Develop assessment measures that cross the entire semester rather than at a single point in time. SLO D was assessed by combining the results of a single examination with the direct observation of discussions in class. The instructor was disappointed in the lack of depth these students demonstrated regarding professionalism and the associated ethical decision-making process. The instructor knows SLU provides a strong undergraduate experience in professionalism and ethics and with the addition of the ASCI 4250 Professional Ethics and Standards course the instructor is convinced the breadth and depth of their experience is much greater than what is demonstrated in their short

		narratives. The instructor accepts blame for this as once again as this was a single data point (except for classroom conversations). The assignment was also offered at the very end of the semester of the student's senior year and the instructor suspects they were just trying to get the assignment completed. Recommendations: 1. Assess SLO D with more-specific requirements detailing the practice of professionalism and ethical decision-making (my one question was too broad) 2. Assess SLO D across the semester rather than at a singular and specific data point. (Especially not at the end of the semester) 3. Include a requirement for students to provide both a degree of underlying theory as well as practical examples when speaking to professionalism and ethical decision-making. Two of the three students enrolled in this course did a fairly good job of assessing some of the contemporary issues facing aviation. SALO G suffered from the same problem as other outcomes related to this course. That is, the assessment was completed by the instructor synthesizing classroom conversations with written feedback on a single examination. Without the benefit of the discussion rubric for which performance might be captured, the assessment process is woefully lacking in supporting documentation. Overall, the instructor is of the opinion that the students in the class understood many of the contemporary issues facing aviation, however, their ability to describe and develop plans for mitigation were thin. Recommendations: 1. Develop a rubric for measuring classroom discussions. 2. Include a more-comprehensive written assignment that goes beyond popular media by utilizing scholarly resources to become more familiar with contemporary issues. 3. Assess contemporary issues across the entire semester with both direct and indirect measurements.
ASCI 4900-10	Senior Seminar (Online)	The instructor recommends the inclusion of an assessment that addresses use of quantitative research methods. Include a line in the grading rubric for the research paper to involve more data and synthesis of data. The instructor recommends presenting the students with more opposing viewpoints to their thoughts. Grade on and provide a rubric for the quality of responses. In the future, the instructor recommends to challenge students to critically think about the consequences of the current industry challenges. More interaction (feedback on paper, opportunities for students to re-submit assignments) after the assignment is completed

		may encourage that thinking.

NOTE: The performance indicator rubrics and evidence as provided by the instructor and indirect measures of student surveys of the courses listed above which were used by the department to assess the individual courses can be found in ***Appendix B: Spring 2018 Aviation Management Undergraduate Program and Course Assessment Data***, of this report.

Course evidence collected as part of this assessment process is contained in a large file and is not posted on this website. The information can be found in ***Appendix C: 2017-2018 Aviation Management Undergraduate Program and Course Evidence***, of this report and can be obtained by contacting Stephen G. Magoc, chairperson of the Department of Aviation Science stephen.magoc@slu.edu or at 314-977-8333.

AABInternational

SAINT LOUIS UNIVERSITY EST. 1818	**Saint Louis University**
June 21, 2018	Parks College of Engineering, Aviation and Technology
	Bachelor of Science in Aeronautics Concentration in Aviation Management

Department of Aviation Science

Appendix A

Fall 2017 Aviation Management

Undergraduate Program and Course Assessment Data

Direct Measures
Of
Assessment

Performance Indicator Rubric

AABI Student Learning Outcome E: Communicate effectively using both Oral and Written Communication Skills – ORAL SKILLS ONLY

Course: **ASCI 1010 Professional Orientation** Semester Taught: **Fall 2017** Number of Students Scored: **34**

Type of Student Work Used for Assessment* (e.g. Homework #4; Exam #2 problem 3; final project): **Group Presentation**

**Attach description of assignment used for assessment and samples of student work.*

Rating Scale / Performance Indicator	Needs Improvement	Meets Expectations	Exceeds Expectations
Organization of material.	Confusing organization; weak problem statement or purpose; weak conclusion or summary; other sections are weak; weak use of citations and references.	Mostly logical and complete organization; adequate problem statement or purpose; adequate conclusion or summary; adequate use of citations and references.	Excellent organization; well-stated problem statement or purpose; strong conclusion or summary; thorough list of citations and references.
Provide evidence to support claims or inform audience.	Ideas not expressed clearly or details are weak; data analysis is weak; illustrations are lacking or confusing.	Ideas are generally expressed clearly and details are adequate; data analysis is adequate; illustrations support ideas, but have some mislabeling or do not accurately present evidence.	Ideas are well-developed, expressed clearly with many appropriate details; data analysis is thorough; illustrations clearly support core message(s), are properly labeled and captioned
Demonstrate the proper use of language.	Several errors in grammar, punctuation, spelling; several sentences have an awkward construction; proofreading appears to have been done hastily.	A few errors in grammar, punctuation, spelling; sentences are mostly well-crafted; appears to have been proofread, but further revision could improve text.	Minor errors, if any, in grammar, punctuation, and spelling; varied and creative sentence structure; demonstrates thorough proofreading and revision.
Delivery of an oral presentation.	Clarity of speech is uneven; delivery is halting; speaker is unsure of topic and appears nervous or disengaged; limited or sporadic eye contact with audience; limited or inappropriate use of physical gesture and facial expression.	Effective speaking voice; recovers easily from speaking errors; speaker is in command of the topic but appears slightly nervous in delivery; appropriate eye contact with audience throughout most of the presentation; use of physical gesture and facial expression is appropriate, but appears forced or artificial at times.	Strong, clear speaking voice easily understood by audience; speaker conveys confidence in talking about the topic; excellent eye contact with audience throughout presentation; use of physical gesture and facial expression conveys energy and enthusiasm.

Description of Assignment: Group presentation of a current or contemporary issue in the aviation industry. There were eight groups of students completing the assignment.

Using the performance indicator rubric, the groups scored as follows:

Organization of Material –

Performance Indicator	Section of Audience Critique of Group Rubric	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Organization of Material	Organization, Evaluation	0	62.5	37.5
Evidence to Support Claims/Inform Audience	Problem/Need Identification	0	25	75
Proper use of Language	Verbal Delivery	0	62.5	37.5
Delivery of Oral Presentation	Visual Aids, Verbal Delivery, Nonverbal Delivery	37.5	25	37.5

To improve the course outcome, the instructor suggests providing better examples of oral presentations so that more of the students will be capable of exceeding the expectations while reinforcing the abilities of those students to exceed expectations.

Each group presentation was critiqued by the class using the “Rubric for Audience Critique of Group.” A compilation of the critique rubric scores for the eight groups follows.

Performance Indicator Rubric

AABI Student Learning Outcome G: Assess Contemporary Issues

Course: **ASCI 1010 Professional Orientation** Semester Taught: **Fall 2017** Number of Students Scored: **34**

Type of Student Work Used for Assessment* (e.g. Homework #4; Exam #2 problem 3; final project): **Quiz 1**

**Attach description of assignment used for assessment and samples of student work.*

Rating Scale / Performance Indicator	Needs Improvement	Meets Expectations	Exceeds Expectations
Identify contemporary issues related to the aviation industry.	When identifying contemporary aviation issues, important facts and details are missing.	Prioritizes contemporary aviation issues; ignores some less significant, yet relevant issues.	Effectively prioritizes contemporary aviation issues, including subtle details; does not include unrelated contemporary issues.
Recognize potential solutions.	Shows some understanding of contemporary aviation issues; provides some explanations of potential solutions but important facts are missing.	Shows adequate understanding of contemporary aviation issues; provides adequate explanation of potential solutions; missing the explanation of minor facts.	Shows in-depth understanding of contemporary aviation issues; provides in-depth explanation of potential solutions.

Description of Assignment: Quiz #1 was based on select readings from ***"Aviation Daily"*** over a period of 3-4 weeks.

Performance Indicator	Questions, Problems, Etc.	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Identify contemporary issues	Question #9	5.9	94.1	N/A
	Question #10	37.4	62.6	N/A
Recognize potential solutions	Extra Credit Question	29.4	11.8	58.8

Evidence of the assessment of Quiz 1, showing the high, middle and low scores for the quiz follows.

To improve the course outcome, the instructor suggests providing more class time on topics in which students need improvement so that more of the students will be capable of at minimum, meeting the expectations while reinforcing the abilities of those students currently meeting and exceeding expectations.

Performance Indicator Rubric

AABI Student Learning Outcome G: Assess Contemporary Issues

Course: **ASCI 1010 Professional Orientation** Semester Taught: **Fall 2017** Number of Students Scored: **34**

Type of Student Work Used for Assessment* (e.g. Homework #4; Exam #2 problem 3; final project): **Quiz 2**

**Attach description of assignment used for assessment and samples of student work.*

Rating Scale / Performance Indicator	Needs Improvement	Meets Expectations	Exceeds Expectations
Identify contemporary issues related to the aviation industry.	When identifying contemporary aviation issues, important facts and details are missing.	Prioritizes contemporary aviation issues; ignores some less significant, yet relevant issues.	Effectively prioritizes contemporary aviation issues, including subtle details; does not include unrelated contemporary issues.
Recognize potential solutions.	Shows some understanding of contemporary aviation issues; provides some explanations of potential solutions but important facts are missing.	Shows adequate understanding of contemporary aviation issues; provides adequate explanation of potential solutions; missing the explanation of minor facts.	Shows in-depth understanding of contemporary aviation issues; provides in-depth explanation of potential solutions.

Description of Assignment: Quiz #2 was based on select readings from ***"Aviation Daily"*** over a period of 3-4 weeks.

Using the performance indicator rubric, the groups scored as follows:

Performance Indicator	Questions, Problems, Etc.	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Identify contemporary issues	Question #6	17.6	82.4	N/A
	Question # 7	11.8	89.2	N/A
Recognize potential solutions	Question #8	29.4	60.6	N/A

Evidence of the assessment of Quiz 2, showing the high, middle and low scores for the quiz follows.

To improve the course outcome, the instructor suggests providing more class time on topics in which students need improvement so that more of the students will be capable of at minimum, meeting the expectations while reinforcing the abilities of those students currently meeting and exceeding expectations.

AABI Student Learning Outcome G: Assess Contemporary Issues

Course: **ASCI 1010 Professional Orientation** Semester Taught: **Fall 2017** Number of Students Scored: **34**

Type of Student Work Used for Assessment* (e.g. Homework #4; Exam #2 problem 3; final project): **Quiz 3**

**Attach description of assignment used for assessment and samples of student work.*

Rating Scale / Performance Indicator	Needs Improvement	Meets Expectations	Exceeds Expectations
Identify contemporary issues related to the aviation industry.	When identifying contemporary aviation issues, important facts and details are missing.	Prioritizes contemporary aviation issues; ignores some less significant, yet relevant issues.	Effectively prioritizes contemporary aviation issues, including subtle details; does not include unrelated contemporary issues.
Recognize potential solutions.	Shows some understanding of contemporary aviation issues; provides some explanations of potential solutions but important facts are missing.	Shows adequate understanding of contemporary aviation issues; provides adequate explanation of potential solutions; missing the explanation of minor facts.	Shows in-depth understanding of contemporary aviation issues; provides in-depth explanation of potential solutions.

Description of Assignment: Quiz #3 was based on select readings from ***"Aviation Daily"*** over a period of 3-4 weeks.

Performance Indicator	Questions, Problems, Etc.	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Identify contemporary issues	Question #3	17.6	82.4	N/A
	Question #4	23.6	76.4	N/A
Recognize potential solutions	Extra Credit Question	44.1	26.5	29.4

Evidence of the assessment of Quiz 3, showing the high, middle and low scores for the quiz follows.

To improve the course outcome, the instructor suggests providing more class time on topics in which students need improvement so that more of the students will be capable of at minimum, meeting the expectations while reinforcing the abilities of those students currently meeting and exceeding expectations.

Performance Indicator Rubric

AABI Student Learning Outcome G: Assess Contemporary Issues

Course: **ASCI 1010 Professional Orientation** Semester Taught: **Fall 2017** Number of Students Scored: **34**

Type of Student Work Used for Assessment* (e.g. Homework #4; Exam #2 problem 3; final project): **Test 1**

**Attach description of assignment used for assessment and samples of student work.*

Rating Scale / Performance Indicator	Needs Improvement	Meets Expectations	Exceeds Expectations
Identify contemporary issues related to the aviation industry.	When identifying contemporary aviation issues, important facts and details are missing.	Prioritizes contemporary aviation issues; ignores some less significant, yet relevant issues.	Effectively prioritizes contemporary aviation issues, including subtle details; does not include unrelated contemporary issues.
Recognize potential solutions.	Shows some understanding of contemporary aviation issues; provides some explanations of potential solutions but important facts are missing.	Shows adequate understanding of contemporary aviation issues; provides adequate explanation of potential solutions; missing the explanation of minor facts.	Shows in-depth understanding of contemporary aviation issues; provides in-depth explanation of potential solutions.

Description of Assignment: Test 1 covered lecture material from the course.

Performance Indicator	Questions, Problems, Etc.	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Identify contemporary issues and/or Recognize potential solutions	Question #10	17.6	82.4	N/A
	Question #17	11.8	88.2	N/A
	Question #22	29.4	70.6	N/A
	Question #38	17.6	82.4	N/A
	Extra Credit Question	11.8	82.4	5.8

Evidence of the assessment of Test 1, showing the high, middle and low scores for the quiz follows.

To improve the course outcome, the instructor suggests providing better examples and/or increased discussion of topics so that more of the students will be capable of meeting the expectations while reinforcing the abilities of those students meeting expectations.

Performance Indicator Rubric

AABI Student Learning Outcome G: Assess Contemporary Issues

Course: **ASCI 1010 Professional Orientation** Semester Taught: **Fall 2017** Number of Students Scored: **34**

Type of Student Work Used for Assessment* (e.g. Homework #4; Exam #2 problem 3; final project): **Final Exam**

**Attach description of assignment used for assessment and samples of student work.*

Rating Scale / Performance Indicator	Needs Improvement	Meets Expectations	Exceeds Expectations
Identify contemporary issues related to the aviation industry.	When identifying contemporary aviation issues, important facts and details are missing.	Prioritizes contemporary aviation issues; ignores some less significant, yet relevant issues.	Effectively prioritizes contemporary aviation issues, including subtle details; does not include unrelated contemporary issues.
Recognize potential solutions.	Shows some understanding of contemporary aviation issues; provides some explanations of potential solutions but important facts are missing.	Shows adequate understanding of contemporary aviation issues; provides adequate explanation of potential solutions; missing the explanation of minor facts.	Shows in-depth understanding of contemporary aviation issues; provides in-depth explanation of potential solutions.

Description of Assignment: The Final Exam covered lecture material from the course.

Performance Indicator	Questions, Problems, Etc.	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Identify contemporary issues and/or Recognize potential solutions	Question #4	11.8	88.2	N/A
	Question #9	58.8	41.2	N/A
	Question #15	58.8	41.2	N/A
	Question #21	2.9	97.1	N/A
	Question #34	5.8	94.2	N/A
	Question #44	11.8	88.2	N/A
	Question #47	0	100	N/A
	Question #60	5.8	94.2	N/A
	Extra Credit Question	26.	61.8	11.8

Evidence of the assessment of the Final Exam, showing the high, middle and low scores for the quiz follows.

To improve the course outcome, the instructor suggests providing better examples and/or increased discussion of topics so that more of the students will be capable of meeting the expectations while reinforcing the abilities of those students meeting expectations.

DEPARTMENT OF AVIATION SCIENCE
ASSESSMENT OF UNDERGRADUATE PROGRAM STUDENT LEARNING OUTCOMES
FALL 2017

ASCI 4250 PROFESSIONAL ETHICS AND STANDARDS
SECTION 01 ON CAMPUS

Program Student Learning Outcomes

- D - Make professional and ethical decisions
- E – Communicate effectively, using both written and oral communication skills
- G – Assess contemporary issues
- K - Apply knowledge of business sustainability to aviation issues

Direct measures:
The student learning outcome will be assessed using data from:
The results of embedded questions in quizzes; mid-term examinations, final examinations, and 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.

NOTES – FALL 2017
No instructor comments

Subjects/Topics
No instructor comments

Methodology
No instructor comments

Performance Indicator Rubric

AABI Student Learning Outcome D: Make Professional and Ethical Decisions

Course: **ASCI 4250 Professional Ethics and Standards** Semester Taught: **Fall 2017**
Number of Students Scored: **22 enrolled**

Performance Indicator	**Student Work Description of Assignment**	**% Needs Improvement**	**% Meets Expectations**	**% Exceeds Expectations**
Identifies ethical problems	Seminar	0	100%	0
Identifies ethical (and legal) principles involved	Seminar	0	100%	0
Decide on the proper ethical action and be prepared to deal with opposing arguments	Seminar	0	100%	0
Summary	Ten seminar sessions and topics; one per week. Two student seminar moderators randomly selected for each session to lead small-group discussion. Students managed each seminar and had to apply ethical theories and ethical decision-making frameworks to the practical, industry-oriented dilemmas presented. The purpose is to create understanding by bringing differing viewpoints and questions to the seminar; to apply professional and ethical standards to ethical dilemmas in various aviation settings. During the informal discussions, students grew to identify the ethical dilemmas, to identify appropriate ethical theories, and were able to decide on the proper ethical action and deal with opposing arguments from other students within the group. As in any seminar setting, the students developed over the course of the semester to higher-level thinking skills. In the first four seminars students struggled with identifying the dilemmas and ethical principles or discussions lead to trivial or inappropriate solutions. Following mid-term break the final six sessions saw students meeting or exceeding expectations.			

Instructor's Recommendations	For fall 2018 course offering: (1) Revise / improve / update the seminar topics (2) consider addressing the issue of "moral hazard" (3) consider addressing the issue of "ethical relativism"
Department Recommendations	

Performance Indicator Rubric

AABI Student Learning Outcome E: Communicate effectively using both Oral and Written Communication Skills

Course: **ASCI 4250 Professional Ethics and Standards** Semester Taught: **Fall 2017**
Number of Students Scored: **22 enrolled**

Performance Indicator	**Student Work Description of Assignment**	**% Needs Improvement**	**% Meets Expectations**	**% Exceeds Expectations**
Organization of material		100%	%	0
Provide evidence to support claims or inform audience.		100%	%	0
Demonstrate the proper use of language.				
Delivery of an oral presentation.		100%		
Summary	This course did not specifically address this learning outcome and no direct evidence was gathered, fall 2017.			
Instructor's Recommendations	For fall 2018 course offering: (1) Revise / improve / update the seminar topics to ensure oral and written communication skills are evidenced and measured			

	(2) Assign and develop rubric for a "research paper"
Department Recommendations	

Performance Indicator Rubric

AABI Student Learning Outcome G: Assess contemporary issues

Course: **ASCI 4250 Professional Ethics and Standards** Semester Taught: **Fall 2017**
Number of Students Scored: **22 enrolled**

Performance Indicator	**Student Work Description of Assignment**	**% Needs Improvement**	**% Meets Expectations**	**% Exceeds Expectations**
Identify contemporary issues related to the aviation industry	Seminar	0	100%	0
Recognize potential solutions	Seminar	0	100%	0
Summary	Ten seminar sessions and topics; one per week. All topics were relevant, contemporary issues. Students were able to identify and prioritize contemporary aviation issues and ignore some less significant, yet relevant, issues. Student demonstrated adequate understanding of contemporary aviation issues and provide adequate explanation of potential solutions.			
Instructor's Recommendations	For fall 2018 course offering: (1) Revise / improve / update the seminar topics to ensure new, relevant contemporary ethical dilemmas are presented (2) consider addressing the issue of "moral hazard" (3) consider addressing the issue of "ethical relativism"			

Department Recommendations	

Performance Indicator Rubric

AABI Student Learning Outcome K: Apply knowledge of business sustainability to aviation issues

Course: **ASCI 4250 Professional Ethics and Standards** Semester Taught: **Fall 2017**
Number of Students Scored: **22 enrolled**

Performance Indicator	**Student Work Description of Assignment**	**% Needs Improvement**	**% Meets Expectations**	**% Exceeds Expectations**
Identify legal and regulatory issues of aviation-related climate change; Identify economic, social and environmental concepts applied to aviation business.		100%	%	0
Find and analyze evidence of accepted practices of sustainability in aviation business settings.		100%	%	0
Apply acquired knowledge and facts of legal, economic, social and environmental sustainability concepts to a given aviation situation to solve problems.		100%		
Summary	This course did not specifically address this learning outcome and no direct evidence was gathered, fall 2017.			
Instructor's Recommendations	For fall 2018 course offering:			

	(3) Revise / improve / update the seminar topics to ensure new, relevant contemporary ethical dilemmas are presented to include “business sustainability in aviation”
Department Recommendations	

EVIDENCE

Order	Date	Moderators/Team/Student	Topic
	Sept 14		**Regulatory Capture**
7	**Nov 9**		**Whistleblowing in aviation**
9	**Nov 30**		**Corporate Responsibility**
8	**Nov 16**		**Cost-Benefit Analysis & Ethics**
10	**Dec 7**		**Gender Diversity in Aviation** **Racial Diversity in Aviation**
10	**Dec 7**		**Age Discrimination**
2	**Sept 28**		**Ethics & the Environment in Aviation Settings**
1	**Sept 21**		**Privacy & Confidentiality in Aviation Settings**
5	**Oct 26**		**Ethics of Technology Use in Aviation Settings**
6	**Nov 2**		**Ethics in Aviation Education (training; teaching)**
3	**Oct 5**		**Business Ethics, Safety, and the Airline Industry**
4	**Oct 12**		**Codes of Ethics: Value & Role in Aviation**

QUIZZES:

	Quiz 1	Quiz 2	Quiz 3	Quiz 4	Quiz 5
	Ethical Theories	Regulatory Capture; Privacy & Confidentiality	Ethical issues related to the environment & sustainability in aviation settings	Rights & Obligations; Ethical Use of Technology	Corporate Responsibility; Corporate Corruption; Cost Benefit Analysis
Class average	79	78	78	73	85

MID-TERM AND FINAL EXAMS:
Class average Mid-Term (online): 94
Class average Final: 84

	Seminar	Quizzes	Exams	Needs Improvement	Meets Expectations	Exceeds Expectations
Identifies Ethical Problem						
	Seminar	Quizzes	Exams	Needs Improvement	Meets Expectations	Exceeds Expectations
Identifies ethical principles involved		Quiz #1; Question #3	Final; Question #34		#34: 91%	#3: 100%

	Seminar	Quizzes	Exams	Needs Improvement	Meets Expectations	Exceeds Expectations
Decide on the proper ethical action and be prepared to deal with opposing arguments						

SEMINAR
ETHICS AND THE ENVIRONMENT
Airports and Aircraft
Moderators:

1. Framing Question: ***For those who fly—air carrier or small general aviation, as pilots or as passengers—can you fly with a clear conscience? After all, it is estimated that U.S. commercial airlines alone burn about 50,000,000 gallons of kerosene per day.***
2. Are passengers on airplanes **complicit** in causing harm? (to cause harm)
3. How do aviation **emissions compare to** other transportation sectors (rail, maritime, highway, etc.)?
4. Can this topic be addressed from a **virtue ethic framework**?
5. Are there special duties associated with your (complicit) role? . . . the **consequentialist.**
6. Can the **moral principles** be applied? (non-malevolence; utility; etc.)
7. Is airline **corporate environment and social responsibility** more or less a marketing tool?
   . . . just a buzzword?

8. What are the **environmental and social costs** as well as **benefits** of air transportation?
9. What measurable impacts does air transport have on human wellbeing in developing countries? . . . addressing the transport needs of the poor.
10. In the U.S., aviation traffic is approximately 47% leisure passenger travel, 31% business passenger travel, and 22% freight traffic. How much of this is subsistence or luxury distinction (consumption) regarding aviation emissions?
11. Should **aviation growth be limited** in the future? Can we develop the sense that people (and freight) need to fly less in the future?
12. Are **airport goals** different from that of air carriers?
    a. To what extent does St. Louis Lambert Airport contribute to this region's NO_x (nitrogen oxides) inventory?
        i. NOx: from high compression/high combustion emissions; i.e. engine exhausts
13. What are the future **environmental metrics** for aviation?
14. What **role is ICAO** (International Civil Aviation Organization) currently playing in the realm of aviation emissions?

SEMINAR

Ethics and the Use of Technology in Aviation Settings

- MODERATORS

Thursday, October 26, 2017

ASSIGNMENT TO STUDENTS

SET NO. 1

The moderators have asked you to review the three following documents.

http://www.slate.com/articles/technology/future_tense/2014/12/automation_in_the_cockpit_is_making_pilots_thinking_skills_duller.html

"Dumbing It Down in the Cockpit"

http://scholarworks.wmich.edu/cgi/viewcontent.cgi?article=1093&context=hilltopreview

Western Michigan University publication: "***Legal and Ethical Considerations for Social Media Hiring Practices in the Workplace"***

https://www.ntsb.gov/news/events/Pages/2014_Asiana_BMG-Abstract.aspx

"NTSB Board Meeting: Crash of Asiana Flight Accident Summary"

Review the Summary and consider carefully those that address **technology use in the cockpit**

SET NO. 2

The moderators also expect you to read/review the articles posted within the Blackboard file on this subject. These three articles have been available for two weeks for your review.

_____

PRIVACY AND CONFIDENTIALITY
SEMINAR
Moderators:
MODERATORS' ASSIGNMENT TO STUDENTS:

http://www.wired.com/2014/07/malaysia-370-cockpit-camera/ Cockpit cameras

Part 1:

- Cockpit recorders, TSA…….how do you sacrifice privacy for safety?
    - http://www.faa.gov/privacy/ FAA Privacy Policy
        - Privacy Act of 1974
        - What we collect automatically
        - What other information we collect

1.) What is privacy? What is confidentiality?

*****ARTICLE*****

2.) Do you sacrifice your privacy or confidentiality for safety? If so, how much will you sacrifice?

PART 2:

(Confidential reporting and how it fits into Kohlbergs model)

3.) What do you think about confidential reporting?

4.) Does confidentiality fit into Kholberg's model? If so, where and why? And under what circumstances?

****EXERCISE****

5.) Does confidential reporting bring about "better practice" or do we have to use recorders so that nobody gets away with anything? How much are you willing to sacrifice for safety?

Part 3:

6.) If so ……..What about alternative fields? medicine? carpenter's union? military?

_____

SEMINAR

ETHICS IN AVIATION EDUCATION

MODERATORS:

1. Do we need to be taught ethics in aviation training? If so, why is it important?
2. Are pilots that receive their flight training without an ethics class less ethical than pilots that do?
3. Consider confidentiality. Do instructors have an obligation to keep their student's performance confidential? Is it acceptable for them to discuss matters such as abilities and mistakes with other instructors, students, ect.?
4. What responsibilities do the students have when it comes to professional and ethical behavior? Or, is it up to the instructors to teach them how to behave?
5. Read this: https://www.reddit.com/r/flying/comments/3d865o/i_failed_my_ppl_checkride_again/ Given how subjective check-rides are. Do you see any ethical issues with the process? Is it possible for the check pilot to be completely fair and impartial?
6. What ethical issues or dilemmas have you experienced in your flight training so far?

DEPARTMENT OF AVIATION SCIENCE
ASSESSMENT OF UNDERGRADUATE PROGRAM STUDENT LEARNING OUTCOMES
FALL 2017

ASCI 4450 AVIATION LAW
FALL 2017 - SECTION 01 ON CAMPUS (24)
FALL 2017 - SECTION 10 ONLINE (22)

Program Student Learning Outcomes

- D - Make professional and ethical decisions
- E – Communicate effectively, using both written and oral communication skills
- G – Assess contemporary issues
- I - Assess the national and international aviation environment

Direct measures:
The student learning outcome will be assessed using data from:
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.

NOTES – FALL 2017
No instructor comments

Subjects/Topics
No instructor comments

Methodology
No instructor comments

Performance Indicator Rubric

AABI Student Learning Outcome D: Make Professional and Ethical Decisions

Course: **ASCI 4450 Aviation Law** Semester Taught: **Fall 2017**
Number of Students Scored: **24 enrolled on campus**

Performance Indicator	**Student Work Description of Assignment**	**% Needs Improvement**	**% Meets Expectations**	**% Exceeds Expectations**
Identifies ethical problems	Quiz 3; question 1	20%	80%	0
Identifies ethical (and legal) principles involved	Quiz 3; question 7	20%	80%	0
Decide on the proper ethical action and be prepared to deal with opposing arguments	Not measured; no evidence	100%	0%	0
Summary				
Instructor's Recommendations	For fall 2018 course offering: (1) Revise quiz questions to specifically reflect the three performance indicators (2) Obtain more specific data from the quiz results			
Department Recommendations				

Quiz 3; Question 1:

1. In ***FAA v. Charles F. Dress***, a flight instructor, you learned

    a. that it is reasonable for a flight instructor to rely on the students to obtain a full briefing prior to the flight.
    b. briefing tapes are retained for a period of five (5) days.

c. that students in flight training are more apt to make a mistake than a government-employed or government-contracted briefer.
d. an instructor is admonished to independently verify the pro-flight planning information provided to him/her by the student.

Quiz 3; Question 7:

1. What was the most important "take-away" from the **Thomas v. FAA** (1996) St. Louis area airplane flight demonstration for potential buyer case?

   a. There are no duties or responsibilities for acts or omissions of a second pilot in the cockpit of a single-pilot aircraft.
   b. A non-flying pilot is never actively involved in an airplane's operation, and, thus, is not liable for its unsafe operation.
   c. Two qualified pilots in a single-pilot airplane only need to formally identify who is "pilot in command" for the flight to remain clear of any potential FAA legal enforcement action following an accident.
   d. A pilot, even though not manipulating the controls, who is actively involved in an airplane's operation has a clear duty to not operate the airplane in a way that would endanger the life or property of another.

Performance Indicator Rubric

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

Course: **ASCI 4450 Aviation Law** Semester Taught: **Fall 2017**
Number of Students Scored: **24 enrolled on campus**

Performance Indicator	Student Work Description of Assignment	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Organization of material	Case briefs	100%	0	0
Provide evidence to support claims or inform audience.	Case briefs	100%	0	0
Demonstrate the proper use of language.	Case briefs			
Delivery of an oral presentation.	Case briefs	100%	0	0

Summary	All students orally presented two case briefs in the course. However, no rubric was developed to measure these oral case briefs. This course did not fully address this learning outcome and no direct evidence was gathered, fall 2017.
Instructor's Recommendations	For fall 2018 course offering: (1) Revise / improve / update the seminar topics to ensure oral and written communication skills are evidenced and measured (2) Assign and develop rubric for "case briefs" (3) Assign and develop rubric for a "research paper"
Department Recommendations	

Performance Indicator Rubric

AABI Student Learning Outcome E: Assess contemporary issues

Course: **ASCI 4450 Aviation Law** Semester Taught: **Fall 2017**
Number of Students Scored: **24 enrolled on campus**

Performance Indicator	**Student Work Description of Assignment**	**% Needs Improvement**	**% Meets Expectations**	**% Exceeds Expectations**
Identify contemporary issues related to the aviation industry	Quiz 11; question 18	0	0%	0
Recognize potential solutions	No assessment; no evidence	100%	0%	0
Summary				
Instructor's Recommendations	For fall 2018 course offering: (1) Revise assessment methodology to ensure both "performance indicators" are measured and evidence is retained			

Department Recommendations	

Quiz 11; Question 18

Aviation is exposed to many potential liability claims. As students actively engaged in training within an FAA-approved pilot school, you should be aware of such exposure. Of the following statements, which **one(s)** is/are most truthful as a result of your studies? [there may be more than one correct response]

a. You've carefully reviewed your student's plans for a solo cross-country flight. All documents were checked. Your student has been flying in a safe and consistent manner. She's ready to go, and you sign her off. But, as with all your students, you still worry. You sweat out the trip with her. Relax, you really have nothing to worry about. You will never be dragged into personal injury litigation.
b. Educational malpractice claims boil down to a simple argument: the pilot was not taught what he/she needed to know to be able to safely fly the aircraft. In these cases, the plaintiffs claim that their injury was proximately caused by the flight school or seller's negligence in instructing the pilot in specific skills necessary to prevent the accident.
c. Under the law of negligence, the law imposes on each person a duty to exercise "due care" to protect others from unreasonable risk. In the flight instruction situation, an instructor owes this duty of care to his/her student and others. If the instructor fails to exercise due care, the instructor is negligent and is liable if the negligence causes damage.
d. Should there be an accident, an instructor can usually shift liability to an instructee (student) pilot who is flying the aircraft (PF; pilot flying) at the time of the event. After all, the "pilot in command" regulations of the FARs will be your defense.
e. Have your student sign a release of liability before you provide flight instruction. A release, also known as a waiver or exculpatory clause, can be an invaluable tool in reducing your flight instructor exposure to liability. The idea of an exculpatory clause is that it represents an expressed assumption of the risk. This is a widely recognized defense to claims of negligence.
f. The flight instructor has no further legal responsibility to the student pilot once the instruction is complete and the student has become a licensed pilot; this we can assume. A licensed pilot does not have a continuing, legally protected right to look to his/her flight instructor for compensation if he/she is injured in circumstances which he/she was not adequately prepared by that flight instructor to deal with (the circumstances). One cannot sue on the concept of educational malpractice.

Performance Indicator Rubric

AABI Student Learning Outcome I: Assess the national and international aviation environment

Course: **ASCI 4450 Aviation Law** Semester Taught: **Fall 2017**
Number of Students Scored: **24 enrolled on campus**

Performance Indicator	**Student Work Description of Assignment**	**% Needs Improvement**	**% Meets Expectations**	**% Exceeds Expectations**
Identify contemporary issues affecting the local/regional, national and/or international aviation environment.	Case briefs	100%	0	0
Reflection on contemporary issues affecting the local/regional, national and/or international aviation	Case briefs	100%	0	0
Summary	The material was covered within various legal cases; however, no assessment was made and no evidence retained.			
Instructor's Recommendations	For fall 2018 course offering: (1) Revise the case briefs and testing materials to specifically address these two "performance indicators" and ensure they are measured and evidence is provided			
Department Recommendations				

CASE BRIEFS

Administrative law

1. *ATA v. DOT and FAA* 900 F.2d 369 (1990)
   Assigned to: **Sept. 21**
2. *Hinson (FAA) v. Machado* NTSB Order No. EA-4116 (1994)
   Assigned to: **Sept 26**
3. *Thomas v. Hinson (FAA)* 74 F.3d 888 (8th Cir. 1996)
   Assigned to: **Sept 26**
4. *Blakey (FAA) v. Charles F. Dress,* NTSB Order No. EA-5115 (Oct 2004)
   Assigned to: **Sept 26**
5. *Dickson v. NTSB & FAA U.S. Cir. Ct. App. DC (2011)*
   Assigned to: **Sept 28**
6. *FAA v. pasternack NTSB Order No. EA-5615 (2012)*
   Pasternack V. NTSB No. 09-1139 U.S. Ct. app. D.C. (2010)
   Assigned to: **Sept 28**
7. *Garvey v. NTSB and Merrell* 190 F.3d 571 (1999)
   Assigned to: **Oct 3**
8. *Hinson (FAA) v. NTSB* 57 F.3d 1144, 313 (D.C. Cir. 1995)
   Assigned to: **Oct 3**
9. *Ramaprakash V. FAA & NTSB* 346 F.3d 1121 (2003)
   Assigned to: **Oct 5**
10. *Lindsay v. NTSB* 47 F.3d 1209 (1995)
    Assigned to: **Oct 5**
11. *Borregard v. NTSB* 46 F.3d 944 (1995)
    Assigned to: **Oct 5**
12. *Andrzejewski v. FAA* U.S. ct. App 9thDist (2008)
    Assigned to: **Oct 5**
13. *Huerta (FAA) v. Jody Ducote,* NTSB Order No. EA-5664 (June 2013)
    Assigned to: **Oct 5**

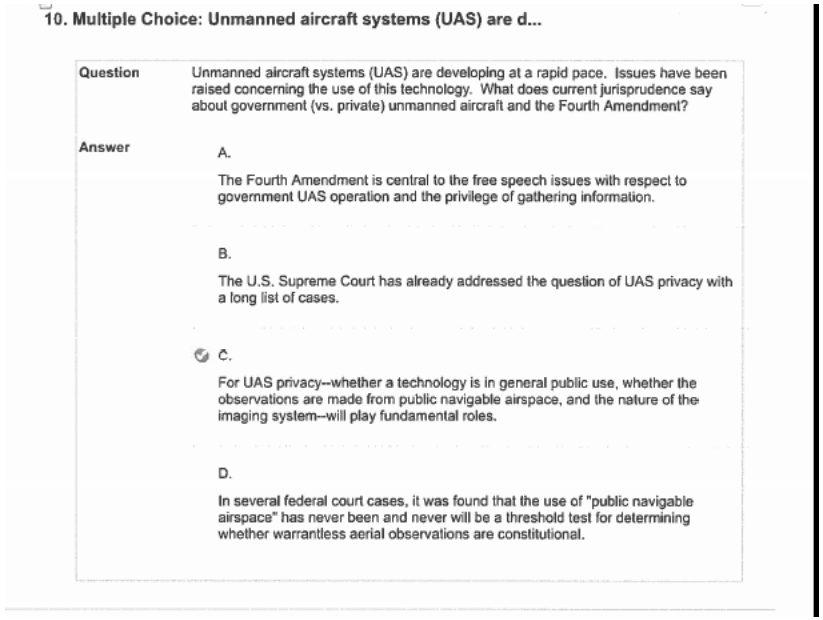
14. *Manin v. NTSB & FAA U.S. Cir. Ct. App. DC (2011)*
    Assigned to: **Oct 5**
15. *Huerta (FAA) v. Andrew Dustman*, NTSB Order No. EA-5657 (March 2013)
    Assigned to: **Oct 5**
16. *Huerta (FAA) v. Christopher Lee Gage,* NTSB Docket No.: SE-19313 (July 2012)
    Assigned to: **Oct 5**
17. *Mendenhall v. NTSB & FAA 93 F.3d 871 (1996)*
    Assigned to: **Oct 10**
18. *Babbitt* (FAA) *v. Austin and McCall* NTSB Order No. EA-5583 (2011)
    Assigned to: **Oct 10**
19. *Trans States Airlines v. FAA,* No. 05-1963, U.S. Court of Appeals for the Eighth Circuit, (March 2006)
    Assigned to: **NOT ASSIGNED**
20. ["wild card"] *Taylor v. Hueta (FAA*) U.S. Court of Appeals, D.C. (2017)
    Assigned to: **Oct 10**
21. *"wild card" FAA v. Dennis Lauterbach* NTSB Order No. EA-5745 (2015)
    Assigned to: **Oct 10**
22. *["wild card"] Cross v. Harris* 370 P.2d 703 (1962)
    Assigned to: **(Chapter 4)**
23. *["wild card"] FLYTENOW, Inc. v. FAA* U.S. Court of Appeals, D.C. (2015)
    Assigned to: **Oct 10**
24. *["wild card"] Cleveland v. piper Aircraft Corporation* 985 F.2d 1438 (1993)
    Assigned to: **(Chapter 4)**
25. *["wild card"] Flyers Rights v. FAA* U.S. Court of Appeals D.C. (2017) [drone registration]
    Assigned to: **Oct 12**

Torts, Property law, International air law

26. *Trans States Airlines v. FAA,* No. 05-1963, U.S. Court of Appeals for the Eighth Circuit, (March 2006)
    Assigned to: NOT ASSIGNED
27. *Cross v. Harris*, 230 Sup Ct Oregon 398; 370 P.2d 703 (1962)
    Crop dusting; trespass; damages; liability
    Assigned to: (Chapter 4)
28. *Goldberg v. Kollsman Instrument Corp.,* 12 NY 2d 432, (1963) NY Ct of Appeals
    Manufacturer's implied warranty of fitness; negligence; merchantability & fitness
    Assigned to: (Chapters 4 and 6)
29. *Newberger v. Pokrass,* 33 Wis. 2d 569 (1967) negligence; res ipsa loquitur
    Assigned to: (Chapter 4)
30. *Cleveland v. Piper Aircraft Corporation,* 985 F2d 1438 (1993) Manufacturer liability
    Assigned to: (Chapter 4)
31. *Brocklesby v. United States,* 767 F. 2d 1288 (1985) Ct. Appls, 9th Circuit Wrongful death; Jeppesen; strict products liability; negligence
    Assigned to: (Chapter 4)
32. *Bruce v. Martin-Maretta Corp.,* 544 F. 2d 441 (1976) Ct Appls, 10th Circuit Product liability; WSU team; Martin 404; Ozark Airlines
    Assigned to: (Chapter 4)
33. *McGee v. Cessna Aircraft Co.,* 139 Cal. App. 3d 179 (1983) Negligence; strict liability crashworthiness
    Assigned to: -(Chapter 4)
34. *Nesselrode v. Executive Beechcraft, Inc*., 707 S.W.2s 371 (1986) Sup Ct of Missouri Wrongful death action; strictly liable; products liability; foreseeability; duty to warn
    Assigned to: (Chapter 4)
35. *Hinkle v. Cessna,* No. 247099, Ct of Appeals of Michigan (2004) GARA; products liability
    Assigned to: (Chapter 4)
36. *Burke v. Pan American World Airways, Inc.,* 484 F. Supp. 850 (1980) Dist. Ct., SD NY Negligence; wrongful death; twin sister; Tenerife B747s
    Assigned to: (Chapter 4)
37. Flight Instructor Liability / Educational Malpractice and the Liability of Flight Training Providers
    Assigned to: (Chapter 4)

Online Final Exam

Assess contemporary issues



10. Multiple Choice: Unmanned aircraft systems (UAS) are d...

Question	Unmanned aircraft systems (UAS) are developing at a rapid pace. Issues have been raised concerning the use of this technology. What does current jurisprudence say about government (vs. private) unmanned aircraft and the Fourth Amendment?
Answer	A. The Fourth Amendment is central to the free speech issues with respect to government UAS operation and the privilege of gathering information. B. The U.S. Supreme Court has already addressed the question of UAS privacy with a long list of cases. C. For UAS privacy--whether a technology is in general public use, whether the observations are made from public navigable airspace, and the nature of the imaging system--will play fundamental roles. D. In several federal court cases, it was found that the use of "public navigable airspace" has never been and never will be a threshold test for determining whether warrantless aerial observations are constitutional.

16. Multiple Choice: Which of the following has contribute... Points: 2

Question	Which of the following has contributed most to long-term economic growth and sustainability of the aviation small manufacturing sector in the past 23 years?
Answer	A. Pilot's Bill of Rights
	✓ B. General Aviation Revitalization Act
	C. Federal Tort Claims Act
	D. FAA Modernization and Reform Act of 2012

23. Multiple Choice: Why was the Pilot's Bill of Rights (2... Points: 2

Question	Why was the Pilot's Bill of Rights (2012) a significant piece of Congressional legislation?
Answer	A. It reduces the severity of enforcement actions that may be taken against the airman for alleged wrongdoing.
	B. It improves the system of weather information distribution in terms of searchability.
	✓ C. It statutorily requires the FAA in any investigation to make sure that the pilot is fully aware of what he/she is being accused of before any findings of violation are issued.
	D. It finally clarifies that the NTSB and its administrative law judges are indeed bound by the FAA's interpretation of a regulation.

☐ **40. Multiple Choice: In the state of Wisconsin, the state ...** Points: 2

Question	In the state of Wisconsin, the state legislature has enacted Chapter 114, Aeronautics, Section 114.09, Intoxicated and reckless flying; penalty. *"No person may operate an aircraft in the air or on the ground if the person has a prohibited alcohol concentration* (means an alcohol concentration of 0.04 or more if there is no passenger in the aircraft, more than 0.00 if there is a passenger in the aircraft); *fined between $350 - $1,100 and imprisoned for not less than 5 days nor more than 6 months."* a. Is this an exercise of a state's assertion of police power by criminalizing certain aviation-related conduct? b. Is it permissible for some state laws to go beyond the general prohibitions of careless or reckless operations and to become very specific as in this example?
Answer	☑ A. Yes, to both questions B. Yes, to the first question. No, to the second question. C. No, to the first question. Yes, to the second question. D. No, to both questions.
Incorrect Feedback	Textbook page 76, chapter 3. State provisions

☐ **44. Multiple Answer: Aviation is exposed to many potential...** Points: 5

Question	Aviation is exposed to many potential liability claims. As students, some of you are actively engaged in pilot training, and you should be aware of such exposure. Of the following statements, which ones (more than one correct response) are most truthful based on your studies in this course?
Answer	A. You are a flight instructor. You've carefully reviewed your student's plans for a solo cross-country flight. All documents were checked. Your student has been flying in a safe and consistent manner. She's ready to go and you sign her off. But, as with all your students, you still worry. You sweat out the trip with her. Relax, you really have nothing to worry about. You will never be dragged into personal injury litigation with a student of this nature.
	B. Should there be an accident, an instructor can usually shift liability to an instructee (student) pilot who is flying the aircraft (PF; pilot flying) at the time of the event. After all, the "pilot in command" regulations of the FARs will be your defense.
	☑ C. Educational malpractice claims boil down to a simple argument: the pilot was not taught what he/she needed to know to be able to safely fly the aircraft. In these cases, the plaintiff's claim that their injury was proximately caused by the flight school or seller's negligence in instructing the pilot in specific skills necessary to prevent the accident.

COURSE EVALUATION REPORT

- “There were a lot of reading assignments that I just couldn’t complete. Assigning an entire chapter on a Tuesday night for the following Thursday made it difficult to accomplish. It would have been helpful to have a source for all designated reading assignments so I could have seen what reading was due for when. There were also way too many handouts. The cases are important, but we would get them without ever looking at them again. There were few things highlighted for us to read on the handouts on the sometimes dozens of pages. A more concise summary of the law cases put into one consolidated packet would be way more effective.”
- “Course was full and constantly linked to the real world and its applications.”
- “I usually would finish reading assignments when assigned, weeks before they were relevant which would usually present problems when it came to recall.”
- “Instructor was always a fully invested in the material and explained all clearly!” [sic]
- “I should have prepared more for each class. I wish I was able to put more effort into the classes, but I was pretty overwhelmed with my other classes.”

Indirect Measures of Assessment

Student Surveys

Department Course Evaluation Report for Aviation Science - Fall 2017

Parks College of Engineering, Aviation and Technology Course Evaluations

Total Enrollment 528
Responses Received 190
Response Rate 35.98%

Creation Date Tue, Jan 02, 2018

Intrepretation Guidelines

This report includes the aggregate of all student responses to Likert scale or multiple choice questions for all courses taught within a department in the semester.

[QTitle] (Aggregate)

Options	Count
to meet a requirement of an undergraduate academic major or minor	165
to meet a requirement of a graduate/professional program or minor	31
to meet an undergraduate core/general education requirement	22
as an elective (not part of any major/minor/program or core/general education requirement)	1
Please explain:	0

Questions about the Student (Aggregate)

	Strongly Agree	Agree	Disagree	Strongly Disagree	Average	Total Responses
I believe my academic background was sufficient to succeed in this course.	107	71	9	2	3.50	189
The subject matter of this course was of interest to me before the course began.	122	53	12	2	3.56	189

Questions about the Student (Breakdown by Course)

I believe my academic background was sufficient to succeed in this course.

	Strongly Agree	Agree	Disagree	Strongly Disagree	Average	Total Responses
Overall	107	71	9	2	3.50	189
FL2017 ASCI-1010-01-Professional Orientation	11	7	2	0	3.45	20
FL2017 ASCI-1300-01-Aviation Weather	7	7	3	2	3.00	19
FL2017 ASCI-1300-10-Aviation Weather	7	8	0	0	3.47	15
FL2017 ASCI-2200-01-Concepts in Aerodynamics	4	5	1	0	3.30	10
FL2017 ASCI-3010-01-Jet Transport Systems I	4	1	0	0	3.80	5
FL2017 ASCI-4012-01-Jet Flying Tech I Lect	5	2	0	0	3.71	7
FL2017 ASCI-4050-01-Human Factors	3	4	0	0	3.43	7
FL2017 ASCI-4050-10-Human Factors	9	4	0	0	3.69	13
FL2017 ASCI-4250-01-Prof Ethics and Standards	8	4	0	0	3.67	12
FL2017 ASCI-4450-01-Aviation Law	5	3	1	0	3.44	9
FL2017 ASCI-4450-10-Aviation Law	6	6	0	0	3.50	12
FL2017 ASCI-5220-10-Aviation Safety Programs	5	2	0	0	3.71	7
FL2017 ASCI-5460-02-Qualitative Data Analysis	6	2	0	0	3.75	8
FL2017 FSCI-1150-01-Flight 1	8	4	1	0	3.54	13
FL2017 FSCI-1250-01-Basic Flight Foundations	11	5	1	0	3.59	17
FL2017 FSCI-2150-01-Flight 3	4	2	0	0	3.67	6
FL2017 FSCI-2250-01-Instrument Flight Foundations	4	5	0	0	3.44	9

The subject matter of this course was of interest to me before the course began.

	Strongly Agree	Agree	Disagree	Strongly Disagree	Average	Total Responses
Overall	122	53	12	2	3.56	189
FL2017 ASCI-1010-01-Professional Orientation	14	4	2	0	3.60	20
FL2017 ASCI-1300-01-Aviation Weather	7	7	4	1	3.05	19
FL2017 ASCI-1300-10-Aviation Weather	7	6	2	0	3.33	15
FL2017 ASCI-2200-01-Concepts in Aerodynamics	6	4	0	0	3.60	10
FL2017 ASCI-3010-01-Jet Transport Systems I	4	1	0	0	3.80	5
FL2017 ASCI-4012-01-Jet Flying Tech I Lect	6	1	0	0	3.86	7
FL2017 ASCI-4050-01-Human Factors	4	3	0	0	3.57	7
FL2017 ASCI-4050-10-Human Factors	9	3	1	0	3.62	13
FL2017 ASCI-4250-01-Prof Ethics and Standards	5	6	1	0	3.33	12
FL2017 ASCI-4450-01-Aviation Law	5	4	0	0	3.56	9
FL2017 ASCI-4450-10-Aviation Law	6	4	1	1	3.25	12
FL2017 ASCI-5220-10-Aviation Safety Programs	6	1	0	0	3.86	7
FL2017 ASCI-5460-02-Qualitative Data Analysis	6	1	1	0	3.63	8
FL2017 FSCI-1150-01-Flight 1	10	3	0	0	3.77	13
FL2017 FSCI-1250-01-Basic Flight Foundations	15	2	0	0	3.88	17
FL2017 FSCI-2150-01-Flight 3	6	0	0	0	4.00	6
FL2017 FSCI-2250-01-Instrument Flight Foundations	6	3	0	0	3.67	9

Questions about the Student (Aggregate)

	Always	Often	Sometimes	Never	Average	Total Responses
I came to each class session prepared.	111	61	17	0	3.50	189
I invested enough time and energy to meet the course requirements.	110	63	15	1	3.49	189
I asked the instructor for help when I needed it.	106	40	31	12	3.27	189

Questions about the Student (Breakdown by Course)

I came to each class session prepared.

	Always	Often	Sometimes	Never	Average	Total Responses
Overall	111	61	17	0	3.50	189
FL2017 ASCI-1010-01-Professional Orientation	12	8	0	0	3.60	20
FL2017 ASCI-1300-01-Aviation Weather	8	7	4	0	3.21	19
FL2017 ASCI-1300-10-Aviation Weather	9	6	0	0	3.60	15
FL2017 ASCI-2200-01-Concepts in Aerodynamics	6	2	2	0	3.40	10
FL2017 ASCI-3010-01-Jet Transport Systems I	1	3	1	0	3.00	5
FL2017 ASCI-4012-01-Jet Flying Tech I Lect	2	3	2	0	3.00	7
FL2017 ASCI-4050-01-Human Factors	3	2	2	0	3.14	7
FL2017 ASCI-4050-10-Human Factors	9	4	0	0	3.69	13
FL2017 ASCI-4250-01-Prof Ethics and Standards	3	6	3	0	3.00	12
FL2017 ASCI-4450-01-Aviation Law	4	3	2	0	3.22	9
FL2017 ASCI-4450-10-Aviation Law	8	4	0	0	3.67	12
FL2017 ASCI-5220-10-Aviation Safety Programs	6	1	0	0	3.86	7
FL2017 ASCI-5460-02-Qualitative Data Analysis	7	1	0	0	3.88	8
FL2017 FSCI-1150-01-Flight 1	10	3	0	0	3.77	13
FL2017 FSCI-1250-01-Basic Flight Foundations	15	2	0	0	3.88	17
FL2017 FSCI-2150-01-Flight 3	3	2	1	0	3.33	6
FL2017 FSCI-2250-01-Instrument Flight Foundations	5	4	0	0	3.56	9

I invested enough time and energy to meet the course requirements.

	Always	Often	Sometimes	Never	Average	Total Responses
Overall	110	63	15	1	3.49	189
FL2017 ASCI-1010-01-Professional Orientation	12	7	1	0	3.55	20
FL2017 ASCI-1300-01-Aviation Weather	7	10	1	1	3.21	19
FL2017 ASCI-1300-10-Aviation Weather	9	4	2	0	3.47	15
FL2017 ASCI-2200-01-Concepts in Aerodynamics	3	6	1	0	3.20	10
FL2017 ASCI-3010-01-Jet Transport Systems I	1	2	2	0	2.80	5
FL2017 ASCI-4012-01-Jet Flying Tech I Lect	1	6	0	0	3.14	7
FL2017 ASCI-4050-01-Human Factors	5	0	2	0	3.43	7
FL2017 ASCI-4050-10-Human Factors	8	4	1	0	3.54	13
FL2017 ASCI-4250-01-Prof Ethics and Standards	5	4	3	0	3.17	12

	Always	Often	Sometimes	Never	Average	Total Responses
FL2017 ASCI-4450-01-Aviation Law	5	3	1	0	3.44	9
FL2017 ASCI-4450-10-Aviation Law	8	4	0	0	3.67	12
FL2017 ASCI-5220-10-Aviation Safety Programs	7	0	0	0	4.00	7
FL2017 ASCI-5460-02-Qualitative Data Analysis	7	1	0	0	3.88	8
FL2017 FSCI-1150-01-Flight 1	9	4	0	0	3.69	13
FL2017 FSCI-1250-01-Basic Flight Foundations	16	1	0	0	3.94	17
FL2017 FSCI-2150-01-Flight 3	3	3	0	0	3.50	6
FL2017 FSCI-2250-01-Instrument Flight Foundations	4	4	1	0	3.33	9

I asked the instructor for help when I needed it.

	Always	Often	Sometimes	Never	Average	Total Responses
Overall	106	40	31	12	3.27	189
FL2017 ASCI-1010-01-Professional Orientation	9	3	6	2	2.95	20
FL2017 ASCI-1300-01-Aviation Weather	7	5	5	2	2.89	19
FL2017 ASCI-1300-10-Aviation Weather	12	1	2	0	3.67	15
FL2017 ASCI-2200-01-Concepts in Aerodynamics	3	5	2	0	3.10	10
FL2017 ASCI-3010-01-Jet Transport Systems I	2	0	3	0	2.80	5
FL2017 ASCI-4012-01-Jet Flying Tech I Lect	3	3	1	0	3.29	7
FL2017 ASCI-4050-01-Human Factors	2	1	1	3	2.29	7
FL2017 ASCI-4050-10-Human Factors	10	1	2	0	3.62	13
FL2017 ASCI-4250-01-Prof Ethics and Standards	5	2	3	2	2.83	12
FL2017 ASCI-4450-01-Aviation Law	6	1	1	1	3.33	9
FL2017 ASCI-4450-10-Aviation Law	9	2	0	1	3.58	12
FL2017 ASCI-5220-10-Aviation Safety Programs	5	2	0	0	3.71	7
FL2017 ASCI-5460-02-Qualitative Data Analysis	4	1	3	0	3.13	8
FL2017 FSCI-1150-01-Flight 1	9	4	0	0	3.69	13
FL2017 FSCI-1250-01-Basic Flight Foundations	11	5	1	0	3.59	17
FL2017 FSCI-2150-01-Flight 3	4	2	0	0	3.67	6
FL2017 FSCI-2250-01-Instrument Flight Foundations	5	2	1	1	3.22	9

Questions about the Course (Aggregate)

	Strongly Agree	Agree	Disagree	Strongly Disagree	Average	Total Responses
Expected learning outcomes for the course were clearly communicated.	130	51	7	1	3.64	189
Course requirements (attendance, participation, readings, assignments, exams, etc.) were clearly communicated.	132	42	12	3	3.60	189
The course design (timing of and relationships among readings, discussions, labs, assignments, exams, etc.) supported my achievement of the course learning outcomes.	121	55	11	2	3.56	189
The course required me to apply what I learned in new ways.	125	47	15	2	3.56	189
The course challenged me intellectually.	128	51	8	2	3.61	189
Overall, I think this course was excellent.	107	60	19	3	3.43	189

Questions about the Course (Breakdown by Course)

Expected learning outcomes for the course were clearly communicated.

	Strongly Agree	Agree	Disagree	Strongly Disagree	Average	Total Responses
Overall	130	51	7	1	3.64	189
FL2017 ASCI-1010-01-Professional Orientation	15	4	1	0	3.70	20
FL2017 ASCI-1300-01-Aviation Weather	10	8	1	0	3.47	19
FL2017 ASCI-1300-10-Aviation Weather	11	4	0	0	3.73	15
FL2017 ASCI-2200-01-Concepts in Aerodynamics	5	5	0	0	3.50	10
FL2017 ASCI-3010-01-Jet Transport Systems I	4	1	0	0	3.80	5
FL2017 ASCI-4012-01-Jet Flying Tech I Lect	6	1	0	0	3.86	7
FL2017 ASCI-4050-01-Human Factors	5	2	0	0	3.71	7
FL2017 ASCI-4050-10-Human Factors	8	3	2	0	3.46	13
FL2017 ASCI-4250-01-Prof Ethics and Standards	8	3	1	0	3.58	12
FL2017 ASCI-4450-01-Aviation Law	7	2	0	0	3.78	9
FL2017 ASCI-4450-10-Aviation Law	10	1	1	0	3.75	12
FL2017 ASCI-5220-10-Aviation Safety Programs	5	2	0	0	3.71	7
FL2017 ASCI-5460-02-Qualitative Data Analysis	2	4	1	1	2.88	8
FL2017 FSCI-1150-01-Flight 1	10	3	0	0	3.77	13
FL2017 FSCI-1250-01-Basic Flight Foundations	15	2	0	0	3.88	17
FL2017 FSCI-2150-01-Flight 3	3	3	0	0	3.50	6
FL2017 FSCI-2250-01-Instrument Flight Foundations	6	3	0	0	3.67	9

Course requirements (attendance, participation, readings, assignments, exams, etc.) were clearly communicated.

	Strongly Agree	Agree	Disagree	Strongly Disagree	Average	Total Responses
Overall	132	42	12	3	3.60	189
FL2017 ASCI-1010-01-Professional Orientation	16	3	1	0	3.75	20
FL2017 ASCI-1300-01-Aviation Weather	9	7	2	1	3.26	19

	Strongly Agree	Agree	Disagree	Strongly Disagree	Average	Total Responses
FL2017 ASCI-1300-10-Aviation Weather	12	3	0	0	3.80	15
FL2017 ASCI-2200-01-Concepts in Aerodynamics	5	5	0	0	3.50	10
FL2017 ASCI-3010-01-Jet Transport Systems I	3	2	0	0	3.60	5
FL2017 ASCI-4012-01-Jet Flying Tech I Lect	6	1	0	0	3.86	7
FL2017 ASCI-4050-01-Human Factors	5	2	0	0	3.71	7
FL2017 ASCI-4050-10-Human Factors	7	2	3	1	3.15	13
FL2017 ASCI-4250-01-Prof Ethics and Standards	9	2	1	0	3.67	12
FL2017 ASCI-4450-01-Aviation Law	6	2	1	0	3.56	9
FL2017 ASCI-4450-10-Aviation Law	10	1	1	0	3.75	12
FL2017 ASCI-5220-10-Aviation Safety Programs	4	3	0	0	3.57	7
FL2017 ASCI-5460-02-Qualitative Data Analysis	2	3	2	1	2.75	8
FL2017 FSCI-1150-01-Flight 1	11	2	0	0	3.85	13
FL2017 FSCI-1250-01-Basic Flight Foundations	16	1	0	0	3.94	17
FL2017 FSCI-2150-01-Flight 3	4	1	1	0	3.50	6
FL2017 FSCI-2250-01-Instrument Flight Foundations	7	2	0	0	3.78	9

The course design (timing of and relationships among readings, discussions, labs, assignments, exams, etc.) supported my achievement of the course learning outcomes.

	Strongly Agree	Agree	Disagree	Strongly Disagree	Average	Total Responses
Overall	121	55	11	2	3.56	189
FL2017 ASCI-1010-01-Professional Orientation	14	5	1	0	3.65	20
FL2017 ASCI-1300-01-Aviation Weather	7	9	3	0	3.21	19
FL2017 ASCI-1300-10-Aviation Weather	10	5	0	0	3.67	15
FL2017 ASCI-2200-01-Concepts in Aerodynamics	5	4	1	0	3.40	10
FL2017 ASCI-3010-01-Jet Transport Systems I	3	2	0	0	3.60	5
FL2017 ASCI-4012-01-Jet Flying Tech I Lect	4	3	0	0	3.57	7
FL2017 ASCI-4050-01-Human Factors	3	4	0	0	3.43	7
FL2017 ASCI-4050-10-Human Factors	8	1	4	0	3.31	13
FL2017 ASCI-4250-01-Prof Ethics and Standards	8	4	0	0	3.67	12
FL2017 ASCI-4450-01-Aviation Law	5	3	0	1	3.33	9
FL2017 ASCI-4450-10-Aviation Law	11	0	1	0	3.83	12
FL2017 ASCI-5220-10-Aviation Safety Programs	6	1	0	0	3.86	7
FL2017 ASCI-5460-02-Qualitative Data Analysis	3	3	1	1	3.00	8
FL2017 FSCI-1150-01-Flight 1	9	4	0	0	3.69	13
FL2017 FSCI-1250-01-Basic Flight Foundations	16	1	0	0	3.94	17
FL2017 FSCI-2150-01-Flight 3	4	2	0	0	3.67	6
FL2017 FSCI-2250-01-Instrument Flight Foundations	5	4	0	0	3.56	9

The course required me to apply what I learned in new ways.

	Strongly Agree	Agree	Disagree	Strongly Disagree	Average	Total Responses
Overall	125	47	15	2	3.56	189

	Strongly Agree	Agree	Disagree	Strongly Disagree	Average	Total Responses
FL2017 ASCI-1010-01-Professional Orientation	11	6	3	0	3.40	20
FL2017 ASCI-1300-01-Aviation Weather	6	10	2	1	3.11	19
FL2017 ASCI-1300-10-Aviation Weather	10	5	0	0	3.67	15
FL2017 ASCI-2200-01-Concepts in Aerodynamics	7	2	1	0	3.60	10
FL2017 ASCI-3010-01-Jet Transport Systems I	1	1	3	0	2.60	5
FL2017 ASCI-4012-01-Jet Flying Tech I Lect	6	1	0	0	3.86	7
FL2017 ASCI-4050-01-Human Factors	3	3	1	0	3.29	7
FL2017 ASCI-4050-10-Human Factors	9	1	3	0	3.46	13
FL2017 ASCI-4250-01-Prof Ethics and Standards	7	4	0	1	3.42	12
FL2017 ASCI-4450-01-Aviation Law	6	3	0	0	3.67	9
FL2017 ASCI-4450-10-Aviation Law	10	1	1	0	3.75	12
FL2017 ASCI-5220-10-Aviation Safety Programs	6	1	0	0	3.86	7
FL2017 ASCI-5460-02-Qualitative Data Analysis	5	2	1	0	3.50	8
FL2017 FSCI-1150-01-Flight 1	11	2	0	0	3.85	13
FL2017 FSCI-1250-01-Basic Flight Foundations	16	1	0	0	3.94	17
FL2017 FSCI-2150-01-Flight 3	4	2	0	0	3.67	6
FL2017 FSCI-2250-01-Instrument Flight Foundations	7	2	0	0	3.78	9

The course challenged me intellectually.

	Strongly Agree	Agree	Disagree	Strongly Disagree	Average	Total Responses
Overall	128	51	8	2	3.61	189
FL2017 ASCI-1010-01-Professional Orientation	10	6	3	1	3.25	20
FL2017 ASCI-1300-01-Aviation Weather	7	11	0	1	3.26	19
FL2017 ASCI-1300-10-Aviation Weather	9	6	0	0	3.60	15
FL2017 ASCI-2200-01-Concepts in Aerodynamics	9	1	0	0	3.90	10
FL2017 ASCI-3010-01-Jet Transport Systems I	0	3	2	0	2.60	5
FL2017 ASCI-4012-01-Jet Flying Tech I Lect	7	0	0	0	4.00	7
FL2017 ASCI-4050-01-Human Factors	4	3	0	0	3.57	7
FL2017 ASCI-4050-10-Human Factors	8	4	1	0	3.54	13
FL2017 ASCI-4250-01-Prof Ethics and Standards	9	3	0	0	3.75	12
FL2017 ASCI-4450-01-Aviation Law	7	1	1	0	3.67	9
FL2017 ASCI-4450-10-Aviation Law	10	2	0	0	3.83	12
FL2017 ASCI-5220-10-Aviation Safety Programs	5	2	0	0	3.71	7
FL2017 ASCI-5460-02-Qualitative Data Analysis	5	3	0	0	3.63	8
FL2017 FSCI-1150-01-Flight 1	10	3	0	0	3.77	13
FL2017 FSCI-1250-01-Basic Flight Foundations	15	1	1	0	3.82	17
FL2017 FSCI-2150-01-Flight 3	5	1	0	0	3.83	6
FL2017 FSCI-2250-01-Instrument Flight Foundations	8	1	0	0	3.89	9

Overall, I think this course was excellent.

	Strongly Agree	Agree	Disagree	Strongly Disagree	Average	Total Responses

	Strongly Agree	Agree	Disagree	Strongly Disagree	Average	Total Responses
Overall	107	60	19	3	3.43	189
FL2017 ASCI-1010-01-Professional Orientation	11	7	2	0	3.45	20
FL2017 ASCI-1300-01-Aviation Weather	6	7	5	1	2.95	19
FL2017 ASCI-1300-10-Aviation Weather	9	5	1	0	3.53	15
FL2017 ASCI-2200-01-Concepts in Aerodynamics	7	2	1	0	3.60	10
FL2017 ASCI-3010-01-Jet Transport Systems I	1	4	0	0	3.20	5
FL2017 ASCI-4012-01-Jet Flying Tech I Lect	3	3	1	0	3.29	7
FL2017 ASCI-4050-01-Human Factors	4	2	1	0	3.43	7
FL2017 ASCI-4050-10-Human Factors	8	1	3	1	3.23	13
FL2017 ASCI-4250-01-Prof Ethics and Standards	6	5	1	0	3.42	12
FL2017 ASCI-4450-01-Aviation Law	5	3	1	0	3.44	9
FL2017 ASCI-4450-10-Aviation Law	10	1	1	0	3.75	12
FL2017 ASCI-5220-10-Aviation Safety Programs	6	1	0	0	3.86	7
FL2017 ASCI-5460-02-Qualitative Data Analysis	1	4	2	1	2.63	8
FL2017 FSCI-1150-01-Flight 1	9	4	0	0	3.69	13
FL2017 FSCI-1250-01-Basic Flight Foundations	15	2	0	0	3.88	17
FL2017 FSCI-2150-01-Flight 3	2	4	0	0	3.33	6
FL2017 FSCI-2250-01-Instrument Flight Foundations	4	5	0	0	3.44	9

Questions about the Instructor: (Aggregate)

	Always	Often	Sometimes	Never	Average	Total Responses
The instructor communicated ideas and information clearly.	126	47	14	2	3.57	189
The instructor demonstrated enthusiasm for the subject matter.	155	24	9	1	3.76	189
The instructor provided feedback/critique that helped me with subsequent work in the course.	122	40	20	7	3.47	189
The instructor treated students with respect.	173	12	4	0	3.89	189
The instructor was available for assistance when needed.	142	33	13	1	3.67	189
Overall, I think this instructor was excellent.	138	35	13	3	3.63	189

Questions about the Instructor: (Breakdown by Course)

The instructor communicated ideas and information clearly.

	Always	Often	Sometimes	Never	Average	Total Responses
Overall	126	47	14	2	3.57	189
FL2017 ASCI-1010-01-Professional Orientation	14	5	1	0	3.65	20
FL2017 ASCI-1300-01-Aviation Weather	11	4	4	0	3.37	19
FL2017 ASCI-1300-10-Aviation Weather	12	2	0	1	3.67	15
FL2017 ASCI-2200-01-Concepts in Aerodynamics	8	2	0	0	3.80	10
FL2017 ASCI-3010-01-Jet Transport Systems I	3	2	0	0	3.60	5

	Always	Often	Sometimes	Never	Average	Total Responses
FL2017 ASCI-4012-01-Jet Flying Tech I Lect	4	3	0	0	3.57	7
FL2017 ASCI-4050-01-Human Factors	5	1	1	0	3.57	7
FL2017 ASCI-4050-10-Human Factors	6	4	2	1	3.15	13
FL2017 ASCI-4250-01-Prof Ethics and Standards	8	3	1	0	3.58	12
FL2017 ASCI-4450-01-Aviation Law	7	2	0	0	3.78	9
FL2017 ASCI-4450-10-Aviation Law	11	0	1	0	3.83	12
FL2017 ASCI-5220-10-Aviation Safety Programs	3	4	0	0	3.43	7
FL2017 ASCI-5460-02-Qualitative Data Analysis	2	3	3	0	2.88	8
FL2017 FSCI-1150-01-Flight 1	11	2	0	0	3.85	13
FL2017 FSCI-1250-01-Basic Flight Foundations	15	2	0	0	3.88	17
FL2017 FSCI-2150-01-Flight 3	3	3	0	0	3.50	6
FL2017 FSCI-2250-01-Instrument Flight Foundations	3	5	1	0	3.22	9

The instructor demonstrated enthusiasm for the subject matter.

	Always	Often	Sometimes	Never	Average	Total Responses
Overall	155	24	9	1	3.76	189
FL2017 ASCI-1010-01-Professional Orientation	16	4	0	0	3.80	20
FL2017 ASCI-1300-01-Aviation Weather	16	3	0	0	3.84	19
FL2017 ASCI-1300-10-Aviation Weather	12	2	1	0	3.73	15
FL2017 ASCI-2200-01-Concepts in Aerodynamics	9	1	0	0	3.90	10
FL2017 ASCI-3010-01-Jet Transport Systems I	3	0	2	0	3.20	5
FL2017 ASCI-4012-01-Jet Flying Tech I Lect	6	1	0	0	3.86	7
FL2017 ASCI-4050-01-Human Factors	6	1	0	0	3.86	7
FL2017 ASCI-4050-10-Human Factors	10	2	0	1	3.62	13
FL2017 ASCI-4250-01-Prof Ethics and Standards	11	1	0	0	3.92	12
FL2017 ASCI-4450-01-Aviation Law	9	0	0	0	4.00	9
FL2017 ASCI-4450-10-Aviation Law	10	1	1	0	3.75	12
FL2017 ASCI-5220-10-Aviation Safety Programs	7	0	0	0	4.00	7
FL2017 ASCI-5460-02-Qualitative Data Analysis	4	1	3	0	3.13	8
FL2017 FSCI-1150-01-Flight 1	11	2	0	0	3.85	13
FL2017 FSCI-1250-01-Basic Flight Foundations	14	2	1	0	3.76	17
FL2017 FSCI-2150-01-Flight 3	3	2	1	0	3.33	6
FL2017 FSCI-2250-01-Instrument Flight Foundations	8	1	0	0	3.89	9

The instructor provided feedback/critique that helped me with subsequent work in the course.

	Always	Often	Sometimes	Never	Average	Total Responses
Overall	122	40	20	7	3.47	189
FL2017 ASCI-1010-01-Professional Orientation	15	4	1	0	3.70	20
FL2017 ASCI-1300-01-Aviation Weather	12	3	1	3	3.26	19
FL2017 ASCI-1300-10-Aviation Weather	9	2	3	1	3.27	15
FL2017 ASCI-2200-01-Concepts in Aerodynamics	5	2	3	0	3.20	10

	Always	Often	Sometimes	Never	Average	Total Responses
FL2017 ASCI-3010-01-Jet Transport Systems I	3	1	1	0	3.40	5
FL2017 ASCI-4012-01-Jet Flying Tech I Lect	5	2	0	0	3.71	7
FL2017 ASCI-4050-01-Human Factors	4	1	2	0	3.29	7
FL2017 ASCI-4050-10-Human Factors	7	2	2	2	3.08	13
FL2017 ASCI-4250-01-Prof Ethics and Standards	8	4	0	0	3.67	12
FL2017 ASCI-4450-01-Aviation Law	6	3	0	0	3.67	9
FL2017 ASCI-4450-10-Aviation Law	9	2	1	0	3.67	12
FL2017 ASCI-5220-10-Aviation Safety Programs	7	0	0	0	4.00	7
FL2017 ASCI-5460-02-Qualitative Data Analysis	1	2	4	1	2.38	8
FL2017 FSCI-1150-01-Flight 1	12	1	0	0	3.92	13
FL2017 FSCI-1250-01-Basic Flight Foundations	12	4	1	0	3.65	17
FL2017 FSCI-2150-01-Flight 3	3	3	0	0	3.50	6
FL2017 FSCI-2250-01-Instrument Flight Foundations	4	4	1	0	3.33	9

The instructor treated students with respect.

	Always	Often	Sometimes	Never	Average	Total Responses
Overall	173	12	4	0	3.89	189
FL2017 ASCI-1010-01-Professional Orientation	18	2	0	0	3.90	20
FL2017 ASCI-1300-01-Aviation Weather	17	2	0	0	3.89	19
FL2017 ASCI-1300-10-Aviation Weather	15	0	0	0	4.00	15
FL2017 ASCI-2200-01-Concepts in Aerodynamics	9	1	0	0	3.90	10
FL2017 ASCI-3010-01-Jet Transport Systems I	5	0	0	0	4.00	5
FL2017 ASCI-4012-01-Jet Flying Tech I Lect	7	0	0	0	4.00	7
FL2017 ASCI-4050-01-Human Factors	7	0	0	0	4.00	7
FL2017 ASCI-4050-10-Human Factors	11	1	1	0	3.77	13
FL2017 ASCI-4250-01-Prof Ethics and Standards	9	1	2	0	3.58	12
FL2017 ASCI-4450-01-Aviation Law	9	0	0	0	4.00	9
FL2017 ASCI-4450-10-Aviation Law	12	0	0	0	4.00	12
FL2017 ASCI-5220-10-Aviation Safety Programs	7	0	0	0	4.00	7
FL2017 ASCI-5460-02-Qualitative Data Analysis	8	0	0	0	4.00	8
FL2017 FSCI-1150-01-Flight 1	11	2	0	0	3.85	13
FL2017 FSCI-1250-01-Basic Flight Foundations	16	1	0	0	3.94	17
FL2017 FSCI-2150-01-Flight 3	4	1	1	0	3.50	6
FL2017 FSCI-2250-01-Instrument Flight Foundations	8	1	0	0	3.89	9

The instructor was available for assistance when needed.

	Always	Often	Sometimes	Never	Average	Total Responses
Overall	142	33	13	1	3.67	189
FL2017 ASCI-1010-01-Professional Orientation	16	4	0	0	3.80	20
FL2017 ASCI-1300-01-Aviation Weather	12	2	5	0	3.37	19
FL2017 ASCI-1300-10-Aviation Weather	11	0	4	0	3.47	15

	Always	Often	Sometimes	Never	Average	Total Responses
FL2017 ASCI-2200-01-Concepts in Aerodynamics	6	3	1	0	3.50	10
FL2017 ASCI-3010-01-Jet Transport Systems I	5	0	0	0	4.00	5
FL2017 ASCI-4012-01-Jet Flying Tech I Lect	6	1	0	0	3.86	7
FL2017 ASCI-4050-01-Human Factors	5	2	0	0	3.71	7
FL2017 ASCI-4050-10-Human Factors	10	1	1	1	3.54	13
FL2017 ASCI-4250-01-Prof Ethics and Standards	7	5	0	0	3.58	12
FL2017 ASCI-4450-01-Aviation Law	8	1	0	0	3.89	9
FL2017 ASCI-4450-10-Aviation Law	11	1	0	0	3.92	12
FL2017 ASCI-5220-10-Aviation Safety Programs	6	1	0	0	3.86	7
FL2017 ASCI-5460-02-Qualitative Data Analysis	5	2	1	0	3.50	8
FL2017 FSCI-1150-01-Flight 1	11	2	0	0	3.85	13
FL2017 FSCI-1250-01-Basic Flight Foundations	14	3	0	0	3.82	17
FL2017 FSCI-2150-01-Flight 3	3	3	0	0	3.50	6
FL2017 FSCI-2250-01-Instrument Flight Foundations	6	2	1	0	3.56	9

Overall, I think this instructor was excellent.

	Always	Often	Sometimes	Never	Average	Total Responses
Overall	138	35	13	3	3.63	189
FL2017 ASCI-1010-01-Professional Orientation	13	6	1	0	3.60	20
FL2017 ASCI-1300-01-Aviation Weather	11	4	3	1	3.32	19
FL2017 ASCI-1300-10-Aviation Weather	11	2	2	0	3.60	15
FL2017 ASCI-2200-01-Concepts in Aerodynamics	8	2	0	0	3.80	10
FL2017 ASCI-3010-01-Jet Transport Systems I	3	2	0	0	3.60	5
FL2017 ASCI-4012-01-Jet Flying Tech I Lect	5	1	1	0	3.57	7
FL2017 ASCI-4050-01-Human Factors	6	1	0	0	3.86	7
FL2017 ASCI-4050-10-Human Factors	9	2	1	1	3.46	13
FL2017 ASCI-4250-01-Prof Ethics and Standards	8	3	1	0	3.58	12
FL2017 ASCI-4450-01-Aviation Law	7	2	0	0	3.78	9
FL2017 ASCI-4450-10-Aviation Law	11	1	0	0	3.92	12
FL2017 ASCI-5220-10-Aviation Safety Programs	7	0	0	0	4.00	7
FL2017 ASCI-5460-02-Qualitative Data Analysis	3	2	2	1	2.88	8
FL2017 FSCI-1150-01-Flight 1	11	2	0	0	3.85	13
FL2017 FSCI-1250-01-Basic Flight Foundations	15	2	0	0	3.88	17
FL2017 FSCI-2150-01-Flight 3	4	0	2	0	3.33	6
FL2017 FSCI-2250-01-Instrument Flight Foundations	6	3	0	0	3.67	9

AABInternational

SAINT LOUIS UNIVERSITY.	**Saint Louis University**
June 21, 2018	Parks College of Engineering, Aviation and Technology Bachelor of Science in Aeronautics Concentration in Aviation Management

Department of Aviation Science

Appendix B

Spring 2018 Aviation Management

Undergraduate Program and Course Assessment Data

Direct Measures
Of
Assessment

Performance Indicator Rubric

AABI Student Learning Outcome G: Assess Contemporary Issues

Course: ASCI 1510: Air Transportation System Semester Taught: Spring 2018 Number of Students Scored: 8

Type of Student Work Used for Assessment* Exam #1, Essay 3; Final Exam, Problem 15, 27, Essay 1 and 6; Homework #2; Homework #6,

**Attach description of assignment used for assessment and samples of student work.*

Rating Scale / Performance Indicator	Needs Improvement	Meets Expectations	Exceeds Expectations
Identify contemporary issues related to the aviation industry.	When identifying contemporary aviation issues, important facts and details are missing.	Prioritizes contemporary aviation issues; ignores some less significant, yet relevant issues.	Effectively prioritizes contemporary aviation issues, including subtle details; does not include unrelated contemporary issues.
Recognize potential solutions.	Shows some understanding of contemporary aviation issues; provides some explanations of potential solutions but important facts are missing.	Shows adequate understanding of contemporary aviation issues; provides adequate explanation of potential solutions; missing the explanation of minor facts.	Shows in-depth understanding of contemporary aviation issues; provides in-depth explanation of potential solutions.

Description of Assignment: The student assessment consisted of homework assignments and exams. Students were expected to answer multiple choice questions and picked essays to answer to identify their knowledge of contemporary issues related to the aviation industry.

Performance Indicator	Section of Audience Critique of Group Rubric	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Identify contemporary issues related to the aviation industry.	Exam #1, Essay 3	10%	90%	---
Identify contemporary issues related to the aviation industry.	Final Exam, Problem 15	0%	100%	---
Identify contemporary issues related to the aviation industry.	Final Exam, Problem 27	0%	100%	---

Identify contemporary issues related to the aviation industry.	Final Exam, Essay 1*	20%	80%	---
Recognize potential solutions.	Final Exam, Essay 6*	0%	100%	---
Identify contemporary issues related to the aviation industry.	Homework #2: Find an article within the last 30 days in Aviation Daily that relates to one of the three environments as discussed in chapter 1 in the book. Submit a one paragraph summary (minimum of five sentences) of the article. Include the title of the article and date of the article on the paper.	12.5%	87.5%	---
Identify contemporary issues related to the aviation industry.	Homework #6: File: Airbus Studies More A320neo Production To Meet Demand Read the attached article and write a one page paper outlining examples from the article relating to concepts within chapter 5.	7.5%	92.5%	---

Example: In the future, a rubric will be incorporated with the essays and homework assignments. Additionally, many in-class discussions and readings were related to contemporary issues, but they were not documented. In the future, pictures of student's presentations on the board will be taken and incorporated into the assessment.

Note: Attached are the highest exam grade and homework assignments. For the Final Exam, students are six (6) essay questions and are asked to answer four (4).

Performance Indicator Rubric

AABI Student Learning Outcome I: Assess the National and International Aviation Environment

Course: ASCI 1510: Air Transportation System Semester Taught: Spring 2018 Number of Students Scored: 8

Type of Student Work Used for Assessment: Exam 2, Problem 25; Final Exam, Problem 32, Essay #4

**Attach description of assignment used for assessment and samples of student work.*

Rating Scale / Performance Indicator	Needs Improvement	Meets Expectations	Exceeds Expectations
Identify contemporary issues affecting the local/regional, national and/or international aviation environment	Minimal understanding of contemporary issues affecting the local/regional, national and/or international aviation environment.	Identifies most of the contemporary aviation issues affecting the local/regional, national and/or international aviation environment.	Identifies all relevant contemporary aviation issues affecting the local/regional, national and/or international aviation environment.
Reflection on contemporary issues affecting the local/regional, national and/or international aviation environment	Provides little evidence of reflection of the contemporary issues affecting the local/regional, national and/or international aviation environment.	Reflects properly on almost all of the contemporary issues affecting the local/regional, national and/or international aviation environment.	Reflects properly on all of the contemporary issues affecting the local/regional, national and/or international aviation environment.

Description of Assignment: The student assessments consisted of exam questions and essay question. Students were expected to answer and/or describe their understanding of contemporary issues regarding the international aviation environment.

Organization of Material –

Performance Indicator	Section of Audience Critique of Group Rubric	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Identify contemporary issues affecting the local/regional, national and/or international aviation environment	Exam 2, Problem 25	0%	100%	---

Identify contemporary issues affecting the local/regional, national and/or international aviation environment	Final Exam, Problem 32	0%	100%	---
Reflection on contemporary issues affecting the local/regional, national and/or international aviation environment	Final Exam, Essay #4	0%	100%	---

Example:
In the future, a rubric will be incorporated with the essays and homework assignments. Additionally, many in-class discussions and readings were related to contemporary issues within the international aviation environment, but they were not documented. In the future, pictures of student's presentations on the board will be taken and incorporated into the assessment.

Note: Attached are the highest exam grade and homework assignments. For the Final Exam, students are six (6) essay questions and are asked to answer four (4).
.

Performance Indicator Rubric

AABI Student Learning Outcome I: Assess the National and International Aviation Environment

Course: ASCI 1510: Air Transportation System Semester Taught: Spring 2018 Number of Students Scored: 8

Type of Student Work Used for Assessment: Exam 2, Problem 25; Final Exam, Problem 32, Essay #4

**Attach description of assignment used for assessment and samples of student work.*

Rating Scale / Performance Indicator	Needs Improvement	Meets Expectations	Exceeds Expectations
Identify contemporary issues affecting the local/regional, national and/or international aviation environment	Minimal understanding of contemporary issues affecting the local/regional, national and/or international aviation environment.	Identifies most of the contemporary aviation issues affecting the local/regional, national and/or international aviation environment.	Identifies all relevant contemporary aviation issues affecting the local/regional, national and/or international aviation environment.
Reflection on contemporary issues affecting the local/regional, national and/or international aviation environment	Provides little evidence of reflection of the contemporary issues affecting the local/regional, national and/or international aviation environment.	Reflects properly on almost all of the contemporary issues affecting the local/regional, national and/or international aviation environment.	Reflects properly on all of the contemporary issues affecting the local/regional, national and/or international aviation environment.

Description of Assignment: The student assessments consisted of exam questions and essay question. Students were expected to answer and/or describe their understanding of contemporary issues regarding the international aviation environment.

Organization of Material –

Performance Indicator	Section of Audience Critique of Group Rubric	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Identify contemporary issues affecting the local/regional, national and/or international aviation environment	Exam 2, Problem 25	0%	100%	---

Identify contemporary issues affecting the local/regional, national and/or international aviation environment	Final Exam, Problem 32	0%	100%	---
Reflection on contemporary issues affecting the local/regional, national and/or international aviation environment	Final Exam, Essay #4	0%	100%	---

Example:
In the future, a rubric will be incorporated with the essays and homework assignments. Additionally, many in-class discussions and readings were related to contemporary issues within the international aviation environment, but they were not documented. In the future, pictures of student's presentations on the board will be taken and incorporated into the assessment.

Note: Attached are the highest exam grade and homework assignments. For the Final Exam, students are six (6) essay questions and are asked to answer four (4).
.

ASCI 1850 Safety Management Systems

AABI Learning **Outcome B** - Analyze and Interpret Data

Description of Assignment: Provide a comprehensive explanation of a risk matrix.

Performance Indicator	*Assignment Type*	*% Needs Improvement*	*% Meets Expectations*	*% Exceeds Expectations*	Mean
Locate an example risk matrix. Provide a comprehensive explanation of the matrix, including the meanings of the X and Y axis and any color-coding of the cells	Scenario based Descriptive Qualitative	15%	65%	20%	N/A
Include an example risk assessment using the matrix and where the example risk assessment in the matrix the event would fall.	Scenario based Descriptive Qualitative	10%	70%	20%	N/A

An example copy of Needs Improvement, Meets Expectations and Exceeds Expectation follows

Summary:

My strategy for developing rubrics to evaluate whether I was successful in achieving certain metrics was somewhat ill-advised. Rather than including these assignments as distinct and separate or including the material within the context of a test, I decided to assign them as optional homework assignments. The incentive for the students was a few additional points added to their grade. Regrettably, only a handful of students responded. The data provided in the above table is fictitious but represents my understanding of the potential outcomes.

I utilized an assignment that attempted to capture the outcomes in a narrative form. My thought process was that while a quantitative assessment would give me precision, a qualitative assessment would better enable me to understand how well my students understood the data. Overall, I was surprised by the appearance spread in the quality of the work submitted.

Recommendations:

1. Assessment materials will be required as opposed to optional
2. I will consider additional quantitative measures to obtain more precision

Example – Needs Improvement

		Probability of Occurrence				
		Extremely improbable	Extremely remote	Remote	Reasonably probable	Frequent
Severity	Catastrophic	Review	Unacceptable	Unacceptable	Unacceptable	Unacceptable
	Hazardous	Review	Review	Unacceptable	Unacceptable	Unacceptable
	Major	Acceptable	Review	Review	Review	Review
	Minor	Acceptable	Acceptable	Acceptable	Acceptable	Review

The Meaning of the X-axis: The probability of an occurrence is the likelihood of the frequency for something to happen.

The Meaning of the Y-axis: The severity of an occurrence is the potential degree of damage caused by the incident.

The Darker shade is what the company considers to be unacceptable risk.

The Bolded outline the company considers to need to be reviewed and have the risks mitigated.

The White shade is what the company considers to be an acceptable risk to proceed with.

Example using the matrix:

There is a risk that people will fall or trip on unlit stairs. The severity would be considered minor but the probability would be considered frequent. Because of where it falls on the risk matrix it would go to be in the "reviewed" category. When it goes under review it can be mitigated in several different ways. One way the risk could be mitigated would be to add lighting to the stairs either along the edges or lights in the wall near the floor. If the stairs are outside the company could add glow tape to the stairs so that they are visible at night.

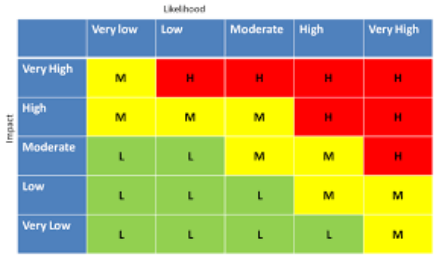
Commented [TK1]: Many better examples are readily available on the web. A grey scale does not necessarily convey enough of a demarcation between risks levels

Commented [TK2]: Sentence mechanics

Commented [TK3]: This is a prediction not a review

Commented [TK4]: People have died falling down the stairs

Example – Meets Expectations



I found this example of a risk matrix through google images, and it seems to be a pretty good one. Throughout the risk management process, we take the product from the severity and the likelihood of a hazard. This chart has the severity on the y axis and the likelihood of the hazard on the x axis. Both the y and x axis are in qualitative terms. The difference between qualitative and quantitative is that qualitative description uses words, ad quantitative descriptions use numbers. This example is also color coated. So, wants you decide how likely, and how severe a hazard is going to be, then you go to the corresponding color coated box where both the Colum and the row intersect. If it is green, then there is little risk associated with that hazard. If it is yellow, then there is marginal or moderate risk associated with that hazard. Lastly, if it is red, then there is a very high risk associated with this hazard.

Commented [TK5]: ??

Commented [TK6]: potentially

While flying an airplane, there are many hazards that could occur. When calculating the risk of that hazard we can use a chart like the one above. A very simple example could be icing of the wings. On a day like today, that risk is probably about 0, since we fly low and it is very hot out. That wasn't always the scenario, in fact, during the begging of this spring semester, there were many calls for icing that we would have to keep our eyes open for before we flew. Let's pretend that we are flying on a cold winter morning, which I did multiple times this semester. I

would say that the severity of icing is high. Icing on your wings can decrease lift and make the plane heavier. On many morning, there was a moderate chance of icing. When looking at the chart above, you can see that where moderate likelihood and high severity interact, there is a moderate risk. This means that we need to accept, mitigate, or reject the hazard then. Luckily, there are a couple things that we do that can mitigate this risk. We can throw baffles on the planes, and spray deicer fluid over the wings. This makes sure the engine stays warm, and the ice on the plane melts. So as long as the deicer fluid was in stock, I would still go out on a colder day. Now, if it gets to -10 degrease Celsius then we do not fly, and that's an example of us rejecting the risk from the hazard.

Your descriptions of a risks matrix are decent; however, your writing skills need work. When writing a technical assignment, avoid using the first-person and attempt to use a more-formal style of language and context.

Example – Exceeds Expectations

Commented [TK7]: Try to make these bigger. Good variety of risks levels

This risk matrix shows the hardness of a risk based on both the likelihood and severity. The x-axis represents the likelihood on a scale of 1-5 (improbable, remote, occasional, probable, and frequent). The y-axis represents the severity

Commented [TK8]: What do you mean by hardness?

on a scale of 1-5 (negligible, low, moderate, significant, and catastrophic). You multiply the number of likelihood and the number of severity to get the risk rating. Risk rating from 1 to 3 is labeled with dark green to show that the risk is desirable and requires no action. The rating from 4-6 is labeled with light green to show that the risk is acceptable and requires monitoring. The rating from 8-12 is labeled with yellow to show that it's undesirable and requires an action. The rating of 15 is labeled with light pink to show that it's unacceptable and requires an urgent action. The rating from 16-25 is labeled with red to show that it's catastrophic and requires an halt. A fictional example would be a bird strike that happens. I would rate 2 (remote) as a likelihood as it rarely happens and either a 2 or 3 (low or moderate) as a severity as it depends on the size and the number of birds. If you multiply that numbers, the risk rating comes out as 4 or 6. Since both number falls under the light green area, the risk would be acceptable, and we should monitor bird strikes.

Commented [TK9]: Good

Commented [TK10]: Good example

Commented [TK11]: Excellent explanation

ASCI 1850 Safety Management Systems

AABI Learning **Outcome D** - Make Ethical & Professional Decisions

Description of Assignment: Describe how Professional and Ethical Decision Making is a requirement for a strong Safety Management Systems

Performance Indicator	*Assignment Type*	*% Needs Improvement*	*% Meets Expectations*	*% Exceeds Expectations*	Mean
Provide a comprehensive explanation on why a "good" Safety Management System must be both professional and ethical. Explain how professional expectations are created in an SMS	Narrative Descriptive Qualitative	25%	55%	20%	N/A
Provide a comprehensive explanation on why a "good" Safety Management System must be both professional and ethical. Explain how ethical decision-making is encouraged in an SMS	Narrative Descriptive Qualitative	8%	63%	29%	N/A

An example copy of Needs Improvement, Meets Expectations and Exceeds Expectation follows

Summary:

Similar to other outcome rubrics in this report, Outcome D was evaluated using an optional, qualitative assignment. Consequently, the number of assignments that were returned was somewhat disappointing. Of the relatively small number of returns n=7, I was somewhat disappointed with the results of this (Outcome D) assessment. Students seem to have a hard time articulating the meaning of both professionalism and ethical behavior. Although this course is taught in the freshman year of both the Flight Science and Aviation Management programs, I had higher expectations given the discussions in class regarding professionalism and ethical behavior.

Recommendations:

1. Additional discussion of the roles of professionalism and ethics in aviation
2. One or more take-home assignments aimed at reinforcing a better understanding of professionalism and ethics.
3. Assessment materials will be required as opposed to optional
4. I will consider additional quantitative measures to obtain more precision

ASCI 1850 Safety Management Systems

AABI Learning **Outcome J** – Apply Pertinent knowledge in identifying and solving problems

Description of Assignment: Describe in each of the options discussed in class for dealing with risks (accept, mitigate, reject, etc.)

Performance Indicator	*Assignment Type*	*% Needs Improvement*	*% Meets Expectations*	*% Exceeds Expectations*	Mean
Within the discussion of mitigation, describe the "Safety Order of Precedence" Describe considerations that determine the appropriate mitigation strategy for a given situation	Narrative Descriptive Qualitative	6%	22%	72%	N/A
What is the appropriate hierarchy in the application of the safety order of precedence Describe the logic behind the order used in determination of mitigation strategies	Narrative Descriptive Qualitative	2%	38%	60%	N/A

Example copies of Needs Improvement, Meets Expectations and Exceeds Expectation assignments follow

Summary:

Like the other Outcomes in this assessment rubric, Outcome J was assessed with an optional assignment. Of the students who did respond, I was relatively pleased with their performance. Although I did not have a sufficient number of responses to drive significant changes in the course, the students did an excellent job (for the most part) and applying pertinent knowledge in identifying and solving problems. It will certainly continue to use the techniques I'm using now in this course although the assessment of all Outcomes will become a mandatory rather than optional assignment.

Recommendations:

1. Assessment materials will be required as opposed to optional
2. I will consider additional quantitative measures to obtain more precision

Did ASCI 2750 Accident Investigation

AABI Learning **Outcome B** - Analyze and Interpret Data

Description of Assignment:

Performance Indicator	*Assignment Type*	*% Needs Improvement*	*% Meets Expectations*	*% Exceeds Expectations*	Mean
Students will demonstrate the ability to analyze and interpret data in class on written test	Open ended questions Quantitative and Qualitative	0%	85%	15%	N/A

An example copy of Meets Expectations and Exceeds Expectation follows

Summary:

A block of questions from a semester test were used to determine the assessment of Outcome B. In total 20, fill-in-the-blank questions were used to assess the student's capability to analyze and interpret data related to federal regulations and Federal Aviation Administration guidance on accident investigations. Students who answered all questions correctly exceeded expectation. Students who missed up to 5-questions met expectations and any student who missed more than 5 questions would need improvement. (n=7)

The method for assessing this outcome used only a single test and direct measurement. I see this is a weakness.

Recommendations:

1. Add indirect measures of assessment
2. Conduct assessments at different points throughout the semester to measure change

ASCI 2750 Accident Investigation

AABI Learning **Outcome J** – Apply Pertinent knowledge in identifying and solving problems

Description of Assignment:

Performance Indicator	*Assignment Type*	*% Needs Improvement*	*% Meets Expectations*	*% Exceeds Expectations*	Mean
Student's will apply pertinent knowledge in identifying and solving problems associated with aircraft accident investigation.	Open ended questions Quantitative and Qualitative	0%	29%	71%	N/A

Example copies of Meets Expectations and Exceeds Expectations assignments follow

Summary:

Like Outcome B above, Outcome J was assessed using a block of questions extracted from an examination. In this case the comprehensive Final Exam. A total of 12-questions assessed student performance surrounding their ability to apply pertinent knowledge in identifying and solving problems associated with aircraft accident investigation. Students who missed less than 2 questions Exceeded Expectations. Student who missed between 2 and 4 questions met expectations and any student who missed more than 5 questions would need improvement. (n=7).

Recommendations:

1. Add indirect measures of assessment
2. Conduct assessments at different points throughout the semester to measure change

DEPARTMENT OF AVIATION SCIENCE
ASSESSMENT OF UNDERGRADUATE PROGRAM STUDENT LEARNING OUTCOMES
SPRING 2018

ASCI 3100 AIR CARRIER OPERATIONS
SECTION 01 ON CAMPUS

Program Student Learning Outcomes

- D - Make professional and ethical decisions
- I – Assess the national and international aviation environment (new; added Feb-Mar 2018)
- K - Apply knowledge of business sustainability to aviation issues

Direct measures:
The student learning outcome will be assessed using data from:
The results of embedded questions in quizzes; mid-term examinations, final examinations, and case studies will be obtained from the ASCI 3100 course.

NOTES – SPRING 2018

The department chair asked if I would teach this course and make significant changes from the focus on pilots and manuals. Members of the advisory group were seeking broader inclusion of "air carrier operations" topics and material and less focus on "the cockpit."

The post-Colgan Air Flight 3407 accident events, hearings, documents, legislation and rulemaking were used to inform the students of the dynamics of air carrier operations and as a platform from which to discuss multiple topics.

Subjects/Topics

- ***Legal issues in air carrier certification***
  - DOT and FAA roles
- ***Operations specifications (opspecs)***
  - Petition for exemption
- ***Operational control***
  - IATA operational control concepts
  - Operations control center
- ***Management***
  - Structure
  - Job descriptions
  - FAA's oversight of operational changes occurring in regional air carrier industry (management, labor, finances, growth)
- ***Pilot's Records Improvement Act (PRIA)***
  - Role of Congress
  - Changes as result of Colgan
  - Pilot Records Database
  - Airline pre-hiring processes
- ***Drug and alcohol program***
  - DOT 49 CFR 40 (testing facilities & procedures)
  - FAR part 120
  - Opioids added January 2018

- Legal cases for illustration

- ***System of Manuals***
  - Electronic manuals system
  - General operations manual
  - User manuals
  - Winter operations manual
- ***Colgan Flight 3407 Case***
  - Professionalism and leadership
  - Salaries and wages (emphasis on regional air carriers)
  - Communications; meetings; internal documents
  - Operations
  - Passenger enhancements; passenger bill of rights
  - Qualifications / Resume / Interview
  - Code share agreements; financial incentives based on performance
  - Training program; changes required under new FARs
  - Fatigue / Duty Rest Limitations; FAR part 117
  - Role of families of accident victims; influence on Congress; changes to regional air carrier operations and pilot hiring
  - Sustainability
    - Regional air carrier restructuring; new business model; relationship with mainline carriers;
- ***Airplanes used in part 121***
  - Spent less than one hour on chapter 8 material
  - Assumption: transport category airplane performance is covered in other courses for pilots (and dispatchers)
- ***Maintenance***
  - Maintenance tooling
  - Maintenance CASS and CAMP compliance
  - CASS and SMS
  - MROs
  - Recent Airworthiness Directives (ADs) using Southwest engine failure
- ***Flight Operations***
  - Operational policies; crewmember policies
  - Flight planning; irregular operations
  - Emergency operations
  - HazMat
  - Personal (portable) electronic devices
  - Security
    - ISAGO standards manual and IOSA standards manual
    - ICAO standards
    - Federal flight deck officer program
    - Secure flight / Pre-Check program
    - Aircraft operator security program; airport security program
  - Passenger issues
    - Customer service
    - Air Carrier Access Act (passengers with disabilities)
    - Ground delay program (tarmac delay)
    - Air carriers' customer service commitments
    - Contingency plans
    - Passenger rights; service animals
    - DOT sanctions

Documents

- Multiple powerpoint slides
- 8900.1 Flight Standards Information Management System (FSIMS)
- Multiple FAA Advisory Circulars
- Sample opspecs
- Reports from General Accountability Office (GAO)
- FAA InFOs
- FAA Orders
- Numerous FAA NPRMs
- ALPA documents
- NTSB hearings transcripts
- Multiple Colgan Air documents
- DOT/IG reports and Congressional hearings
- National Academies of Sciences
- ICAO and IATA documents

Methodology

- Instructor avoided lecture as much as practical
    - Just over 50 sets of Powerpoint slides were posted within Blackboard
        - only used in class when needed to emphasize a few slides/points of importance
    - Approximately 230 documents and files were posted within Blackboard for student reference and factual support of material being covered
    -
- Utilized "situational questions" as a handout to generate discussions in most class sessions
    - Small groups; determine responses; oral discussion with references to documents posted
- Great deal of emphasis on collaboration/teamwork among students; open discussions to resolve situations presented and provide response with facts in support
- Three regional air carrier guests: Assistant Chief Pilot; Director of In-Flight Operations; Recruiter
    - Students wrote questions (anonymous) for speakers

Scenarios

- Scenarios designed to illustrate "common carriage"
- Multiple scenario-based questions used within the quizzes

Use of Colgan Flight 3407 case

- to cover multiple textbook chapters, FARs and operational topics

Quizzes

- Five in-class quizzes
- Challenging questions; required research; each quiz required full 1 hour + 15 min class period
- Open source (group collaboration; open book; Internet; Blackboard; etc.)

Week Six – Mid-Course Correction

- Instructor survey of students' opinions of the course experience to date
    - Collaboration through in-class exercises was highly valued
    - Liked exposure to new and interesting material and relevant documents
    - Critical of the amount of material and toughness of the quizzes
    - Some criticism of the "speed" of the course

Performance Indicator Rubric

AABI Student Learning Outcome D: Make Professional and Ethical Decisions

Course: **ASCI 3100 Air Carrier Operations** Semester Taught: **Spring 2018**
Number of Students Scored: **17 enrolled**

Performance Indicator	**Student Work Description of Assignment**	**% Needs Improvement**	**% Meets Expectations**	**% Exceeds Expectations**
Identifies ethical problems	Quiz 1 Question 5: question of operating as common carrier; FAA analysis & tests for …	19%	81%	0
Identifies ethical (and legal) principles involved	Quiz 1 Question 9: development of website; ethical/legal issue; interpretation	81%	19%	0
Decide on the proper ethical action and be prepared to deal with opposing arguments	Quiz 1 Question 9: development of website; ethical/legal issue; interpretation	81%	19%	0
Summary	Most students have some sense of the basic ethical (and legal) issues surrounding the FAA's various tests for analyzing an operation. When presented with a website development scenario, most students are unable to identify the ethical principles involved and are unable to decide the correct action when presented with a scenario illustrating the development of a website that may be "acting" as an air carrier in common carriage in violation of the law and good ethical practices. Most students had a flawed analysis or insufficiently addressed the question: "*What is your interpretation of this scenario?*"			
Instructor's Recommendations	For spring 2019 course offering: (1) revise the approach to teaching chapter 1, "what is an air carrier?" (2) consider addressing this AABI learning outcome in a different topic/context within this course (3) ensure this material is taught (repeated) in ASCI 4450 Aviation Law using court cases			
Department Recommendations				

QUIZ 1 – QUESTION 5

Assume you are a certificated private pilot and you are accused by the FAA of acting illegally as a common carrier. In their analysis of the operation, the FAA will, among other tests, look to see if you

a. were paid only for the fuel, oil, and aircraft rental.
b. had an independent interest in taking the trip.
c. had a commercial pilot certificate.
d. used your personal aircraft or paid money for a rental aircraft.

QUIZ 1 – QUESTION 9

A friend of yours has developed a website used exclusively by both pilots and aviation enthusiasts, comprising a specific and discreet group of individuals who have demonstrated a common interest and common purpose to share an aviation adventure. Pilots and aviation enthusiasts apply for membership to this website which is only available to pilots who ensure they intend to conduct private operations. Upon enrollment, members have access to an isolated, non-public network. The network allows pilots to post an Aviation Adventure with a specific date and time and the points of operation. A member may select an Aviation Adventure for which he/she has a bona fide common purpose and request to participate in the planned Aviation Adventure. The pilot may accept or reject the request. If accepted, the pilot may accept a pro rata reimbursement from his/her passengers under 14 CFR §61.113.

What is your interpretation of this scenario?

Responses should include some of the below:

- Pilots participating in this website (web-based) expense-sharing scheme are required to have a part 119 certificate (air carrier or operating certificate).
- Because they are engaged in common carriage. Common carriage (AC 120-12A & in chapter 1) is described as a holding out of a willingness to transport persons or property from place to place for compensation or hire.
- The above scenario is a description of holding out. Holding out can be accomplished by any means which communicates to the public that a transportation service is indiscriminately available to members of that segment of the public it is designed to attract. This website is designed to attract a broad segment of the public interested in transportation by air.

Performance Indicator Rubric

AABI Student Learning Outcome D: Assess the national and International Aviation Environment

Course: **ASCI 3100 Air Carrier Operations** Semester Taught: **Spring 2018**
Number of Students Scored: **17 enrolled**

Performance Indicator	**Student Work Description of Assignment**	**% Needs Improvement**	**% Meets Expectations**	**% Exceeds Expectations**
Identify contemporary issues affecting the local/regional, or national and/or international aviation environment	Case study questions, research and discussions. Colgan Air Flight 3407: *From 2009 to the present, how did we get to this point?*		100%	
Reflection on contemporary issues affecting the local/regional, national and/or international aviation environment	Case study questions, research and discussions. Colgan Air Flight 3407: *From 2009 to the present, how did we get to this point?*		100%	
Summary	This case--and the assigned questions--was used to highlight material from at least three textbook chapters and present the topics in a meaningful way; students learned *how* and *why* new regulations affecting virtually all units of an air carrier's operations were developed. Students were highly engaged in the topics.			
Instructor's Recommendations	(1) This was a very effective vehicle for teaching students to identify, understand and reflect on today's issues that impact air carriers and their operational units. (2) Use it again, with improvements, in the spring 2019 offering; for example, improve the "research questions" section.			
Department Recommendations				

Assessing Contemporary Issues
Local/Regional Aviation Environment
National/International Environment

Colgan Air Flight 3407 (2009 – 2018)

A case of aircraft design, icing conditions, crew fatigue, training, pilot experience, hiring practices, professional standards, flight discipline, safety programs, organizational and management culture, and airline economic drivers

- Regulatory issues
- Economic, financial and business sustainability issues
- Ethical Principles, Values and Judgments
- Professionalism/Professional Obligations
- Leadership
- Training
- Fatigue
- Safety Culture

SYNOPSIS

It was the deadliest transportation accident in the United States in more than seven years. On February 12, 2009, about 2217 eastern standard time (EST), a Colgan Air Inc., Bombardier Dash 8-Q400, N200WQ, d.b.a. Continental Connection Flight 3407, crashed during an instrument approach to runway 23 at the Buffalo-Niagara International Airport, Buffalo, New York. The crash site was approximately five nautical miles northeast of the airport and mostly confined to one residential house. The four flight crew and 45 passengers were fatally injured and the aircraft was destroyed by impact forces and post crash fire. There was one ground fatality. Night visual meteorological conditions prevailed at the time of the accident. The flight was a part 121 scheduled passenger flight from Liberty International Airport, Newark, New Jersey.

The National Transportation Safety Board (NTSB) conducted a public hearing in May of 2009 for three days. The hearing covered a wide range of issues including: icing effect on the airplane's performance, cold weather operations, sterile cockpit rules, crew experience, fatigue management, and stall recovery training. Both the U.S. Senate and House of Representatives conducted no less than five hearings. The House introduced H.R. 3371 "Airline Safety and Pilot Training Improvement Act of 2009" on July 29, 2009.

SUPPLEMENTAL INFORMATION AND INSTRUCTIONS TO CHAPTERS 5, 6, AND 7
RESEARCH QUESTION ASSIGNMENT

"From 2009 to the present, how did we get to this point?"

The authors of your textbook frequently refer to the Colgan Air, Continental Express, Flight 3407 accident as they introduce new material. This is especially the case within chapters 5, 6, and 7. Also, these specific chapters address Public Law 111-216 several times. In an effort to make these select–admittedly dry--chapters more interesting, I am asking each of you to accept a simple research question and make an informal oral presentation to your peers. As a class, you need to understand the importance of each of these question sets.

Organizations, culture, and federal laws do not exist in a vacuum. There is history behind each. There are reasons Congress and government agencies hold hearings and promulgate laws. Air carriers are one of the most highly regulated industries in the U.S. and as future leaders of our air carriers, you should have an appreciation of where we are at and how we got to this point. Air carriers operate under great stress 24/7/365.

Congress played a major role in its response to this accident that resulted in 50 deaths (see P.L. 111-216). Significant changes have taken place within regional and major air carrier operations as a result of multiple forces that came together following this 2009 accident in New York. As a very small example, in addition to amendments to existing FARs, at least three new parts have been written and developed since the Colgan accident: FAR part 5 SMS, part 110 definitions, and part 117 rest and duty limitations. New Congressionally mandated training requirements for crewmembers have also been addressed in rulemaking.

You have been randomly selected to address one set of questions, complete some basic research, and make an informal presentation of your findings to the class. You task is to engage the class in a conversation on your question topic. These questions are numbered in a logical sequence by chapter. Your instructor has uploaded numerous documents into Blackboard to aid in your preparation. Some are quite lengthy. For example, the NTSB hearing transcripts are very large, but each contains extremely valuable insights into the corporate culture, business focus and regulated operational tasks of an airline.

RESEARCH QUESTIONS

Consider each of the questions in the context of (1) Colgan's business and operational position leading up to the accident as well as (2) the hearings, legislation and rulemaking following the accident to the present day.

1. Did the crew maintain personal standards of **conduct befitting a professional** pilot? How is **leadership** maintained before and during flight? Identify any post-Colgan activities (hearings, legislation, rulemaking) affecting air carrier operations that focus on **professionalism and leadership**.

2. Can **salaries and wages** of pilots be equated to acts of **professionalism** and levels of safety?

3. How did the **company communicate** with flight crewmembers prior to the accident? What flaws, if any, were in the system of manuals, operations specifications, internal documents and other **forms of communication**?

4. Did an **institutional culture** at regional air carriers exist that allowed people to **respond to situations or errors in a positive way**? Has this culture changed in any way post-Colgan?

5. Were safety programs in place within the company? Did this air carrier have a FOQA program? What was the safety culture at Colgan Air, Inc.? What **new focus on safety** activities and legislation have resulted from this accident?

6. Regional air carriers have been a growing segment of the aviation industry over the last several years and now, as of 2015, operate over 10,000 flights a day and serve approximately 20 percent of all airline passengers. While they now (see FAR part 119) must meet the same safety standards as mainline carriers, they operate under a business model that requires them to keep costs low. In the Colgan Air, Inc. case, was there a **conflict between integrity and economic or financial gain**? Was growth far too rapid? Did the actors in this case view the standard that should be used to determine the best course of action to be that of self-interest? Was this a regional air carrier in **financial distress**? Address **business sustainability** issues for air carriers (economic, social, and environmental sustainability) in the context of post-Colgan. Is the U.S. regional airline **business model** broken?

7. In this accident, what **impact,** if any, did the **code-sharing agreement** between the major(s) and the regional(s) have upon safety? Have there been any significant changes in the way regionals do business since this accident?

8. What role did the **U.S. Congress** play in reaction to the event? Were the actions of the Senate and the House appropriate to the facts of the accident? Examine the **role of federal legislators and agencies** in this case. Were they implicitly involved in the outcomes of this flight?

9. Review the role of **families** of the accident victims in this specific accident. Why has their work been of such significance in changing the regional airline business and operations model?

10. Discuss the federal government's push for a "**passenger bill of rights**" following the accident. What impact has new Congressional legislation and DOT regulations placed on the regional air carrier's business model?

11. Did this air carrier have any unusual **interview and hiring practices** for new-hire flight crewmembers? How were **PRIA** requirements addressed? Compare and contrast the **hiring practices** of regional air carrier businesses before this accident with the standard hiring practices of today.

12. What were the **training standards** for flight crewmembers? Did crews receive **exposure to** all possible in-flight dilemmas during training scenarios? Identify the new crewmember **training** requirements mandated by Congress as a result of this accident.

13. What issues of f**atigue** were addressed during NTSB and Congressional Hearings and why did they become so critical in this case? How has **fatigue** been addressed by Congress and rulemaking within the FAA? Do these new regulations have an **economic impact** upon regional air carriers?

REFERENCES

Your course instructor has placed numerous documents within specific topic files in the Blackboard course site. The primary documents for this case study come from the following sources:

- United States Congress (PL 111-216)
- National Transportation Board (NTSB)
- Department of Transportation (DOT)
- Federal Aviation Administration (FAA)
- Federal Aviation Regulations (FARs)
- Airline Pilots Association (ALPA a union)
- Air Transport Association (ATA) (now Airlines for America)
- Regional Airline Association (RAA)

It is highly recommended that these official sources be examined. However, there are multiple additional resources, scholarly publications (Google Scholar), Internet search, and library documents (SLU Library Journals and Databases) that may be very useful. Your instructor can help guide your efforts should you need assistance.

.

Performance Indicator Rubric

AABI Student Learning Outcome K: Apply Knowledge of Business Sustainability to Aviation Issues

Course: **ASCI 3100 Air Carrier Operations** Semester Taught: **Spring 2018**
Number of Students Scored: **17 enrolled**

Performance Indicator	Student Work Description of Assignment	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Identify legal and regulatory issues of aviation-related climate change; Identify economic, social and environmental concepts applied to aviation business.	***Regional Air Carriers: Restructuring and Sustainability***. An examination of the issue of business sustainability and its relationship to air carrier operations. Bankruptcies. Identify elements from this air carrier operations course that may be contributing to this fragile state in which regionals exist. What lies ahead		100%	0
Find and analyze evidence of accepted practices of sustainability in aviation business settings.	*Regional Air Carriers: Restructuring and Sustainability*. An examination of the issue of business sustainability and its relationship to air carrier operations. Bankruptcies. Identify elements from this air carrier operations course that may be contributing to this fragile state in which regionals exist. What lies ahead	90%	10%	0
Apply acquired knowledge and facts of legal, economic, social and environmental	*Regional Air Carriers: Restructuring and Sustainability*. An examination of the issue of business sustainability	50%	50%	0

sustainability concepts to a given aviation situation to solve problems.	and its relationship to air carrier operations. Bankruptcies. Identify elements from this air carrier operations course that may be contributing to this fragile state in which regionals exist. What lies ahead			
Summary	Questions issued as an assignment to all students. Few students researched documents for evidence to support the responses to five questions. Many individuals were unable to apply previously learned facts and concepts to the five questions. Most students could not see the implications of sustainability for the regional air carrier industry and apply these to their future place within the industry.			
Instructor's Recommendations	For spring 2019: (1) While this is a very useful topic and one introduced into this course for the first time, consider a different approach to addressing air carrier business models and sustainability. (2) Find a means of holding students accountable for research and developing their ability to apply facts and concepts to solve problems			
Department Recommendations				

REGIONAL AIRLINES: RESTRUCTURING AND SUSTAINABILITY

The company was originally founded in 1965 as a typical fixed-base operator in Manassas, Virginia. It changed its name to Colgan Air, Inc. in early 1993. In 1997, it became a feeder for Continental Airlines for two years. Its partners eventually grew to include United and US Airways. Colgan became a subsidiary of Pinnacle Airlines Corp. in 2007 so that Pinnacle could gain access to Colgan's partners since Pinnacle was tied only to Northwest Airlines at the time. Colgan began providing service out of Newark Liberty International Airport as Continental Connection in early 2008. About one year later, the accident took place on a flight from Newark to Buffalo, NY. Pinnacle filed for bankruptcy in the spring of 2012. Colgan Air, Inc., went out of business in the fall of 2012. This is a brief history of only one company. Similar histories are found throughout the commuter/regional airline industry.

Let's examine the issue of ***business sustainability and its relationship to air carrier operations***.

1. **Identify the current feeder airlines for the following majors: Alaska, American, Delta, United**

   14 as of Dec 2017

   - Envoy Air (wholly owned by American)
   - Republic
   - Piedmont (wholly owned by American)

- PSA (wholly owned by American)
- Skywest
- ExpressJet (wholly owned by Skywest acquired 2010)
- Compass
- GoJet
- Tran States
- Mesa
- Endeavor Air
- Horizon Air (wholly owned by Alaska)
- Air Wisconsin
- CommutAir

May add PenAir (KS) Saab 340s (part 121?) and CapeAir (9K) Cessna 402s 9 pax part 135

2. **Of these feeders, identify those that are publicly held companies. If it is a publicly held company, we may find company filings on the Securities and Exchange Commission (SEC) web site.**
   Skywest is only one 2018
   Prior: Skywest and Republic were only two in 2015

3. **Can you identify a few regional airlines that have recently filed for bankruptcy? Who are they? Did they successfully reorganize and come back as viable airlines?**
   - Republic
     - Filed February 2016. Emerged May 2017.
   - Mesa
     - Filed January 2010 Emerged March 2011
     - Became privately held
   - Pinnacle
     - Filed April 2012 Emerged May 2013 but owned by Delta
     - Acquired by Delta (became Endeavor wholly owned by Delta June 2013)

   ExpressJet
   Came close in 2014-2016 but did not file Chapter 11
   Acquired by Skywest (which merged with ASA) August 2010

4. **What elements from this air carrier operations course can you identify as contributing to this fragile state in which regionals exist?**
   - FARs 9-seat cap Pt 135 op rules "scheduled pax" ops (one level of safety)
   - Mainline pilots unions: Scope clauses
   - 1500-hour regulation (pilot supply)
   - Flight/Duty limitations new regs impact
   - Training
   - Issues surrounding pay
   - Business model: Code-share agreements: capacity purchase agreements & pro-rate agreements (revenue-sharing)
   - Mainline carriers have ever-increasing control over
   - Financial / operational risk increasing (in relations with mainline carrier)
   - Operating margins (%) are very low

- Small communities losing air service
- Congress/Families of Colgan/Political interests blocking….

5. **What lies ahead for this feeder airline industry--this so-called regional airline industry? Going forward, what might the industry look like?**
   Regional restructuring is unfinished
   Pilot training reforms?

AABI Student Learning Outcome E: Communicate effectively using both Oral and Written Communication Skills

ASCI 4350 – Team resource management

Description of Assignment: Student group project paper and **poster project and senior design presentation**. The presentations are open to the public and graded by anyone who has reviewed the presentation.

Performance Indicator (Sample size = 2)	**Questions, Problems, Etc.**	**% Needs Improvement**	**% Meets Expectations**	**% Exceeds Expectations**	**Mean**
Organization of material	Organization				
	Visuals				
Provide evidence to support claims or inform audience	Methods and Results				
	Overall Content Knowledge				
Demonstrate the proper use of language	Response to Questions				
	Mechanics				
Delivery of an oral presentation	Delivery				

A copy of a student test representing the high score earned in this assignment can be found at the end of this performance rubric.

Summary

Given that this is the first time that this assessment tool has been used in this course, some questions were raised concerning implementation. The primary issues were that the assessment rubric only contained three levels and that the rubric categories had to be mapped to existing criteria.

In the context of ASCI4350, a selection of categories from the graded evaluation of the final project poster presentations was taken to meet individual categories of this outcome. Two groups of students (total of 13) participated in both the SLU senior legacy symposium and the Parks senior design symposium. Presentation and poster grades were assigned by the course instructor, Parks faculty, and industry professionals by a survey administered by the Dean's office.

Recommendations

1. The survey used for ASCI4350 students will be redesigned to meet both the categories and levels of this outcome.

AABI Student Learning Outcome F: Engage in and Recognize the Need for Life-long Learning

ASCI 4350 – Team resource management

Description of Assignment: **Student group project paper** and poster project and senior design presentation. The presentations are open to the public and graded by anyone who has reviewed the presentation.

Performance Indicator (Sample size = 2)	**Questions, Problems, Etc.**	**% Needs Improvement**	**% Meets Expectations**	**% Exceeds Expectations**	**Mean**
Use of Research to Explore a Topic	Problem significance or contribution			100	3.5
	Purpose statement		100		
Identification and Pursuit of Opportunities to Expand Knowledge, Skills and Abilities	Contribution			100	3.5
	Comprehensive sources		100		
Evaluates Quality of Opportunities and Resources to Expand Knowledge, Skills, and Abilities	Quality of sources		100		3.3
	Relevance of sources			100	
	Evidence of timely & seminal sources			100	
Applies Expanded Knowledge to Relevant Problems	Demonstrates an understanding of the aviation field			100	4
	Use of industry examples			100	
	Results and conclusions discussion			100	

A copy of a student test representing the high score earned in this assignment can be found at the end of this performance rubric.
Summary

Given that this is the first time that this assessment tool has been used in this course, some questions were raised concerning implementation. The primary issues were that the assessment rubric only contained three levels and that the rubric categories had to be mapped to existing criteria.

In the context of ASCI4350, a selection of categories from the evaluation of the final project written assignment was taken to meet individual categories of this outcome. The assessment is based off of the two papers submitted by the two teams completing the course.

Recommendations

1. The assignment rubric will be revised to match the three levels used by the performance indicator rubric.

AABI Student Learning Outcome C: Work Effectively on Multidisciplinary and Diverse Teams

ASCI 4350 – Team resource management

Description of Assignment: Student group project paper and **poster project and senior design presentation**. The presentations are open to the public and graded by anyone who has reviewed the presentation.

Performance Indicator (Sample size = 2)	**Questions, Problems, Etc.**	**% Needs Improvement**	**% Meets Expectations**	**% Exceeds Expectations**	**Mean**
Collaboration/Conflict management	Evidence of team work				
Communication	Delivery				
Decision-making	Uses techniques, skills, and modern engineering tools for design				

A copy of a student test representing the high score earned in this assignment can be found at the end of this performance rubric.

Summary

Given that this is the first time that this assessment tool has been used in this course, some questions were raised concerning implementation. The primary issues were that the assessment rubric only contained three levels and that the rubric categories had to be mapped to existing criteria.

In the context of ASCI4350, a selection of categories from the graded evaluation of the final project poster presentations was taken to meet individual categories of this outcome. Two groups of students (total of 13) participated in both the SLU senior legacy symposium and the Parks senior design symposium. Presentation and poster grades were assigned by the course instructor, Parks faculty, and industry professionals by a survey administered by the Dean's office.

Recommendations

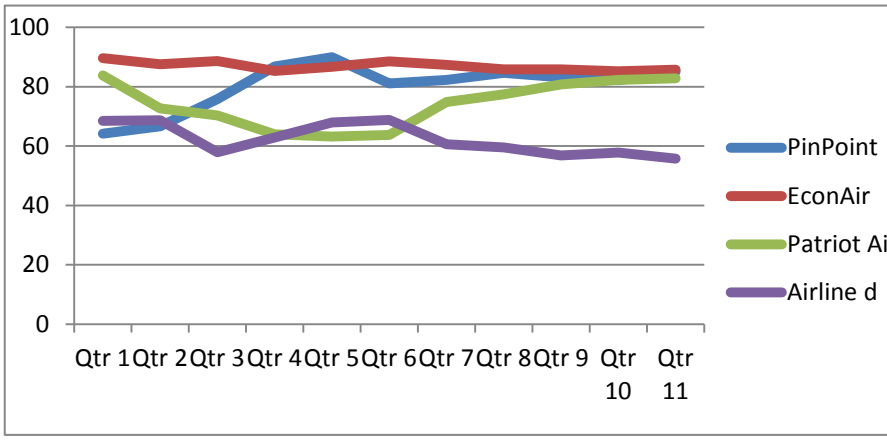
1. The survey used for ASCI4350 students will be redesigned to meet both the categories and levels of this outcome.

QUARTERLY RESULTS (WEIGHTED SCORES)

Periods	PinPoint	EconAir	Patriot Airways	Airline d computer
Qtr 1	64.2	89.6	83.8	68.5
Qtr 2	66.7	87.6	72.7	68.7
Qtr 3	75.8	88.7	70.3	57.9
Qtr 4	86.8	85.3	64	62.9
Qtr 5	90	86.7	63.2	68
Qtr 6	81.1	88.5	63.7	68.8
Qtr 7	82.3	87.4	74.8	60.6
Qtr 8	84.7	85.8	77.4	59.5
Qtr 9	83.2	85.8	80.8	56.8
Qtr 10	82.2	85.2	82.3	57.8
Qtr 11	85.1	85.7	82.8	55.8
Cum. Total	**882.1**	**956.3**	**815.8**	**685.3**
Cum. Net Income	***$1,638,851***	***$2,153,690***	***$1,508,417***	***$65,632***
Final Stock Price	***$38.38***	***$41.80***	***$47.27***	***$12.45***

PinPoint became Uncharted Airways Qtr4)

Uncharted	Holmes (Tropp)
EconAir	Halawani, Sindi
Patriot	Ommen, Thoms
Airline d	Computer



FINAL RESULTS

END OF QTR 11	Airline Strategy	Cumlative Net Profit	Cumulative Revenue	Cash Balance	Loan Balance
Uncharted	Normal	$1,638,851	$45,432,058	$1,501,767	$0
EconAir	Normal	$2,153,690	$38,471,216	$2,401,188	$390,223
Patriot	Normal	$1,508,417	$43,946,310	$1,865,468	$5,954,640
computer		$65,632	$18,156,165	$654,617	$390,223

	Return on Equity	Return on Sales	Line of Credit	Stock Price	Earnings per Share (EPS)
Uncharted	0.102	0.071	$10,900,000	$38.38	$1.36
EconAir	0.078	0.079	$11,800,000	$41.80	$2.00
Patriot	0.154	0.09	$9,800,000	$47.27	$3.30
computer	-0.4	-0.049	$5,200,000	$12.45	-$0.46

	Aircraft Utilization	Passenger Load	Yield per SeatMile	Cumulative Dividends	Cumulative Advertising
Uncharted	99.0%	60.0%	$0.210	$2,000	$54,000
EconAir	102.0%	69.0%	$0.235	$2,000	$45,500
Patriot	100.0%	61.0%	$0.222	$2,000	$74,500
computer	99.0%	49.0%	$0.171	$2,000	$30,000

	Discounted Fare	Max Daily Miles	Miles Flown Daily	Total Aircraft	Total Flights
Uncharted	$35.10	10,200	10,140	5	25
EconAir	$34.10	9,200	9,400	5	22
Patriot	$36.10	10,200	10,200	5	24
computer	$35.00	5,400	5,360	3	13

Performance Indicator Rubric

AABI Student Learning Outcome A: Apply Mathematics, Science and Applied Sciences to Aviation Related Disciplines

Course: **ASCI 4650 Economics of Air Transportation** Semester Taught: **Spring 2018**
Number of Students Scored: **5 enrolled**

Performance Indicator	**Student Work Description of Assignment**	**% Needs Improvement**	**% Meets Expectations**	**% Exceeds Expectations**
Identify specific facts of mathematics, science, and applied science needed for a given situation. (What knowledge is required?)	Study of airline financing: accounting, depreciation, liabilities, assets, balance sheet, income statement, profitability & liquidity ratios. Also, operating performance drivers: CASM, PRASM, LF, R/RPM		100%	
Apply specific facts of mathematics, science, and applied science needed for a given situation. (What application is required?)	With changing demand and conditions, simulation required application / decisions impacting profits, equity, loans, earnings, cash balance		100%	
Summary	Quarterly simulation reports: By the end of the first fiscal year of simulation, students were able to identify and apply key mathematical/financial/operational concepts			
Instructor's Recommendations	Metrics/Measures: Enhance the experience of comparative results by adding individual financial and operational metrics throughout the semester; rather than having all weighted measures at the beginning. Base this on instructor's learning objectives / topics as the semester develops.			
Department Recommendations				

EVIDENCE EXAMPLE

PinPoint Airways / Uncharted Airways						
	Q0	Q1	Q2	Q3	Q4	Q5
Net Profit	$22,234.00	$10,439.00	$67,053.00	$151,916.00	$88,310.00	$163,647.0
Current Ratio	1.381	1.341	1.481	1.737	1.929	2.41
Revenue	$1,490,761.00	$2,598,311.00	$2,881,203.00	$3,013,639.00	$2,922,696.00	$3,048,000.0
Stock Price	$20.00	$21.22	$24.90	$30.94	$28.57	$34.1
Quality	68.00%	71.00%	78.00%	90.00%	94.00%	95.00
Reliability	92.00%	94.40%	94.90%	96.40%	95.90%	98.80
Seat Productivity	4.5	4.6	4.9	5.6	5.4	5
Aircraft Utilization	99.00%	92.00%	99.00%	99.00%	99.00%	99.00
Passenger Load %	52.00%	50.00%	49.00%	56.00%	53.00%	59.00
Yield per Seat Mile	0.183	0.188	0.189	0.198	0.192	0
Operating Profit	$37,056.00	$17,397.00	$111,754.00	$253,193.00	$147,182.00	$283,988.0
OPM	2.49%	0.67%	3.88%	8.40%	5.04%	9.32
Profit Margin	1.50%	0.04%	2.30%	5.00%	3.00%	5.40

Uncharted Airlines BELF

Quarters	ASM	RPM	Op costs	CASM	Revenue	yield	BELF
1	13,793,600	6,837,660	2,200,993		2,598,311		
2	15,220,800	7,387,700	2,362,379		2,881,203		
3	15,220,800	8,595,620	2,379,804		3,013,639		
4	15,220,800	8,118,600	2,391,839		2,922,696		
5	15,220,800	8,924,660	2,452,218		3,048,000		
6	24,820,800	14,699,580	4,047,777		4,457,503		
7	24,820,800	13,684,420	4,090,238		4,926,392		
8	24,820,800	13,922,840	4,092,993		4,860,073		
9	24,820,800	14,461,040	4,133,425		5,076,673		
10	23,636,800	13,881,000	3,996,741		4,936,920		
11	24,820,800	14,858,860	4,128,194		5,219,887		
avg	20,219,782	11,397,453	3,297,873	0.163101	3,994,663	0.350487	46.53557

Performance Indicator Rubric

AABI Student Learning Outcome B: Analyze and Interpret Data

Course: **ASCI 4650 Economics of Air Transportation** Semester Taught: **Spring 2018**
Number of Students Scored: **5 enrolled**

Performance Indicator	**Student Work Description of Assignment**	**% Needs Improvement**	**% Meets Expectations**	**% Exceeds Expectations**
Gather and document data.	Airline simulation teams maintained a "decision log" during two fiscal years. Accomplished by all three teams.			100%
Analyze and interpret data.	Data/Reports from each quarter required analysis for financial, operational decisions of following quarter. One of three teams did excellent		67%	33%
Report on findings and conclusions.	Teams' management audit presentation at end of semester.		100%	
Summary				
Instructor's Recommendations	Spring 2019: (1) Establish a set of specific guidelines for teams' decision logs with details of data collection (2) Management audit will include a more comprehensive report of the findings/results for each airline team			
Department Recommendations				

EVIDENCE EXAMPLE

Aircraft Utilization		Decisions		
ERJ-135	100.00%	1	Fares	Increased fares to $0.39 in an effort to increase CASM therefore increasing LF
Beechcraft 1900	98.89 %	2	Marketing	Remained the same
		3	Compensation	Increased Quality and Training Budget to $2000 in an effort to improve quality, wage remained the same
		4	Fleet	Remained the same
		5	Routes	See Above
		6	Corporate	Remained the same
		7	Financing	$5000 stock sold, no new loans
		8	Special	Selected to tell the whole account of the incident

9. To what extent did the simulation help sharpen your **ability to analyze problems and recommend solutions?**
* i.e., data analysis, statistical, and decision-making skills .... to analyze and interpret various air transportation datasets as well as work well with aviation industry metrics, numbers and trends . . . analytical thinking capabilities with the abjlity to analyze data and develop recommendations for action based on data analysis

It forced us to think critically and analyze problems, overall I would say my skills stayed the same but my perspective changes.

9. To what extent did the simulation help sharpen your **ability to analyze problems and recommend solutions?**
* i.e., data analysis, statistical, and decision-making skills .... to analyze and interpret various air transportation datasets as well as work well with aviation industry metrics, numbers and trends . . . analytical thinking capabilities with the ability to analyze data and develop recommendations for action based on data analysis

It helped my skills immensely.

9. To what extent did the simulation help sharpen your **ability to analyze problems and recommend solutions?**
* i.e., data analysis, statistical, and decision-making skills .... to analyze and interpret various air transportation datasets as well as work well with aviation industry metrics, numbers and trends . . . analytical thinking capabilities with the ability to analyze data and develop recommendations for action based on data analysis

I think it helped me realize that any problem has a solution and we just have to look for it. I know it is cheesy but it is true.

Performance Indicator Rubric

AABI Student Learning Outcome C: Work Effectively on Multidisciplinary and Diverse Teams

Course: **ASCI 4650 Economics of Air Transportation** Semester Taught: **Spring 2018**
Number of Students Scored: **5 enrolled**

Performance Indicator	**Student Work Description of Assignment**	**% Needs Improvement**	**% Meets Expectations**	**% Exceeds Expectations**
Collaboration/Conflict management.	Airline management teams. Assessed through instructor administered survey	33%	67%	
Communication.	Airline management teams. Assessed through instructor administered survey	33%	67%	
Decision-making.	Airline management teams. Assessed through instructor administered survey	33%	67%	
Summary	Survey administered at end of simulation periods. Saudi students (one team) did not respond on the simulation survey to the "teamwork" questions.			
Instructor's Recommendations	Spring 2019: (1) No recommendations			
Department Recommendations				

EVIDENCE SURVEY EXAMPLES

FSCI 4650 Economics of Air Transportation

Student Survey
Airline Simulation
Spring 2018

This is the second time a pedagogical technique of this nature has been used in FSCI 465 *Economics of Air Transportation*. Your input helps to create a better experience for future participants.

My Airline:

Uncharted/Pinpoint	☐
EconAir	☐
Patriot Air	☒
	☐

1. The $40 fee:

a. ___ It's too high.
b. _X_ It's about right.

Payment method:

c. _X_ I'm okay with the payment method used this semester (online; direct; credit card)
d. ___ I would prefer to pay through the university as part of my books/tuition/fee structure

2. The eleven quarters (decision periods):

a. ___ Just the right number of decision periods (2.75 years of operations)
b. _X_ Would like to have more decision periods (up to 14 are possible)

3. The 9 special decisions (incidents):

a. ___ A waste of time
b. _X_ Enjoyed doing them

c. ___ Too many
d. ___ Too few

COMMENTS:

1

Performance Indicator Rubric

AABI Student Learning Outcome E: Communicate effectively using both Oral and Written Communication Skills

Course: **ASCI 4650 Economics of Air Transportation** Semester Taught: **Spring 2018**
Number of Students Scored: **5 enrolled**

Performance Indicator	**Student Work Description of Assignment**	**% Needs Improvement**	**% Meets Expectations**	**% Exceeds Expectations**
Organization of material.	Airline simulation teams: management audit presentation	33%	67%	
Provide evidence to support claims or inform audience.	Airline simulation teams: management audit presentation	33%	67%	
Demonstrate the proper use of language.	Airline simulation teams: management audit presentation	33%	67%	
Delivery of an oral presentation.	Airline simulation teams: management audit presentation	33%	67%	
Summary				
Instructor's Recommendations	Spring 2019: (1) Tighten the presentation guidelines; do not provide as much leniency on how each team may present their findings (2) Establish tighter oral and written guidelines (3) Continue to give teams opportunity to review/practice delivery of the presentation			
Department Recommendations				

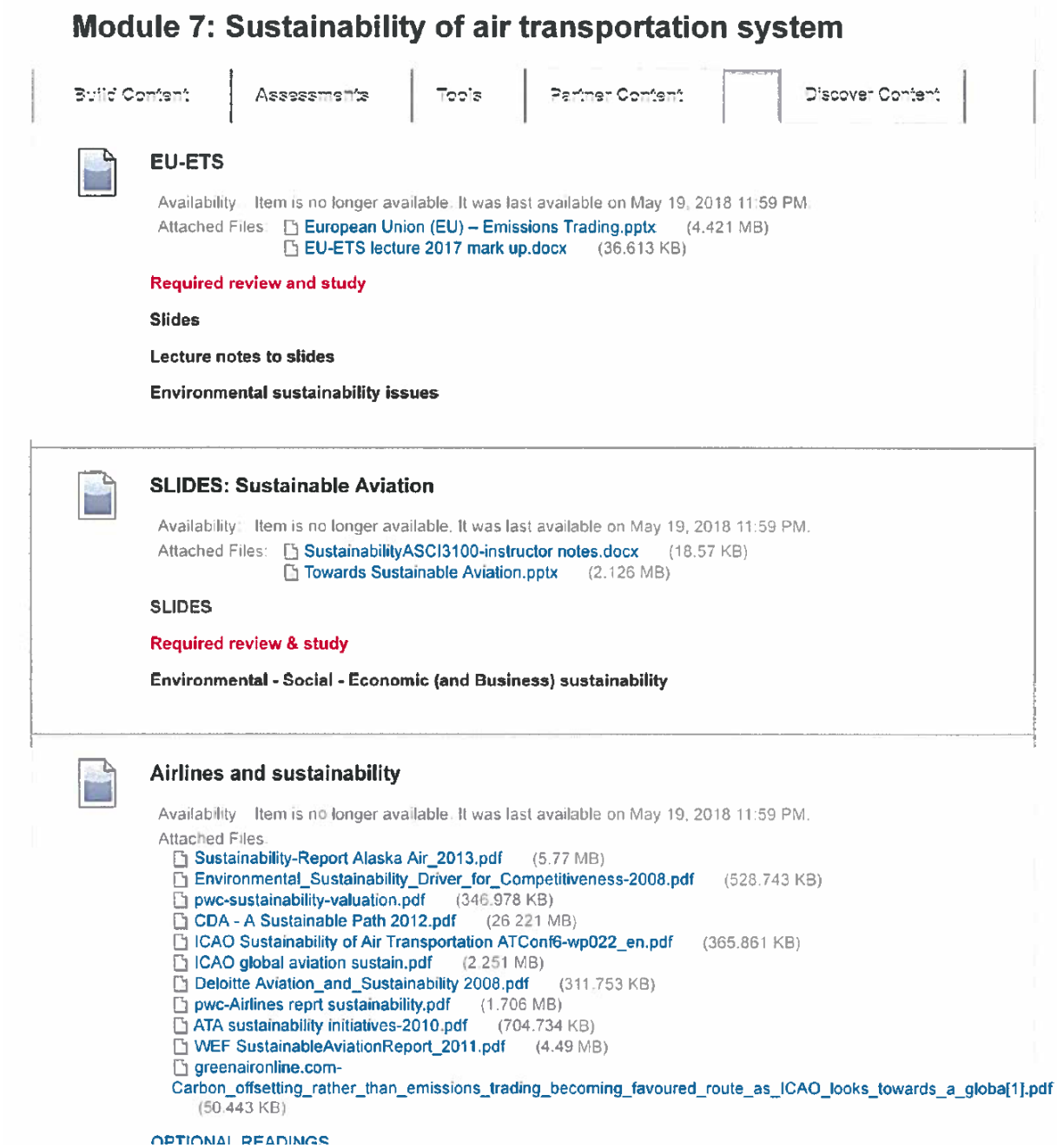
Performance Indicator Rubric

AABI Student Learning Outcome K: Apply Knowledge of Business Sustainability to Aviation Issues

Course: **ASCI 4650 Economics of Air Transportation** Semester Taught: **Spring 2018**
Number of Students Scored: **5 enrolled**

Performance Indicator	**Student Work Description of Assignment**	**% Needs Improvement**	**% Meets Expectations**	**% Exceeds Expectations**
Identify legal and regulatory issues of aviation-related climate change; Identify economic, social and environmental concepts applied to aviation business.	No structured assignment or test questions developed	100%		
Find and analyze evidence of accepted practices of sustainability in aviation business settings.	No structured assignment or test questions developed	100%		
Apply acquired knowledge and facts of legal, economic, social and environmental sustainability concepts to a given aviation situation to solve problems.	No structured assignment or test questions developed	100%		
Summary	The subject was covered in lecture; however, no evidence was collected to support the performance indicators of the learning outcome. **Module 7 Sustainability of air transportation system files:** • Airlines and sustainability • Airports and sustainability • EU-Emissions Trading Scheme • Slides: environmental, social, economic (and business) sustainability • Air Transport Action Group (ATAG) documents on biofuels, emissions, efficiency, and corporate sustainability			
Instructor's Recommendations	Spring 2019: Instructor should develop a highly structured lesson plan to ensure the Performance Indicators are documented and evidence is obtained (1) Legal and regulatory issues (2) Research and analyze evidence of industry practices (3) Situation/Scenario requiring application of sustainability concepts			
Department Recommendations				

EVIDENCE



Module 7: Sustainability of air transportation system

Build Content | Assessments | Tools | Partner Content | Discover Content

EU-ETS

Availability: Item is no longer available. It was last available on May 19, 2018 11:59 PM.
Attached Files: European Union (EU) – Emissions Trading.pptx (4.421 MB)
EU-ETS lecture 2017 mark up.docx (36.613 KB)

Required review and study

Slides

Lecture notes to slides

Environmental sustainability issues

SLIDES: Sustainable Aviation

Availability: Item is no longer available. It was last available on May 19, 2018 11:59 PM.
Attached Files: SustainabilityASCI3100-instructor notes.docx (18.57 KB)
Towards Sustainable Aviation.pptx (2.126 MB)

SLIDES

Required review & study

Environmental - Social - Economic (and Business) sustainability

Airlines and sustainability

Availability: Item is no longer available. It was last available on May 19, 2018 11:59 PM.
Attached Files:
Sustainability-Report Alaska Air_2013.pdf (5.77 MB)
Environmental_Sustainability_Driver_for_Competitiveness-2008.pdf (528.743 KB)
pwc-sustainability-valuation.pdf (346.978 KB)
CDA - A Sustainable Path 2012.pdf (26.221 MB)
ICAO Sustainability of Air Transportation ATConf6-wp022_en.pdf (365.861 KB)
ICAO global aviation sustain.pdf (2.251 MB)
Deloitte Aviation_and_Sustainability 2008.pdf (311.753 KB)
pwc-Airlines reprt sustainability.pdf (1.706 MB)
ATA sustainability initiatives-2010.pdf (704.734 KB)
WEF SustainableAviationReport_2011.pdf (4.49 MB)
greenaironline.com-Carbon_offsetting_rather_than_emissions_trading_becoming_favoured_route_as_ICAO_looks_towards_a_globa[1].pdf (50.443 KB)

OPTIONAL READINGS

Airports and sustainability

Availability: Item is no longer available. It was last available on May 19, 2018 11:59 PM.

Attached Files:
- acrp_syn_010 Aprt Sustain Practices.pdf (3.93 MB)
- FAA airports VArptLowEmissions.pdf (627.438 KB)
- acrp_rpt_042 Sus Aprt Construction.pdf (11.18 MB)
- L&B Corporate Sustainability Policy.pdf (112.926 KB)
- airport acrp_rpt_080 Sustain Aprt projects.pdf (4.595 MB)
- 2011 Environmental Report-StL Lambert.pdf (4.626 MB)
- CDA - A Sustainable Path 2012.pdf (26.221 MB)
- DIA report-2013.pdf (40.736 MB)

OPTIONAL READINGS

ATAG documents

Availability: Item is no longer available. It was last available on May 19, 2018 11:59 PM.

Attached Files:
- 2013-ATAG PositionPaper_ICAO ASBY.pdf (1.893 MB)
- 2012-EU aviation beyond borders.pdf (1.613 MB)
- 2013-PositionPaper emissions-ATAG.pdf (1.726 MB)
- 2013-ICAO ATAG MBMs.pdf (19.676 MB)
- 2009-beginners guide aviation biofuels.pdf (1.469 MB)
- 2010-beginners guide aviation efficiency-ATAG.pdf (2.103 MB)

OPTIONAL READINGS

Air Transport Action Group (ATAG)

Performance Indicator Rubric

AABI Student Learning Outcome E: Communicate effectively using <u>Written Communication Skills Only</u>

Course: **ASCI 4800-01 International Aviation** Semester Taught: **Spring 2018** Number of Students Scored: **8**

Type of Student Work Used for Assessment* (e.g. Homework #4; Exam #2 problem 3; final project): **Tests 1 – 6 and Group Presentation**

**Attach description of assignment used for assessment and samples of student work.*

Rating Scale / Performance Indicator	Needs Improvement	Meets Expectations	Exceeds Expectations
Organization of material	Confusing organization; weak problem statement or purpose; weak conclusion or summary; other sections are weak; weak use of citations and references.	Mostly logical and complete organization; adequate problem statement or purpose; adequate conclusion or summary; adequate use of citations and references.	Excellent organization; well-stated problem statement or purpose; strong conclusion or summary; thorough list of citations and references.
Provide evidence to support claims or inform audience	Ideas not expressed clearly or details are weak; data analysis is weak; illustrations are lacking or confusing.	Ideas are generally expressed clearly and details are adequate; data analysis is adequate; illustrations support ideas, but have some mislabeling or do not accurately present evidence.	Ideas are well-developed, expressed clearly with many appropriate details; data analysis is thorough; illustrations clearly support core message(s), are properly labeled and captioned
Demonstrate the proper use of language	Several errors in grammar, punctuation, spelling; several sentences have an awkward construction; proofreading appears to have been done hastily.	A few errors in grammar, punctuation, spelling; sentences are mostly well-crafted; appears to have been proofread, but further revision could improve text.	Minor errors, if any, in grammar, punctuation, and spelling; varied and creative sentence structure; demonstrates thorough proofreading and revision.
Delivery of an oral presentation	Clarity of speech is uneven; delivery is halting; speaker is unsure of topic and appears nervous or disengaged; limited or sporadic eye contact with audience; limited or inappropriate use of physical gesture and facial expression.	Effective speaking voice; recovers easily from speaking errors; speaker is in command of the topic but appears slightly nervous in delivery; appropriate eye contact with audience throughout most of the presentation; use of physical gesture and facial expression is appropriate, but appears forced or artificial at times.	Strong, clear speaking voice easily understood by audience; speaker conveys confidence in talking about the topic; excellent eye contact with audience throughout presentation; use of physical gesture and facial expression conveys energy and enthusiasm.

Description of Assignment: Test 1 was based on lecture material covered in the course.

Performance Indicator	Questions, Problems, Etc.	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Demonstrate the proper use of language	Question #14	--	75%	25%
	Question #25	12.5%	75%	12.5%

A copy of a student test representing the high score earned in this assignment can be found at the end of this performance rubric.

Description of Assignment: Test 2 was based on lecture material covered in the course.

Performance Indicator	Questions, Problems, Etc.	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Demonstrate the proper use of language	Question #15	25%	100%	12.5%
	Extra Credit Question #1	25%	62.5%	12.5%

A copy of a student test representing the high score earned in this assignment can be found at the end of this performance rubric.

Description of Assignment: Test 3 was based on lecture material covered in the course.

Performance Indicator	Questions, Problems, Etc.	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Demonstrate the proper use of language	Question #6	12.5%	62.5%	25%
	Question #21	--	87.5%	12.5%

A copy of a student test representing the high score earned in this assignment can be found at the end of this performance rubric.

Description of Assignment: Test 4 was based on lecture material covered in the course.

Performance Indicator	Questions, Problems, Etc.	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Demonstrate the proper use of language	Extra Credit Question	25%	50%	25%

A copy of a student test representing the high score earned in this assignment can be found at the end of this performance rubric.

Description of Assignment: Test 5 was based on lecture material covered in the course.

Performance Indicator	Questions, Problems, Etc.	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Demonstrate the proper use of language	Extra Credit Question	25%	50%	25%

A copy of a student test representing the high score earned in this assignment can be found at the end of this performance rubric.

Description of Assignment: Test 6 was based on lecture material covered in the course.

Performance Indicator	Questions, Problems, Etc.	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Demonstrate the proper use of language	Question #1	25%	75%	--
	Question #15	--	75%	25%

A copy of a student test representing the high score earned in this assignment can be found at the end of this performance rubric.

Instructor assessment:
To improve the course outcome, the instructor suggests providing more class time on topics in which students need improvement so that more of the students will be capable of at minimum, meeting the expectations while reinforcing the abilities of those students currently meeting and exceeding expectations.

DATA SUPPORTING THE INSTRUCTOR'S ASSESSMENT OF THIS COURSE FOLLOWS

Performance Indicator Rubric

AABI Student Learning Outcome E: Communicate effectively using <u>Oral Communication Skills Only</u>

Course: **ASCI 4800-01 International Aviation** Semester Taught: **Spring 2018** Number of Students Scored: **8 (4 groups)**

Type of Student Work Used for Assessment* (e.g. Homework #4; Exam #2 problem 3; final project): **Group Presentation**

**Attach description of assignment used for assessment and samples of student work.*

Rating Scale / Performance Indicator	Needs Improvement	Meets Expectations	Exceeds Expectations
Organization of material	Confusing organization; weak problem statement or purpose; weak conclusion or summary; other sections are weak; weak use of citations and references.	Mostly logical and complete organization; adequate problem statement or purpose; adequate conclusion or summary; adequate use of citations and references.	Excellent organization; well-stated problem statement or purpose; strong conclusion or summary; thorough list of citations and references.
Provide evidence to support claims or inform audience	Ideas not expressed clearly or details are weak; data analysis is weak; illustrations are lacking or confusing.	Ideas are generally expressed clearly and details are adequate; data analysis is adequate; illustrations support ideas, but have some mislabeling or do not accurately present evidence.	Ideas are well-developed, expressed clearly with many appropriate details; data analysis is thorough; illustrations clearly support core message(s), are properly labeled and captioned
Demonstrate the proper use of language	Several errors in grammar, punctuation, spelling; several sentences have an awkward construction; proofreading appears to have been done hastily.	A few errors in grammar, punctuation, spelling; sentences are mostly well-crafted; appears to have been proofread, but further revision could improve text.	Minor errors, if any, in grammar, punctuation, and spelling; varied and creative sentence structure; demonstrates thorough proofreading and revision.
Delivery of an oral presentation	Clarity of speech is uneven; delivery is halting; speaker is unsure of topic and appears nervous or disengaged; limited or sporadic eye contact with audience; limited or inappropriate use of physical gesture and facial expression.	Effective speaking voice; recovers easily from speaking errors; speaker is in command of the topic but appears slightly nervous in delivery; appropriate eye contact with audience throughout most of the presentation; use of physical gesture and facial expression is appropriate, but appears forced or artificial at times.	Strong, clear speaking voice easily understood by audience; speaker conveys confidence in talking about the topic; excellent eye contact with audience throughout presentation; use of physical gesture and facial expression conveys energy and enthusiasm.

Description of Assignment: Group presentation of a current topic in national and international aviation.

Performance Indicator	Questions, Problems, Etc.	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Organization of Material	Group presentation		75%	25%
Provide evidence to support claims or inform audience	Group presentation		100%	
Demonstrate the proper use of language	Group presentation		100%	
Delivery of an oral presentation	Group presentation	25%	50%	25%

Evidence of the assessment, showing a group presentation, can be found at the end of this performance indicator rubric.

Instructor assessment:
To improve the course outcome, the instructor suggests providing more class time on topics which might aid the student in the delivery of an oral presentation.

Performance Indicator Rubric

AABI Student Learning Outcome I: Assess the National and International Aviation Environment

Course: **ASCI 4800-01 International Aviation** Semester Taught: **Spring 2018** Number of Students Scored: **8**

Type of Student Work Used for Assessment* (e.g. Homework #4; Exam #2 problem 3; final project): **Tests 1-7**

**Attach description of assignment used for assessment and samples of student work.*

Rating Scale / Performance Indicator	Needs Improvement	Meets Expectations	Exceeds Expectations
Identify contemporary issues affecting the local/regional, national and/or international aviation environment	Minimal understanding of contemporary issues affecting the local/regional, national and/or international aviation environment.	Identifies most of the contemporary aviation issues affecting the local/regional, national and/or international aviation environment.	Identifies all relevant contemporary aviation issues affecting the local/regional, national and/or international aviation environment.
Reflection on contemporary issues affecting the local/regional, national and/or international aviation environment	Provides little evidence of reflection of the contemporary issues affecting the local/regional, national and/or international aviation environment.	Reflects properly on almost all of the contemporary issues affecting the local/regional, national and/or international aviation environment.	Reflects properly on all of the contemporary issues affecting the local/regional, national and/or international aviation environment.

Description of Assignment: The Test 1 score was based on lecture material covered in the course.

Performance Indicator	Questions, Problems, Etc.	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Identify contemporary issues affecting…aviation environment	Question #4	25%	75%	--
	Question # 22	12.5%	87.5%	--
Reflection on contemporary issues**…**aviation environment	Question # 28	--	100%	--
	Question #30	12.5%	87.5%	--

A copy of a student test representing the high score earned in this assignment can be found at the end of this performance rubric.

Description of Assignment: Test 2 was based on lecture material covered in the course.

Performance Indicator	Questions, Problems, Etc.	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Identify contemporary issues affecting...aviation environment	Question #9	25%	75%	--
	Question #14	25%	75%	--
Reflection on contemporary issues…aviation environment	Question #15	25%	62.5%	12.5%
	Question #29	--	100%	--

A copy of a student test representing the high score earned in this assignment can be found at the end of this performance rubric.

Description of Assignment: Test 3 was based on lecture material covered in the course.

Performance Indicator	Questions, Problems, Etc.	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Identify contemporary issues affecting...aviation environment	Question #11	--	100%	--
	Question # 15	12.5%	87.5%	--
Reflection on contemporary issues…aviation environment	Question #4	12.5%	87.5%	--
	Question #6	12.5%	87.5%	--

A copy of a student test representing the high score earned in this assignment can be found at the end of this performance rubric.

Description of Assignment: Test 4 was based on lecture material covered in the course.

Performance Indicator	Questions, Problems, Etc.	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Identify contemporary issues affecting...aviation environment	Question #4	12.5%	87.5%	--
	Question #5	12.5%	87.5%	--
Reflection on contemporary issues…aviation environment	Extra Credit Question	25%	62.5%	12.5%

A copy of a student test representing the high score earned in this assignment can be found at the end of this performance rubric.

Description of Assignment: Test 5 was based on lecture material covered in the course.

Performance Indicator	Questions, Problems, Etc.	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Identify contemporary issues affecting...aviation environment	Question #6	12.5%	87.5%	--
	Question #7	--	100%	--
Reflection on contemporary issues…aviation environment	Extra Credit Question	25%	62.5%	12.5%

A copy of a student test representing the high score earned in this assignment can be found at the end of this performance rubric.

Description of Assignment: Test 6 was based on lecture material covered in the course.

Performance Indicator	Questions, Problems, Etc.	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Identify contemporary issues affecting...aviation environment	Question #1	12.5%	87.5%	--
	Question #11	12.5%	87.5%	--
Reflection on contemporary issues…aviation environment	Question # 25	--	100%	--
	Question # 28	12.5%	75%	12.5%

A copy of a student test representing the high score earned in this assignment can be found at the end of this performance rubric.

Description of Assignment: Test 7 was based on lecture material covered in the course.

Performance Indicator	Questions, Problems, Etc.	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Identify contemporary issues affecting...aviation environment	Question # 11	37.5%	63.5%	--
	Question # 12	50%	50%	--
Reflection on contemporary issues…aviation environment	Question # 10	25%	75%	--
	Question # 14	50%	50%	--

A copy of a student test representing the high score earned in this assignment can be found at the end of this performance rubric.

Description of Assignment: Group presentation of a current topic in national and international aviation.

Performance Indicator	Questions, Problems, Etc.	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Identify contemporary issues affecting...aviation environment	Group presentation	--	100%	--
Reflection on contemporary issues…aviation environment	Group presentation	--	50%	50%

Evidence of the assessment, showing a group presentation, can be found at the end of this performance indicator rubric.

Instructor assessment:
To improve the course outcome, the instructor suggests providing more class time on topics in which students need improvement so that more of the students will be capable of at minimum, meeting the expectations while reinforcing the abilities of those students currently meeting and exceeding expectations.

To improve the course outcome, the instructor suggests providing more class time on topics which might aid the student in the delivery of an oral presentation.

DATA SUPPORTING THE INSTRUCTOR'S ASSESSMENT OF THIS COURSE FOLLOWS

Performance Indicator Rubric

AABI Student Learning Outcome E: Communicate effectively using <u>Written Communication Skills Only</u>

Course: **ASCI 4800-10 International Aviation (SPS)** Semester Taught: **Spring 2018** Number of Students Scored: **17**

Type of Student Work Used for Assessment* (e.g. Homework #4; Exam #2 problem 3; final project): **Group Discussions and Group Presentation**

**Attach description of assignment used for assessment and samples of student work.*

Rating Scale / Performance Indicator	Needs Improvement	Meets Expectations	Exceeds Expectations
Organization of material	Confusing organization; weak problem statement or purpose; weak conclusion or summary; other sections are weak; weak use of citations and references.	Mostly logical and complete organization; adequate problem statement or purpose; adequate conclusion or summary; adequate use of citations and references.	Excellent organization; well-stated problem statement or purpose; strong conclusion or summary; thorough list of citations and references.
Provide evidence to support claims or inform audience	Ideas not expressed clearly or details are weak; data analysis is weak; illustrations are lacking or confusing.	Ideas are generally expressed clearly and details are adequate; data analysis is adequate; illustrations support ideas, but have some mislabeling or do not accurately present evidence.	Ideas are well-developed, expressed clearly with many appropriate details; data analysis is thorough; illustrations clearly support core message(s), are properly labeled and captioned
Demonstrate the proper use of language	Several errors in grammar, punctuation, spelling; several sentences have an awkward construction; proofreading appears to have been done hastily.	A few errors in grammar, punctuation, spelling; sentences are mostly well-crafted; appears to have been proofread, but further revision could improve text.	Minor errors, if any, in grammar, punctuation, and spelling; varied and creative sentence structure; demonstrates thorough proofreading and revision.
Delivery of an oral presentation	Clarity of speech is uneven; delivery is halting; speaker is unsure of topic and appears nervous or disengaged; limited or sporadic eye contact with audience; limited or inappropriate use of physical gesture and facial expression.	Effective speaking voice; recovers easily from speaking errors; speaker is in command of the topic but appears slightly nervous in delivery; appropriate eye contact with audience throughout most of the presentation; use of physical gesture and facial expression is appropriate, but appears forced or artificial at times.	Strong, clear speaking voice easily understood by audience; speaker conveys confidence in talking about the topic; excellent eye contact with audience throughout presentation; use of physical gesture and facial expression conveys energy and enthusiasm.

Description of Assignment: The Module 1 score was based on the level of participation and quality of the group online discussion.

Performance Indicator	Questions, Problems, Etc.	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Demonstrate the proper use of language	Group discussion	12%	53%	35%

A copy of a group discussion thread for this assignment can be found at the end of this performance rubric.

Description of Assignment: The Module 2 score was based on the level of participation and quality of the group discussion.

Performance Indicator	Questions, Problems, Etc.	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Demonstrate the proper use of language	Group discussion	12%	41%	47%

A copy of a group discussion thread for this assignment can be found at the end of this performance rubric.

Description of Assignment: The Module 3 score was based on the level of participation and quality of the group online discussion.

Performance Indicator	Questions, Problems, Etc.	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Demonstrate the proper use of language	Group discussion	6%	47%	47%

A copy of a group discussion thread for this assignment can be found at the end of this performance rubric.

Description of Assignment: The Module 5 score was based on the level of participation and quality of the group online discussion.

Performance Indicator	Questions, Problems, Etc.	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Demonstrate the proper use of language	Group discussion	18%	35%	47%

A copy of a group discussion thread for this assignment can be found at the end of this performance rubric.

Description of Assignment: The Module 6 score was based on the level of participation and quality of the group online discussion.

Performance Indicator	Questions, Problems, Etc.	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Demonstrate the proper use of language	Group discussion	12%	35%	53%

A copy of a group discussion thread for this assignment can be found at the end of this performance rubric.

Description of Assignment: The Module 7 score was based on the level of participation and quality of the group online discussion.

Performance Indicator	Questions, Problems, Etc.	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Demonstrate the proper use of language	Group discussion	18%	70%	12%

A copy of a group discussion thread for this assignment can be found at the end of this performance rubric.

Description of Assignment: The presentation score was based on a rubric.

Performance Indicator	Questions, Problems, Etc.	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Organization of material	Student presentation	18%	72%	12%
Provide evidence to support claims or inform audience	Student presentation	12%	36%	52%
Demonstrate the proper use of language	Student presentation	--	72%	28%
Delivery of an oral presentation	Student presentation	N/A	N/A	N/A

A copy of a student presentation representing the high score earned in this assignment can be found at the end of this performance rubric.

Instructor assessment:
To improve the course outcome, the instructor suggests providing more class time on topics in which students need improvement so that more of the students will be capable of at minimum, meeting the expectations while reinforcing the abilities of those students currently meeting and exceeding expectations.

The instructor recommends that the tests include more essay questions to better assess the students' abilities to communicate using written communication.

Online delivery of the course does not readily allow the instructor to assess the performance indicator, "delivery of an oral presentation." For future course delivery the instructor recommends exploring ways in which the students could record the presentation for delivery to the entire class and the instructor.

DATA SUPPORTING THE INSTRUCTOR'S ASSESSMENT OF THIS COURSE FOLLOWS

Performance Indicator Rubric

AABI Student Learning Outcome I: Assess the National and International Aviation Environment

Course: **ASCI 4800-10 International Aviation (SPS)** Semester Taught: **Spring 2018** Number of Students Scored: **17**

Type of Student Work Used for Assessment* (e.g. Homework #4; Exam #2 problem 3; final project): **Group Discussions, Tests 1-2 and Group Presentation**

**Attach description of assignment used for assessment and samples of student work.*

Rating Scale / Performance Indicator	Needs Improvement	Meets Expectations	Exceeds Expectations
Identify contemporary issues affecting the local/regional, national and/or international aviation environment	Minimal understanding of contemporary issues affecting the local/regional, national and/or international aviation environment.	Identifies most of the contemporary aviation issues affecting the local/regional, national and/or international aviation environment.	Identifies all relevant contemporary aviation issues affecting the local/regional, national and/or international aviation environment.
Reflection on contemporary issues affecting the local/regional, national and/or international aviation environment	Provides little evidence of reflection of the contemporary issues affecting the local/regional, national and/or international aviation environment.	Reflects properly on almost all of the contemporary issues affecting the local/regional, national and/or international aviation environment.	Reflects properly on all of the contemporary issues affecting the local/regional, national and/or international aviation environment.

Description of Assignment: The Module 1 score was based on the level of participation and quality of the group online discussion.

Performance Indicator	Questions, Problems, Etc.	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Identify contemporary issues affecting...aviation environment	Group Discussion	23.5%	23.5%	53%
Reflection on contemporary issues…aviation environment	Group Discussion	23.5%	64.7%	11.8%

A copy of a group discussion thread for this assignment can be found at the end of this performance rubric.

Description of Assignment: The Module 2 score was based on the level of participation and quality of the group online discussion..

Performance Indicator	Questions, Problems, Etc.	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Identify contemporary issues affecting...aviation environment	Group Discussion	23.5%	11.8%	64.7%
Reflection on contemporary issues…aviation environment	Group Discussion	17.6%	17.6%	53%

A copy of a group discussion thread for this assignment can be found at the end of this performance rubric.

Description of Assignment: The Module 3 score was based on the level of participation and quality of the group online discussion.

Performance Indicator	Questions, Problems, Etc.	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Identify contemporary issues affecting...aviation environment	Group Discussion	5.9%	23.5%	70.6%
Reflection on contemporary issues…aviation environment	Group Discussion	23.5%	64.7%	11.8%

A copy of a group discussion thread for this assignment can be found at the end of this performance rubric.

Description of Assignment: Test 1 was based on lecture material covered in the course.

Performance Indicator	Questions, Problems, Etc.	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Identify contemporary issues affecting...aviation environment	Question #4	17.6%	82.4%	86.05
	Question #5	11.8%	88.2%	
Reflection on contemporary issues…aviation environment	Question #31	--	100%	
	Question #46	11.8%	88.2%	

A copy of a student test representing the high score earned in this assignment can be found at the end of this performance rubric.

Description of Assignment: The Module 5 score was based on the level of participation and quality of the group online discussion.

Performance Indicator	Questions, Problems, Etc.	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Identify contemporary issues affecting...aviation environment	Group Discussion	17.6%	17.6%	64.8%
Reflection on contemporary issues…aviation environment	Group Discussion	23.5%	11.8%	64.7%

A copy of a group discussion thread for this assignment can be found at the end of this performance rubric.

Description of Assignment: The Module 6 score was based on the level of participation and quality of the group online discussion.

Performance Indicator	Questions, Problems, Etc.	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Identify contemporary issues affecting...aviation environment	Group Discussion	5.9%	41.2%	52.9%
Reflection on contemporary issues…aviation environment	Group Discussion	23.5%	23.5%	53%

A copy of a group discussion thread for this assignment can be found at the end of this performance rubric.

Description of Assignment: The Module 7 score was based on the level of participation and quality of the group online discussion.

Performance Indicator	Questions, Problems, Etc.	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Identify contemporary issues affecting...aviation environment	Group Discussion	17.6%	17.6%	64.8%
Reflection on contemporary issues…aviation environment	Group Discussion	5.9%	23.5%	70.6%

A copy of a group discussion thread for this assignment can be found at the end of this performance rubric.

Description of Assignment: Test 2 was based on lecture material covered in the course.

Performance Indicator	Questions, Problems, Etc.	% Needs Improvement	% Meets Expectations	Test Average Score
Identify contemporary issues affecting...aviation environment	Question #6	33.3%	66.7%	83.47
	Question #7	6.7%	93.3%	
Reflection on contemporary issues…aviation environment	Question #15	6.7%	93.3%	
	Question #44	--	100%	

Description of Assignment: The presentation score was based on a rubric.

Performance Indicator	Questions, Problems, Etc.	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Identify contemporary issues affecting...aviation environment	Student presentation	17.6%	71.6%	11.8%
Reflection on contemporary issues…aviation environment	Student presentation	17.6%	23.5%	58.9%

A copy of a student presentation representing the high score earned in this assignment can be found at the end of this performance rubric.

To improve the course outcome, the instructor suggests providing more class time on topics in which students need improvement so that more of the students will be capable of at minimum, meeting the expectations while reinforcing the abilities of those students currently meeting and exceeding expectations.

The instructor recommends that the tests include more essay questions to better assess the students' abilities to assess the national and international environment.

DATA SUPPORTING THE INSTRUCTOR'S ASSESSMENT OF THIS COURSE FOLLOWS

ASCI 4900 Senior Seminar

AABI Learning **Outcome A** – Apply Mathematics, Science and Applied Science to Aviation Related Disciplines

Description of Assignment:

Performance Indicator	*Assignment Type*	*% Needs Improvement*	*% Meets Expectations*	*% Exceeds Expectations*	Mean
Students will apply mathematics, science, and applied sciences to aviation related disciplines through written test	Open-ended questions Qualitative	??	??	??	N/A

An example copy of Needs Improvement, Meets Expectations and Exceeds Expectation follows

Summary:

The Boeing MEDA Tool is a method for evaluating aircraft damage causality based on the underlying physics and human causes associated with an aircraft accident or incident. The form/method includes both a qualitative and quantitative assessment of damage and calculations surrounding the energy associated with the event. The tool is quite diverse and utilizes both science and applied science.

That said, I think the department should reconsider whether Outcome A should be included within Senior Seminar. The mathematics and associated science are at a low level and suggesting the course adequately requires students to apply mathematics, science and applied science is less than ideal.

For the Spring 2018 semester a test was given to students that included several questions regarding the META process. Rather than saving the copies of the exam, all I did was record the score and return the test to the students for their own keeping. Consequently, I am unable to assess Outcome A this semester. I have provided the group of questions surrounding the MEDA Tool that were used on the test.

Recommendations:

1. Reconsider whether ASCI 4900 should assess Outcome A
2. If ASCI 4900 continues to assess Outcome A, a more-robust method for evaluating the application of math and science must be considered.

MEDA – Questions

What is the primary function of the Maintenance Error Decision Aid (MEDA)?

In the article “Development and evaluation of the Maintenance Error Decision Aid (MEDA) process,” the authors discuss why it is ill advisable to simply attribute a mistake to “human error.” Why do the authors view this as problematic?

In the article “Development and evaluation of the Maintenance Error Decision Aid (MEDA) process,” the authors discuss the notion of “performance shaping factors.” Please discuss one internal performance shaping factor.

In the article “Development and evaluation of the Maintenance Error Decision Aid (MEDA) process,” the authors discuss the notion of “performance shaping factors.” Please discuss one external performance shaping factor.

In the article “Development and evaluation of the Maintenance Error Decision Aid (MEDA) process,” the authors discuss the notion of “performance shaping factors.” Please discuss one “stressor performance shaping factor.”

ASCI 4900 Senior Seminar

AABI Learning **Outcome B** - Analyze and Interpret Data

Description of Assignment:

Performance Indicator	*Assignment Type*	*% Needs Improvement*	*% Meets Expectations*	*% Exceeds Expectations*	Mean
The student will demonstrate the ability to analyze and interpret data in class discussions and written test.	Open-ended question Qualitative	33%	66%	0%	N/A

An example copy of Needs Improvement, Meets Expectations and Exceeds Expectation follows

Summary:

This senior level course intends to synthesize the undergraduate experience in an open discussion and presentation format. Generally, the students drive the conversation. It's a very small class this semester (n=3), consequently the breadth of conversation was somewhat limited.

The formal assessment of Outcome B was based on a single, open-ended question asked on a comprehensive final exam. I fear the scoring rubric is slightly skewed by my experience engaging these three students in conversation. In other words, the written responses quite frankly were not that good. However, when I synthesize our class discussions with their written submissions I am comfortable with the responses of two of my three students.

Recommendations:

1. Develop a rubric that can be used to grade classroom conversations
2. Develop additional data points for measuring the course outcomes
3. Develop assessment measures that cross the entire semester rather than at a single point in time.

Example – Needs Improvement

The key to ensuring that commercial aviation remains sustainable is competition; “plane” and simple, that is what fosters growth, ingenuity, and forward progress. In an article by Borenstein (1992), he makes the point that competition has driven prices down and service to new destinations up. While there may be fewer airlines than there were in 1978 when deregulation passed as legislation, the flying economy is stronger than ever thanks to globalization of businesses and a booming economy. Competition, while it may eliminate some of the airlines exiting today, creates an environment that calls for the best from every airline partaking in the industry. It creates an environment in the industry where every cent off of a fare counts towards luring new passengers onto flights. I believe that it would be a good step to allow consecutive cabotage in the United States. It would force the traditionally complacent airlines to step up their game and keep the “cutting edge” airlines on their toes. Competition references not only foreign airlines, but also substitutes like high-speed railways and other new technologies that will speed up travel.

Commented [TK1]: Order reference, does it still apply today

Commented [TK2]: do you have data supporting this?

Commented [TK3]: Sentence mechanics

Commented [TK4]: do you have a reference supporting this idea?

Frankly, this answer very thin. You do not provide a great deal of information that might be used to support your recommendations. You have not used any appreciable data that could make a comparison between current conditions and what it is you propose. I would’ve expected more out of a graduating senior.

Example – Meets Expectations

Now, switching topics, looking at aviation sustainability and why it matters. As it stands aviation is not sustainable, due to the large number of side effects it has on local areas, and the environment as a whole (Hoover, 2018). The only reason aviation has been as large as it is currently, is because of the rewards of aviation outweigh its current impact.

Commented [TK5]: I appreciate the reference from Prof. Hoover, however I don't see where you have accompanied the statement with any meaningful data

Commented [TK6]: you provide nothing supporting this statement. Is it just an observation?

Aviation's major impact to the environment stem mostly from emissions or pollutions and noise. Looking first at emission and pollutions, the aviation industry as a whole is only responsible for roughly three to five percent of all greenhouse gas emissions. However, in that small percent is a very damaging mixture of substances. The emissions from an airliner, flying at cruising altitudes, roughly 40,000ft, is producing emissions that are ten times more toxic to the atmosphere than those emitted from the surface (Hoover, 2018). This does not even include the pollution that comes from the runoff of harsh chemicals in the industry, such as the glycol mix that is used to deice aircraft on the ramp. This mixture soaks into the ground and can even find its way into the water used every day by the general public (Kelly, 2018). Noise is the other great contributor to the effects on the local environment. There is no getting around how loud aircraft are, even small general aviation propeller driven aircraft are considered loud by the general public. This can cause disruptions in the local community during the night hours and, if busy enough, can disrupt the public during the day.

Many of the ways aviation is handling these problems is the best it can do right now, but none of these are permanent solutions. In terms of emissions, the best the industry can do right now is biofuels, helping to clean up the current engines. However, the emission are still getting into the atmosphere, so the key is to get the movement toward aviation sustainability in emissions initiated. The sustainability movement has seen a bit of a stall since the 1980s and this needs to be picked up again if aviation as we know it, is to survive (Kelly, 2018). Looking at noise pollution, the current fixes range from operations restrictions, to different engine designs. Ideally the aviation industry needs to communicate both with the engineers and aircraft designers, and the people who ~~actually~~ operate the aircraft to develop a medium between design of equipment and airport infrastructure management.

~~All of~~ these ~~are~~ decisions ~~made are those that~~ must be made by an aviation professional in today's industry.

Commented [TK7]: You need a reference here

Commented [TK8]: good, this is the type of data I'm talking about

Commented [TK9]: you should support this argument with data. How loud is it? Is it within legal requirements?

Commented [TK10]: You need a reference here

Commented [TK11]: you really need to work on your sentence mechanics

Example – Meets Expectations

To ensure commercial aviation remains sustainable airlines and airports should focus more attention on the ways in which they impact the environment. Aviation activities contribute to 2.5% of the total carbon emissions we currently produce on this planet. This number is expected to rise to almost 25% by the year 2050. Further, operations of machines at high altitudes tend cause greater ratios of damage to the environment and the ozone than operations done on the ground level. The jet fuel that is typically used by aircraft is similar to that used by vehicles on the ground that is based in fossil fuels that have a very high carbon content, thus causing these peak levels of CO2 emissions.

Aircraft have slowly been improving in terms of fuel efficiency, however, it is not happening quickly enough to counteract the ever-growing demand for air travel. The aviation industry has looked at a few fuel alternatives, such as biofuels. Biofuels are often derived from organic matter such as plants like algae. These materials are much less toxic for the environment and would most likely assist with lowering CO2 emissions due to the decrease in emissions created during production and also during actual aircraft operations.

Biofuels are certainly at the top of the list of things that may greatly improve upon the current issues impacting the environment. Emissions cause a great deal of damage in many areas and should definitely be treated as a higher priority. There are certain limitations and cons that come with delving into the world of biofuels, however, with more research it seems that they could make a huge improvement on big issues such as global warming and ozone deterioration. Another way aviation could make advances towards greater sustainability is through certain taxes or expenses placed on either the customers or airlines for the amount of emissions they produce during operations. For this route, it would be essential that this issue of environmental damage be brought to the attention of the public in a way that emphasizes its great importance. The public often lives in the moment and does not

Commented [TK12]: good use of data, good interpretation

Commented [TK13]: you should include some references here to support your assertions

Commented [TK14]: show me the data!

Commented [TK15]: Try to be more formal when producing the technical document

look towards the future and how what they do now will impact the younger generations. Paying a few extra dollars today, in order to improve and preserve the environment for as long as possible, should hopefully be something supported by air travelers and a way in which aviation can be sustained for a while.

ASCI 4900 Senior Seminar

AABI Learning **Outcome D** – Make Professional and Ethical Decisions

Description of Assignment:

Performance Indicator	*Assignment Type*	*% Needs Improvement*	*% Meets Expectations*	*% Exceeds Expectations*	Mean
The student will demonstrate both professional and ethical decision making in course presentations, on course test and written assignments.	Narrative Descriptive Qualitative	100%	0%	0%	N/A

Example copies of Needs Improvement, Meets Expectations and Exceeds Expectation assignments follow

Summary:

Like Outcome B, Outcome D was assessed by combining the results of a single examination with the direct observation of discussions in class. I was disappointed in the lack of depth these students demonstrated regarding professionalism and the associated ethical decision-making process. I know SLU provides a strong undergraduate experience in professionalism and ethics and with the addition of Prof. Hoovers course I am convinced the breadth and depth of their experience is much greater than what is demonstrated in their short narratives. I blame myself for this as once again this was a single data point (except for classroom conversations). The assignment was also offered at the very end of the semester of the student's senior year and I suspect they were just trying to get the assignment completed.

Recommendations:

1. Assess Outcome D with more-specific requirements detailing the practice of professionalism and ethical decision-making (my one question was too broad)
2. Assess Outcome D across the semester rather than at a singular and specific data point. (Especially not at the end of the semester)
3. Include a requirement for students to provide both a degree of underlying theory as well as practical examples when speaking to professionalism and ethical decision-making.

Example – Needs Improvement

So, what does it mean to be an aviation professional, understanding ethical decision making? This means that no matter where an individual lies in the context of the company, the decisions made always take into account their social responsibility to the local community in everything from the appropriate disposal of aviation waste, to ensuring the layout of an airport is not abusing the housing in the area. The big question being, is an ethical decision more important than a good business decision? This really comes down to the fact that organizations include people, and every decision must consider them. An example would be a company with the decision of two suppliers, with one being a slightly cheaper option, and the other being a long time supplier with a steady track record that has been a fantastic business partner for years. The ethical aviation professional understands that having a connection with the people of an organization and the trust between businesses can far outweigh the pros of switching to the slightly cheaper supplier. A trusted supplier can work the changes that a company needs, whether that is a rush delivery, or a slight modification, understanding and working with the people will always be a good choice for the longevity of a company.

Commented [TK16]: far too casual for a technical paper

Commented [TK17]: what about the extended community?

Commented [TK18]: Are there other aspects to being ethical in aviation.

Example – Needs Improvement

Ethics is the application of one's personal beliefs and the impact of whatever that application may be. The notion of business ethics is a section of philosophy that deal with the nature of one's values and the standards by which a person's actions can be judged to be either right or wrong in a business setting. Ethics is also a social obligation to the community to be respectful, mindful, and conscious of others. Companies have a similar social responsibility that involves a company's moral obligations and the manner in which the organization makes its decisions regarding its employees and customers and anyone else they may come into contact with. Many companies have a code of ethics that they follow and emphasize within ~~all of~~all their decisions. Such a code must reflect and reinforce the values and principles of that organization.

Commented [TK19]: How about a reference?

Commented [TK20]: I like this, but they need to understand whether you are referencing someone else or is this your own definition.

To be a professional means that one must adhere to the standards of their position and do all that is necessary to benefit their company. However, this comes with certain limitations involving ethics and safety of employees and customers. A professional is not simply someone who has the skills necessary to perform the tasks required of their profession, but they must also possess certain skills and traits outside of their job description. Therefore, it is more about who a person is as a human being and what they value. One must be well rounded ~~in order to~~to make the most educated and sound decisions for their organization and their life in general. A person is considered a professional because they live by their values ~~on a daily basis~~daily and always represent their company, even outside of the workplace.

Although it is important to work towards improvement and advancement, the customers and employee's wellbeing should always be put first when it comes to being ethical in the workplace. Ethical decisions outweigh good business decisions when the ~~aforementioned people's~~people's well-being is involved. It is unethical to turn a blind eye to the safety of the people ~~for the purpose of~~for a profit. This kind of situation could be one in which a company's employees are encouraged to ignore some sort of structural or technological issue with an aircraft or in a situation involving making certain accommodations for people with disabilities or other similar circumstances. Safety should always be the number one concern of an organization, not only for the benefit of the customer, but also for the reputation of the company itself. It is honestly a good business decisions in itself to be ethical. Customer's will be more loyal to an airline that is known for its customer service and high safety standards than one that is profitable due to cutting corners and putting customers on the back burner.

Example: Needs Improvement

Ethics goes by many definitions, but the one that has resounded the most with me has been "Doing the right thing, even when nobody else is watching". To me this suggests altruism, and though it may be rare ~~in this day and age~~today, there is always a place for altruism in society, especially airlines.

Commented [TK21]: Again, is this yours or someone else's?

Commented [TK22]: I think this sounds nice but I'm not sure I agree with it

Commented [TK23]: this should be singular not plural

Commented [TK24]: avoid colloquialisms in technical writing

Professionalism also has many definitions, but my favorite is “Knowing what you are doing in you field of expertise and doing it right”. These definitions are in my own words rather than those of an eloquent author or dictionary, but they hold the same ideals as those definitions. A professional is an expert in their field and applies their knowledge to better the field in every way that they can. Over the course of this semester, name redacted, and I partook in the simulation in Professor Hoover’s Economics of Air Transportation class. We were assigned an airline to run in a simulation, we competed against classmates and even an airline that was run by the simulation itself. The end goal was to “win” by whatever means necessary, name redacted and I took the approach of “winning” by taking care of our customers and employees. To put it into a quote from John Hammond in Jurassic Park, “Spare no expense” was the idea behind ~~all of~~all our decisions when we ran our airline. We took the top level of maintenance for our aircraft, spent nearly triple the money on quality and training as our other airline competitors did, paid our employees well and gave them stock options, and we didn’t gauge the passengers for our flights. We were not the cheapest, but the second cheapest and we gave them peanuts and soda on our flights to help ease their flight. The point of this anecdote was the lesson that name redacted and I learned at the end of the simulation when all of the airlines presented management audits. The other airlines struggled with keeping their employees happy, keeping their airplanes full, and maintaining a good public image. Name redacted and I were astounded by this because we never encountered any of these issues, we could only attribute the differences to our dedication to the people of our airline. While that may not have been the main goal or lesson to be taught in the simulation, Uncharted Airways executives (name redacted and I) learned that a price cannot be put on good customer service and a set of employees that want to be at their job and doing their job to the best of their abilities. We did not “win” by Professor Hoover’s standards, we placed second in the standings, but we won in my mind.

Commented [TK25]: whenever you quote someone you must provide a reference!

ASCI 4900 Senior Seminar

AABI Learning **Outcome G** – Assess Contemporary Issues

Description of Assignment:

Performance Indicator	*Assignment Type*	*% Needs Improvement*	*% Meets Expectations*	*% Exceeds Expectations*	Mean
The student will assess contemporary issues in presentations, on course test and on written assignments	Narrative Descriptive Qualitative	33%	66%	0%	N/A

Example copies of Needs Improvement, Meets Expectations and Exceeds Expectation assignments follow

Summary:

Two of the three students enrolled in ASCI did a fairly good job of assessing some of the contemporary issues facing aviation. Outcome G suffered from the same problem as other outcomes related to this course. That is, the assessment was completed by the instructor synthesizing classroom conversations with written feedback on a single examination. Without the benefit of the discussion rubric for which performance might be captured, the assessment process is woefully lacking in supporting documentation. Lesson learned. Overall, I believe the students in the class understood many of the contemporary issues facing aviation, however, their ability to describe and develop plans for mitigation were thin.

Recommendations:

1. Develop a rubric for measuring classroom discussions.
2. Include a more-comprehensive written assignment that goes beyond popular media by utilizing scholarly resources to become more familiar with contemporary issues.
3. Assess contemporary issues across the entire semester with both direct and indirect measurements.

Example – Needs Improvement

A big issue in aviation today is the airlines willingness to "back-up" their employees. What I mean by this is the airlines seem to be on the passenger's side instead of taking the side of their employees. My favorite quote in all of aviation is one by Herb Kelleher, founder and previous CEO of Southwest Airlines, he was asked "But aren't the customers always right?" "No, they are not," Kelleher snaps. "And I think that's one of the biggest betrayals of employees a boss can possibly commit. The customer is sometimes wrong. We don't carry those sorts of customers. We write to them and say, 'Fly somebody else. Don't abuse our people'" (Freiberg & Freiberg, 1996). By saying this, he gave his employees the back-up that they needed to do their job properly without fear of retribution for making a mistake or fear of a bad review by a customer. His philosophy in NUTS! was to make sure that the airline took care of as many customers as it could, and not pay too much attention to the 1% of customers that make a fuss and cause a scene. Sadly, after Herb gave up his position, Gary Kelly, the new CEO, did not take the same approach as Herb. Mr. Kelly focuses more on customer satisfaction as a whole, and as a result some of the good employees suffer as well as some of the good customers. Passengers on any American airline seem like they can get away with murder just by threatening to post videos on social media or write a bad review of an employee. This issue will take time and cooperation by the airlines to resolve, they need to get back to this ideology of Herb Kelleher and let the bad passengers weed themselves out of the system. It seems a rather aggressive approach, but the satisfaction of customers is low, and the happiness of employees is low as well when certain customers decide to make a scene over something miniscule and potentially ruin many people's experience of that airline.

I don't think you've provided a strong enough argument regarding customer service. I think the data would suggest that, although passengers might not poor customer service, they really tend to shop with their wallets.

Commented [TK26]: Technical writing should be done in the third person

Commented [TK27]: avoid colloquialisms in technical writing

Commented [TK28]: if business has improved because of a greater focus on the customer is Mr. Kelly mistaken?

Commented [TK29]: Avoid exaggerating

Example – Meets Expectations

One of the most significant issues related to professional aviation in today's world is the cost one faces while on the path to obtaining a pilot certificate, at any level. The expenses of flight lessons have increased from between $500 and $600 to anywhere between $15,000 and $20,000. This is clearly a large increase and has made flight training just simply a dream for many people. Again, this may be a contributing factor to the current pilot shortage problem the aviation industry is facing as older generations age out.

Not only has the cost of flying dramatically increased, the hours of flight time one must obtain to work for the airlines has also jumped over the years. It is now required for co-pilots to have 1,500 hours and for pilots to have 1,000 hours as a co-pilot. These numbers have increased from the previous requirement of only 250 hours needed for a co-pilot. Because of this, many people must work in very low paying jobs after graduating from flight school ~~in order to~~to log their hours and be eligible for higher paying jobs.

~~Often times~~Often people in school for aviation must take out copious amounts of loans ~~in order to~~to get through the expensive programs. ~~In order to~~To pay off these loans they must have a job that can help with that, however, these low paying entry jobs into aviation often do not provide nearly enough funds to combat this issue. Many times, people are forced to leave their entry level aviation jobs ~~in order to~~to find something higher paying that can actually help them pay off their loans and support themselves financially.

This issue of expenses deters many people from pursuing aviation as an actual lifelong profession. Clearly, this causes great issues for aviation in many areas. One area being flight

Commented [TK30]: very interesting, I certainly agree it's a big problem

Commented [TK31]: try to include some references that support your argument.

Commented [TK32]: Bad for the pilot but is it good for the passenger (in terms of safety?)

Commented [TK33]: Avoid triteness in your writing

Commented [TK34]: do you think this is still the case? It seems to me that regional airline pay has improved dramatically over the last few years.

instructing. Flight instructors often receive very little pay ~~for the amount of~~for work they do so it is not always a preferred path for those finishing up flight training. It is a great way for one to obtain hours, however, there are also other options that sometimes pay more and have better benefits.

Commented [TK35]: You should include what some of those "other" options are

Some ways these issues could be addressed is through scholarship programs or an improved pipeline system that assists pilot trainees on their path to the major airlines. One way this could be done is through a system in which an airline pays for the last hundred or so hours of flight time for a future employee in return for ~~some kind of contract~~ a contract with said person. This issue is significant to aviation professionals today because the pilot shortage will certainly have a large impact on many airline's sustainability in the very near future. Therefore, it is extremely important that this problem is recognized and addressed as soon as possible.

Commented [TK36]: when all those costs that you're talking about also be a significant burden for the carrier?

Example - Meets Expectations

Considering ~~all of~~all the above discussions, the most significant current issue for the aviation industry is the pilot shortage. This shortage is largely due to new regulations concerning hiring pilots, as well as the mandatory retirement age of 65. This shortage is the biggest issue because the rate commercial aviation is growing, there are not enough pilots to keep up with that progress. Then without pilots, there cannot be functioning airlines. The first hurdle is that of the current regulations requiring pilots to have 1500 flight hours before ~~be~~ being considered to receive an Airline Transport Pilot License required to serve as a pilot or co-pilot for a major air carrier. This is difficult because it takes ~~a~~ many years of flying to amass the needed hour requirement, and therefore there are more pilots leaving then entering the industry (Silk, 2017). The next is the mandatory retirement at 65 years old for all pilots. This regulation does not make much sense because there is no evidence saying that any piloting skills

Commented [TK37]: I agree, certainly the most significant short-term issue.

Commented [TK38]: I would include hiring practices as well

Commented [TK39]: watch your details and make sure you proofread

deteriorate rapidly at 65 years old (Kelly, 2018). Therefore, the industry releases thousands of perfectly ~~health~~ healthy pilots for no reason other than a regulation said to.

These to regulations are the primary causes for the drastic pilot shortage being seen in the aviation industry currently. My personal position is that of the required number of hours needs to be reduced, possibly not as far as the previous 250 hours, but somewhere in the middle that is still attainable in a reasonable period of time. Secondly, the age limit could be moved up to a more suitable age, where cognition and reactions are ~~actually seen~~seen to be affected, but more studies are needed for that decision. One other solution heard is that of drastically increasing the recruitment of other demographics, because theoretically the aviation industry is only pulling from roughly half of its pool of people. If other demographics were as represented as equally as white males, there would be plenty of pilots in the industry. Either way, this pilot shortage must be solved smartly if it is to keep pace with the rate at which the industry ~~as a whole is~~is moving.

Commented [TK40]: always write technical papers in third person

Performance Indicator Rubric

AABI Student Learning Outcome A: Apply Mathematics, Science and Applied Sciences to Aviation Related Disciplines

Course: ASCI 4900: Senior Seminar (SPS) Semester Taught: Spring 2018 Number of Students Scored: 8

Type of Student Work Used for Assessment* (e.g. Homework #4; Exam #2 problem 3; final project): Research paper

**Attach description of assignment used for assessment and samples of student work.*

Rating Scale / Performance Indicator	Needs Improvement	Meets Expectations	Exceeds Expectations
Identify specific facts of mathematics, science, and applied science needed for a given situation (What knowledge is required?)	Does not understand the connections between the mathematic or scientific concept and the problem.	Identifies key mathematical or scientific concept applicable to the problem.	Identifies the relevant facts of the mathematical or scientific concepts for the given problem.
Apply specific facts of mathematics, science, and applied science needed for a given situation (What application is required?)	Significant gaps in the application of the mathematic or scientific concept; calculations used to determine a solution to the problem are performed incorrectly.	Minor gaps in the application of the mathematic or scientific concept; calculations used to determine a solution to the problem are performed correctly.	Correctly applies the relevant facts of the mathematic or scientific concepts to the problem.

Description of Assignment: 8-10 page research paper exploring current aviation issue and the future implications (including various solutions, if applicable). Research should be drawn from at least 5 industry news sources, academic research publications, and material from previous courses.

Performance Indicator	Section of Audience Critique of Group Rubric	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Identify specific facts of mathematics, science, and applied science needed for a given situation (What knowledge is required?)	Research paper	12.5%	75%	12.5%
Apply specific facts of mathematics, science, and applied science needed for a given situation (What application is required?)	Research paper	12.5%	75%	12.5%

Recommendations: Include an assessment that addresses use of quantitative research methods. Include a line in the grading rubric for the research paper to involve more data and synthesis of data.

Attached: A research paper submitted at the end of the semester.

Performance Indicator Rubric

AABI Student Learning Outcome B: Analyze and Interpret Data

Course: ASCI 4900: Senior Seminar (SPS) Semester Taught: Spring 18 Number of Students Scored: 8

Type of Student Work Used for Assessment* (e.g. Homework #4; Exam #2 problem 3; final project): Written assignment, research paper
**Attach description of assignment used for assessment and samples of student work.*

Rating Scale / Performance Indicator	Needs Improvement	Meets Expectations	Exceeds Expectations
Gather and document data	No systematic plan of data collection; data collection is disorganized, even random, and incomplete; data are poorly documented	Develops a simplistic plan of data collection; does not understand the scope of study; data collected are not well-documented, units are missing, or some measurements are incorrectly recorded.	Formulates a plan of data collection to attain a stated objective; carefully documents data collected.
Analyze and interpret data	Inadequate analysis and incorrect interpretation of the data is exhibited.	Adequately analyzes and interprets the data.	Comprehensively and objectively analyzes and synthesizes the data.
Report on findings and conclusions	An incomplete and/or inaccurate conclusion of the data analysis is reported.	Logically reports the findings and presents a possible conclusion of the data analysis.	Comprehensively reports the findings and presents a coherent conclusion of the data analysis.

Description of Assignment: 8-10 page research paper exploring current aviation issue and the future implications (including various solutions, if applicable). Research should be drawn from at least 5 industry news sources, academic research publications, and material from previous courses. In the weeks leading up to the final paper, students prepared an outline for their research, identifying their sources of data and began interpreting their research.

Performance Indicator	Section of Audience Critique of Group Rubric	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Gather and document data	Research paper outline	12.5%	75%	12.5%
Analyze and interpret data	Research paper	12.5%	75%	12.5%
Report on findings and conclusions	Research paper	12.5%	87.5%	---

Recommendations: Include an assessment that addresses use of quantitative research methods. Include a line in the grading rubric for the research paper to involve more data and synthesis of data.

Attached: A paper outline and research paper submitted at the end of the semester.

Performance Indicator Rubric

AABI Student Learning Outcome D: Make Professional and Ethical Decisions

Course: ASCI 4900: Senior Seminar (SPS) Semester Taught: Spring 2018 Number of Students Scored: 8

Type of Student Work Used for Assessment* (e.g. Homework #4; Exam #2 problem 3; final project): Discussion board posts

**Attach description of assignment used for assessment and samples of student work.*

Rating Scale / Performance Indicator	Needs Improvement	Meets Expectations	Exceeds Expectations
Identifies ethical problem	No dilemma identified/ problem identified not related to ethical dilemma.	Has some sense of basic ethical issues, but does not identify all relevant aspects of the ethical dilemma.	Concisely identifies ethical dilemma and demonstrates a complete grasp of the ethical points of a given situation.
Identifies ethical principles involved	Unable to identify ethical principles or identifies inaccurate principles.	Incomplete identification of ethical principles involved.	Clearly delineates the ethical principles involved.
Decide on the proper ethical action and be prepared to deal with opposing arguments	Analysis was not carried out sufficiently and is fundamentally flawed; solution may be trivial or illogical.	Solution and ethical analysis is logical and clear, but does not show great reflection or insight; the analysis may be superficial at some level.	Solution and ethical analysis is logical and clearly presented at a level that reflects extensive reflection and insight.

Description of Assignment: Students responded to discussion board questions after reading material on ethical decision making in the aviation industry. They also responded to one another and engaged in a dialogue about application of the various ethical decision making models in their own professional experience.

Performance Indicator	Section of Audience Critique of Group Rubric	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Identifies ethical problem	Week 3 Discussion board question	12.5%	87.5%	---
Identifies ethical principles involved	Week 3 Discussion board questions	25%	75%	---
Decide on the proper ethical action and be prepared to deal with opposing arguments	Week 3 Discussion board questions	25%	75%	---

Recommendation: Present students with more opposing view points to their thoughts. Grade on and provide a rubric for the quality of responses.

Attached: Excerpt from Week 3 discussion board module.

Week 3 Prompt

COLLAPSE

1. What would you include in a Code of Ethics for your current work position?

2. Define ethical behavior. Define professionalism. Choose an aviation-related job and describe the character traits that would be described as 'professional' rather than 'unprofessional.'

3. If an organization is directing an employee to behave ethically, is it still ethical behavior? Does ethical behavior need to be an individual choice? Does it matter?

4. A focus of airlines—and many large corporations—is Corporate Social Responsibility (CSR). Is there a similar focus in the military?

5. In the article "Corporate Social Responsibility in Aviation," Phillips compares the arguments for and against CSR (page 71). Is it actually an effort to go above and beyond turning a profit or is it just another marketing strategy? What is your position on CSR?

Week 3 Discussion

COLLAPSE

My current work position has a very well established Code of Ethics covered by Air Force Instruction 1-1.2.3 Military Ethics. This AFI how members should act in professional and personal dealings. It is based on 5 CFR 2635.101 which covers principles of any government employee such as not having conflicts of interest, not accepting gifts from people or agencies that have a vested interest, being honest in all matters, and many other topics. The ones that I feel are most important is filling the role of a wingman, that is looking out for each other and taking care of your fellow Airmen, adhering to all applicable laws regarding equal opportunity, and performing your duty to the best of your ability. The Core Values encapsulate the spirit of the Code of Ethics in a succinct way: Integrity First, Service Before Self, Excellence in All We Do. Keeping those three values in the foremost part of your mind will help to keep you on a path to making ethical choices.

Ethical behavior is behaving in a way that promotes what is generally accepted as good behavior. Being honest, promoting fairness and equality, and respecting individuals are all traits of ethical behavior. Professionalism is the realization that the individual represents the organization and should be acting in line with the values of that organization's ethical policies. For a maintenance professional, professionalism means performing tasks in compliance with all applicable guidance, and to the best of one's ability to ensure the safety and integrity of the aircraft being repaired.

Organizations are responsible for setting the standard for ethical behavior for employees. As such, they are ultimately responsible for the behavior of their employees. The individual always needs to make the correct choice when it comes to ethics and to fall in line with the policies set by the organization.

From personal experience, there is a lot of community outreach in the military. The relationship between a military installation and the local community can be touchy considering aircraft takeoffs and landings, exercises, and other activities that may effect the locals around the base. At Whiteman AFB, there are plenty of volunteer opportunities to help out with local events, bolstering local businesses, sending letters of thanks to those that support the military in the community, and programs that allow people to come and tour the aircraft and participate in on-base events.

I don't think that CSR is a bad things. Any social responsibility programs, whether for positive PR, personal gain, or actual generosity and compassion, are a good thing. Helping people and participating as an active member of the community is a positive trait for an organization to have. The companies that hold the put the bottom line before everything else can create a negative image which can hurt the company in the long run. CSR creates an opportunity to humanize an organization and give it a public face that helps people to trust the organization

Grade: 10/10

Performance Indicator Rubric

AABI Student Learning Outcome G: Assess Contemporary Issues

Course: ASCI 4900: Senior Seminar (SPS) Semester Taught: Spring 2018 Number of Students Scored: 8

Type of Student Work Used for Assessment* (e.g. Homework #4; Exam #2 problem 3; final project): Written homework #7

**Attach description of assignment used for assessment and samples of student work.*

Rating Scale / Performance Indicator	Needs Improvement	Meets Expectations	Exceeds Expectations
Identify contemporary issues related to the aviation industry.	When identifying contemporary aviation issues, important facts and details are missing.	Prioritizes contemporary aviation issues; ignores some less significant, yet relevant issues.	Effectively prioritizes contemporary aviation issues, including subtle details; does not include unrelated contemporary issues.
Recognize potential solutions.	Shows some understanding of contemporary aviation issues; provides some explanations of potential solutions but important facts are missing.	Shows adequate understanding of contemporary aviation issues; provides adequate explanation of potential solutions; missing the explanation of minor facts.	Shows in-depth understanding of contemporary aviation issues; provides in-depth explanation of potential solutions.

Description of Assignment: The student assessment consisted of weekly written assignments challenging students to identify current issues of the aviation industry, then research and identify potential solutions or outcomes, summarized in a one page paper.

Performance Indicator	Section of Audience Critique of Group Rubric	% Needs Improvement	% Meets Expectations	% Exceeds Expectations
Identify contemporary issues related to the aviation industry.	Week 7 written assignment	---	100%	---
Recognize potential solutions.	Week 7 written assignment	25%	75%	---

Recommendations: In the future, challenge students to critically think about the consequences of the current industry challenges. More interaction (feedback on paper, opportunities for students to re-submit assignments) after the assignment is completed may encourage that thinking.

Attached: A student's written assignment identifying a current problem in the industry and solution. The paper scored 10/10.

Aviation Sustainability
May 6, 2018

Within 20 years we anticipate a substantial increase in traffic. Nearly doubling to over 7.8 billion passengers per year (Gill, 2018). Such an expansive growth in passenger travel will have a positive ripple effect on the economy. However, sustainability and the carbon footprint are large concerns in the aviation industry. The aviation industry is the fastest growing cause of global warming (iflscience). Sustainability has a number of key fixes needed for resolution stemming from air traffic control to the most obvious, a new fuel source. The rapid advances in technology and amazing potential of our current generations make a carbon free and sustainable aviation culture possible, we only need the will to continue to aggressively pursue our goals.

Often overlooked in terms of sustainability and emissions is the air traffic system that dictates routes and altitudes. Due to congestion near airports or traffic on airways, air traffic control often reroutes, descends, or instructs aircraft to hold while waiting for approach. The common phrase in the aviation world for holding is "burning holes in the sky". This has some truth to it when considering the compounding amount of additional fuel burnt by keeping these jets in the air. A steeper, continuous decent profile will aid in the fuel burnt from altitude through landing. Currently, aircraft are instructed to descend down in steps. When doing this the pilot must add power to arrest the descent rate and continue level flight, thus burning more fuel. With the increased technology of navigational aids and systems on the aircraft we will hopefully see more direct IFR routing to cut back on the time an aircraft is in the air.

An environmentally safe and sustainable fuel source is the largest obstacle to overcome in the battle of global warming and aviation sustainability. The Director General and CEO of IATA, Alexandre de Juniac is adamant that we will never use a replacement fuel that disrupts the ecological balance of the planet or depletes natural resources (Gill, 2018). Sustainable aviation fuels that are currently being tested and implemented produce up to 80% less CO2 compared to conventional jet fuel. These fuels are even being made from domestic waste (Gill, 2018). Another possibility for biofuel is one made largely from sugarcane. This biofuel is clean growing and sustainable as it can be grown in areas unsuitable for traditional agriculture, thus alleviating the potential competition with food production (iflscience).

Although it seems very promising that we have the technology and successful test flights with clean burning biofuel, we still have many hurtles as a culture to face in this fight for sustainability and carbon reduction. The desire for biofuel is undoubtedly there but the demand is low. The supply closely follows the demand curve, which leads to a minimal, high priced supply. With the tight profit margins in the airline business this is detrimental to the growth toward solely using biofuels.

To alleviate this issue and continue advancements, government intervention is a necessity. Incentives to biofuel producers, investors, and the airlines would create a snowball affect that would lead to the successful implementation of biofuels and achieving our carbon reduction goals. The continued will and desire to pursue these goals will lead to a healthier economy and planet.

Reference List

Gill, Michael. (April 16, 2018). Sustainable aviation fuels, the next frontier for air transport. *Open Access News*. Retrieved from https://www.openaccessgovernment.org/sustainable-aviation-fuels-the-next-frontier-for-air-transport/44547/

The Future of Aviation Fuel Could Be Sweet. *IFLScience!* Retrieved from http://www.iflscience.com/technology/future-aviation-fuel-could-be-sweet/

Criteria	Inadequate	Adequate	Above Average	Exemplary
Level of Content	Most ideas are underdeveloped or unoriginal. Lack of supporting evidence that student analyzed the material.	Content indicates thinking and reasoning with original thought on a few ideas.	Content indicates original thinking and develops ideas with sufficient evidence.	Strong synthesis of ideas, in-depth analysis of current event and relevance to related academic material. Original thought evident.
Development/ Completeness	Lacks cohesive structure. Fails to respond coherently to the assignment.	Answers questions of the assignment. Utilizes sources to support argument.	Main points are laid out logically. Answers questions of the assignment in depth, with some quality sources.	High degree of critical thinking is evident. Main points are well developed and supported by quality sources.
Organization	Writing lacks logical organization. Lacks unity of ideas. Serious errors.	Writing is coherent and logically organized. Some points may stray from topic. Transitions not used between thoughts.	Writing is coherent and organized, using transitions between ideas and paragraphs. Ideas are unified.	Writing evidences high degree of attention to logic and reasoning of points. Unity leads reader to the conclusion. Stirs thought.
Grammar/ Mechanics	Numerous grammatical errors. Causes distraction to reader.	Some grammatical errors, minor distraction to reader.	Few grammatical errors, does not distract reader.	Free of grammatical/mechanical errors.
Style	Ineffective writing. Does not engage reader or flow cohesively in its writing style. Lacks complex sentences and varied language.	Writing conveys main points and arguments. Some vocabulary is engaging and some sentences are varied styles.	Sentences flow and writing is readable. Writing style is varied and engages the reader.	Superb readability. Writing style is engaging, cohesive, and vivid. Sentences are varied and demonstrates strong writing style.
Format	Does not follow APA style formatting.	Contains few errors from APA style formatting.	Contains one-two errors from APA style formatting.	Follows APA style perfectly.

I enjoyed reading your paper, & it's evident you've done thorough research on recent accidents in rotorcraft. For future papers, revisit APA-formatting, & watch your writing for run-on sentences. I'd be interested to see if training programs will emphasize your desire to highlight individual readiness in the cockpit.

Criteria	Inadequate	Adequate	Above Average	Exemplary
Level of Content	Most ideas are underdeveloped or unoriginal. Lack of supporting evidence that student analyzed the material.	Content indicates thinking and reasoning with original thought on a few ideas.	Content indicates original thinking and develops ideas with sufficient evidence.	Strong synthesis of ideas, in-depth analysis of current event and relevance to related academic material. Original thought evident.
Development/ Completeness	Lacks cohesive structure. Fails to respond coherently to the assignment.	Answers questions of the assignment. Utilizes sources to support argument.	Main points are laid out logically. Answers questions of the assignment in depth, with some quality sources.	High degree of critical thinking is evident. Main points are well developed and supported by quality sources.
Organization	Writing lacks logical organization. Lacks unity of ideas. Serious errors.	Writing is coherent and logically organized. Some points may stray from topic. Transitions not used between thoughts.	Writing is coherent and organized, using transitions between ideas and paragraphs. Ideas are unified.	Writing evidences high degree of attention to logic and reasoning of points. Unity leads reader to the conclusion. Stirs thought.
Grammar/ Mechanics	Numerous grammatical errors. Causes distraction to reader.	Some grammatical errors, minor distraction to reader.	Few grammatical errors, does not distract reader.	Free of grammatical/mechanical errors.
Style	Ineffective writing. Does not engage reader or flow cohesively in its writing style. Lacks complex sentences and varied language.	Writing conveys main points and arguments. Some vocabulary is engaging and some sentences are varied styles.	Sentences flow and writing is readable. Writing style is varied and engages the reader.	Superb readability. Writing style is engaging, cohesive, and vivid. Sentences are varied and demonstrates strong writing style.
Format	Does not follow APA style formatting.	Contains few errors from APA style formatting.	Contains one-two errors from APA style formatting.	Follows APA style perfectly.

I enjoyed reading your paper, & it's evident you've done thorough research on recent accidents in rotorcraft. For future papers, revisit APA-formatting, & watch your writing for run-on sentences. I'd be interested to see if training programs will emphasize your desire to highlight individual readiness in the cockpit.

Indirect Measures of Assessment

Student Surveys

Department Course Evaluation Report for Aviation Science - Fall 2017

Parks College of Engineering, Aviation and Technology Course Evaluations

Total Enrollment 528
Responses Received 190
Response Rate 35.98%

Creation Date Tue, Jan 02, 2018

Intrepretation Guidelines

This report includes the aggregate of all student responses to Likert scale or multiple choice questions for all courses taught within a department in the semester.

[QTitle] (Aggregate)

Options	Count
to meet a requirement of an undergraduate academic major or minor	165
to meet a requirement of a graduate/professional program or minor	31
to meet an undergraduate core/general education requirement	22
as an elective (not part of any major/minor/program or core/general education requirement)	1
Please explain:	0

Questions about the Student (Aggregate)

	Strongly Agree	Agree	Disagree	Strongly Disagree	Average	Total Responses
I believe my academic background was sufficient to succeed in this course.	107	71	9	2	3.50	189
The subject matter of this course was of interest to me before the course began.	122	53	12	2	3.56	189

Questions about the Student (Breakdown by Course)

I believe my academic background was sufficient to succeed in this course.

	Strongly Agree	Agree	Disagree	Strongly Disagree	Average	Total Responses
Overall	107	71	9	2	3.50	189
FL2017 ASCI-1010-01-Professional Orientation	11	7	2	0	3.45	20
FL2017 ASCI-1300-01-Aviation Weather	7	7	3	2	3.00	19
FL2017 ASCI-1300-10-Aviation Weather	7	8	0	0	3.47	15
FL2017 ASCI-2200-01-Concepts in Aerodynamics	4	5	1	0	3.30	10
FL2017 ASCI-3010-01-Jet Transport Systems I	4	1	0	0	3.80	5
FL2017 ASCI-4012-01-Jet Flying Tech I Lect	5	2	0	0	3.71	7
FL2017 ASCI-4050-01-Human Factors	3	4	0	0	3.43	7
FL2017 ASCI-4050-10-Human Factors	9	4	0	0	3.69	13
FL2017 ASCI-4250-01-Prof Ethics and Standards	8	4	0	0	3.67	12
FL2017 ASCI-4450-01-Aviation Law	5	3	1	0	3.44	9
FL2017 ASCI-4450-10-Aviation Law	6	6	0	0	3.50	12
FL2017 ASCI-5220-10-Aviation Safety Programs	5	2	0	0	3.71	7
FL2017 ASCI-5460-02-Qualitative Data Analysis	6	2	0	0	3.75	8
FL2017 FSCI-1150-01-Flight 1	8	4	1	0	3.54	13
FL2017 FSCI-1250-01-Basic Flight Foundations	11	5	1	0	3.59	17
FL2017 FSCI-2150-01-Flight 3	4	2	0	0	3.67	6
FL2017 FSCI-2250-01-Instrument Flight Foundations	4	5	0	0	3.44	9

The subject matter of this course was of interest to me before the course began.

	Strongly Agree	Agree	Disagree	Strongly Disagree	Average	Total Responses
Overall	122	53	12	2	3.56	189
FL2017 ASCI-1010-01-Professional Orientation	14	4	2	0	3.60	20
FL2017 ASCI-1300-01-Aviation Weather	7	7	4	1	3.05	19
FL2017 ASCI-1300-10-Aviation Weather	7	6	2	0	3.33	15
FL2017 ASCI-2200-01-Concepts in Aerodynamics	6	4	0	0	3.60	10
FL2017 ASCI-3010-01-Jet Transport Systems I	4	1	0	0	3.80	5
FL2017 ASCI-4012-01-Jet Flying Tech I Lect	6	1	0	0	3.86	7
FL2017 ASCI-4050-01-Human Factors	4	3	0	0	3.57	7
FL2017 ASCI-4050-10-Human Factors	9	3	1	0	3.62	13
FL2017 ASCI-4250-01-Prof Ethics and Standards	5	6	1	0	3.33	12
FL2017 ASCI-4450-01-Aviation Law	5	4	0	0	3.56	9
FL2017 ASCI-4450-10-Aviation Law	6	4	1	1	3.25	12
FL2017 ASCI-5220-10-Aviation Safety Programs	6	1	0	0	3.86	7
FL2017 ASCI-5460-02-Qualitative Data Analysis	6	1	1	0	3.63	8
FL2017 FSCI-1150-01-Flight 1	10	3	0	0	3.77	13
FL2017 FSCI-1250-01-Basic Flight Foundations	15	2	0	0	3.88	17
FL2017 FSCI-2150-01-Flight 3	6	0	0	0	4.00	6
FL2017 FSCI-2250-01-Instrument Flight Foundations	6	3	0	0	3.67	9

Questions about the Student (Aggregate)

	Always	Often	Sometimes	Never	Average	Total Responses
I came to each class session prepared.	111	61	17	0	3.50	189
I invested enough time and energy to meet the course requirements.	110	63	15	1	3.49	189
I asked the instructor for help when I needed it.	106	40	31	12	3.27	189

Questions about the Student (Breakdown by Course)

I came to each class session prepared.

	Always	Often	Sometimes	Never	Average	Total Responses
Overall	111	61	17	0	3.50	189
FL2017 ASCI-1010-01-Professional Orientation	12	8	0	0	3.60	20
FL2017 ASCI-1300-01-Aviation Weather	8	7	4	0	3.21	19
FL2017 ASCI-1300-10-Aviation Weather	9	6	0	0	3.60	15
FL2017 ASCI-2200-01-Concepts in Aerodynamics	6	2	2	0	3.40	10
FL2017 ASCI-3010-01-Jet Transport Systems I	1	3	1	0	3.00	5
FL2017 ASCI-4012-01-Jet Flying Tech I Lect	2	3	2	0	3.00	7
FL2017 ASCI-4050-01-Human Factors	3	2	2	0	3.14	7
FL2017 ASCI-4050-10-Human Factors	9	4	0	0	3.69	13
FL2017 ASCI-4250-01-Prof Ethics and Standards	3	6	3	0	3.00	12
FL2017 ASCI-4450-01-Aviation Law	4	3	2	0	3.22	9
FL2017 ASCI-4450-10-Aviation Law	8	4	0	0	3.67	12
FL2017 ASCI-5220-10-Aviation Safety Programs	6	1	0	0	3.86	7
FL2017 ASCI-5460-02-Qualitative Data Analysis	7	1	0	0	3.88	8
FL2017 FSCI-1150-01-Flight 1	10	3	0	0	3.77	13
FL2017 FSCI-1250-01-Basic Flight Foundations	15	2	0	0	3.88	17
FL2017 FSCI-2150-01-Flight 3	3	2	1	0	3.33	6
FL2017 FSCI-2250-01-Instrument Flight Foundations	5	4	0	0	3.56	9

I invested enough time and energy to meet the course requirements.

	Always	Often	Sometimes	Never	Average	Total Responses
Overall	110	63	15	1	3.49	189
FL2017 ASCI-1010-01-Professional Orientation	12	7	1	0	3.55	20
FL2017 ASCI-1300-01-Aviation Weather	7	10	1	1	3.21	19
FL2017 ASCI-1300-10-Aviation Weather	9	4	2	0	3.47	15
FL2017 ASCI-2200-01-Concepts in Aerodynamics	3	6	1	0	3.20	10
FL2017 ASCI-3010-01-Jet Transport Systems I	1	2	2	0	2.80	5
FL2017 ASCI-4012-01-Jet Flying Tech I Lect	1	6	0	0	3.14	7
FL2017 ASCI-4050-01-Human Factors	5	0	2	0	3.43	7
FL2017 ASCI-4050-10-Human Factors	8	4	1	0	3.54	13
FL2017 ASCI-4250-01-Prof Ethics and Standards	5	4	3	0	3.17	12

	Always	Often	Sometimes	Never	Average	Total Responses
FL2017 ASCI-4450-01-Aviation Law	5	3	1	0	3.44	9
FL2017 ASCI-4450-10-Aviation Law	8	4	0	0	3.67	12
FL2017 ASCI-5220-10-Aviation Safety Programs	7	0	0	0	4.00	7
FL2017 ASCI-5460-02-Qualitative Data Analysis	7	1	0	0	3.88	8
FL2017 FSCI-1150-01-Flight 1	9	4	0	0	3.69	13
FL2017 FSCI-1250-01-Basic Flight Foundations	16	1	0	0	3.94	17
FL2017 FSCI-2150-01-Flight 3	3	3	0	0	3.50	6
FL2017 FSCI-2250-01-Instrument Flight Foundations	4	4	1	0	3.33	9

I asked the instructor for help when I needed it.

	Always	Often	Sometimes	Never	Average	Total Responses
Overall	106	40	31	12	3.27	189
FL2017 ASCI-1010-01-Professional Orientation	9	3	6	2	2.95	20
FL2017 ASCI-1300-01-Aviation Weather	7	5	5	2	2.89	19
FL2017 ASCI-1300-10-Aviation Weather	12	1	2	0	3.67	15
FL2017 ASCI-2200-01-Concepts in Aerodynamics	3	5	2	0	3.10	10
FL2017 ASCI-3010-01-Jet Transport Systems I	2	0	3	0	2.80	5
FL2017 ASCI-4012-01-Jet Flying Tech I Lect	3	3	1	0	3.29	7
FL2017 ASCI-4050-01-Human Factors	2	1	1	3	2.29	7
FL2017 ASCI-4050-10-Human Factors	10	1	2	0	3.62	13
FL2017 ASCI-4250-01-Prof Ethics and Standards	5	2	3	2	2.83	12
FL2017 ASCI-4450-01-Aviation Law	6	1	1	1	3.33	9
FL2017 ASCI-4450-10-Aviation Law	9	2	0	1	3.58	12
FL2017 ASCI-5220-10-Aviation Safety Programs	5	2	0	0	3.71	7
FL2017 ASCI-5460-02-Qualitative Data Analysis	4	1	3	0	3.13	8
FL2017 FSCI-1150-01-Flight 1	9	4	0	0	3.69	13
FL2017 FSCI-1250-01-Basic Flight Foundations	11	5	1	0	3.59	17
FL2017 FSCI-2150-01-Flight 3	4	2	0	0	3.67	6
FL2017 FSCI-2250-01-Instrument Flight Foundations	5	2	1	1	3.22	9

Questions about the Course (Aggregate)

	Strongly Agree	Agree	Disagree	Strongly Disagree	Average	Total Responses
Expected learning outcomes for the course were clearly communicated.	130	51	7	1	3.64	189
Course requirements (attendance, participation, readings, assignments, exams, etc.) were clearly communicated.	132	42	12	3	3.60	189
The course design (timing of and relationships among readings, discussions, labs, assignments, exams, etc.) supported my achievement of the course learning outcomes.	121	55	11	2	3.56	189
The course required me to apply what I learned in new ways.	125	47	15	2	3.56	189
The course challenged me intellectually.	128	51	8	2	3.61	189
Overall, I think this course was excellent.	107	60	19	3	3.43	189

Questions about the Course (Breakdown by Course)

Expected learning outcomes for the course were clearly communicated.

	Strongly Agree	Agree	Disagree	Strongly Disagree	Average	Total Responses
Overall	130	51	7	1	3.64	189
FL2017 ASCI-1010-01-Professional Orientation	15	4	1	0	3.70	20
FL2017 ASCI-1300-01-Aviation Weather	10	8	1	0	3.47	19
FL2017 ASCI-1300-10-Aviation Weather	11	4	0	0	3.73	15
FL2017 ASCI-2200-01-Concepts in Aerodynamics	5	5	0	0	3.50	10
FL2017 ASCI-3010-01-Jet Transport Systems I	4	1	0	0	3.80	5
FL2017 ASCI-4012-01-Jet Flying Tech I Lect	6	1	0	0	3.86	7
FL2017 ASCI-4050-01-Human Factors	5	2	0	0	3.71	7
FL2017 ASCI-4050-10-Human Factors	8	3	2	0	3.46	13
FL2017 ASCI-4250-01-Prof Ethics and Standards	8	3	1	0	3.58	12
FL2017 ASCI-4450-01-Aviation Law	7	2	0	0	3.78	9
FL2017 ASCI-4450-10-Aviation Law	10	1	1	0	3.75	12
FL2017 ASCI-5220-10-Aviation Safety Programs	5	2	0	0	3.71	7
FL2017 ASCI-5460-02-Qualitative Data Analysis	2	4	1	1	2.88	8
FL2017 FSCI-1150-01-Flight 1	10	3	0	0	3.77	13
FL2017 FSCI-1250-01-Basic Flight Foundations	15	2	0	0	3.88	17
FL2017 FSCI-2150-01-Flight 3	3	3	0	0	3.50	6
FL2017 FSCI-2250-01-Instrument Flight Foundations	6	3	0	0	3.67	9

Course requirements (attendance, participation, readings, assignments, exams, etc.) were clearly communicated.

	Strongly Agree	Agree	Disagree	Strongly Disagree	Average	Total Responses
Overall	132	42	12	3	3.60	189
FL2017 ASCI-1010-01-Professional Orientation	16	3	1	0	3.75	20
FL2017 ASCI-1300-01-Aviation Weather	9	7	2	1	3.26	19

	Strongly Agree	Agree	Disagree	Strongly Disagree	Average	Total Responses
FL2017 ASCI-1300-10-Aviation Weather	12	3	0	0	3.80	15
FL2017 ASCI-2200-01-Concepts in Aerodynamics	5	5	0	0	3.50	10
FL2017 ASCI-3010-01-Jet Transport Systems I	3	2	0	0	3.60	5
FL2017 ASCI-4012-01-Jet Flying Tech I Lect	6	1	0	0	3.86	7
FL2017 ASCI-4050-01-Human Factors	5	2	0	0	3.71	7
FL2017 ASCI-4050-10-Human Factors	7	2	3	1	3.15	13
FL2017 ASCI-4250-01-Prof Ethics and Standards	9	2	1	0	3.67	12
FL2017 ASCI-4450-01-Aviation Law	6	2	1	0	3.56	9
FL2017 ASCI-4450-10-Aviation Law	10	1	1	0	3.75	12
FL2017 ASCI-5220-10-Aviation Safety Programs	4	3	0	0	3.57	7
FL2017 ASCI-5460-02-Qualitative Data Analysis	2	3	2	1	2.75	8
FL2017 FSCI-1150-01-Flight 1	11	2	0	0	3.85	13
FL2017 FSCI-1250-01-Basic Flight Foundations	16	1	0	0	3.94	17
FL2017 FSCI-2150-01-Flight 3	4	1	1	0	3.50	6
FL2017 FSCI-2250-01-Instrument Flight Foundations	7	2	0	0	3.78	9

The course design (timing of and relationships among readings, discussions, labs, assignments, exams, etc.) supported my achievement of the course learning outcomes.

	Strongly Agree	Agree	Disagree	Strongly Disagree	Average	Total Responses
Overall	121	55	11	2	3.56	189
FL2017 ASCI-1010-01-Professional Orientation	14	5	1	0	3.65	20
FL2017 ASCI-1300-01-Aviation Weather	7	9	3	0	3.21	19
FL2017 ASCI-1300-10-Aviation Weather	10	5	0	0	3.67	15
FL2017 ASCI-2200-01-Concepts in Aerodynamics	5	4	1	0	3.40	10
FL2017 ASCI-3010-01-Jet Transport Systems I	3	2	0	0	3.60	5
FL2017 ASCI-4012-01-Jet Flying Tech I Lect	4	3	0	0	3.57	7
FL2017 ASCI-4050-01-Human Factors	3	4	0	0	3.43	7
FL2017 ASCI-4050-10-Human Factors	8	1	4	0	3.31	13
FL2017 ASCI-4250-01-Prof Ethics and Standards	8	4	0	0	3.67	12
FL2017 ASCI-4450-01-Aviation Law	5	3	0	1	3.33	9
FL2017 ASCI-4450-10-Aviation Law	11	0	1	0	3.83	12
FL2017 ASCI-5220-10-Aviation Safety Programs	6	1	0	0	3.86	7
FL2017 ASCI-5460-02-Qualitative Data Analysis	3	3	1	1	3.00	8
FL2017 FSCI-1150-01-Flight 1	9	4	0	0	3.69	13
FL2017 FSCI-1250-01-Basic Flight Foundations	16	1	0	0	3.94	17
FL2017 FSCI-2150-01-Flight 3	4	2	0	0	3.67	6
FL2017 FSCI-2250-01-Instrument Flight Foundations	5	4	0	0	3.56	9

The course required me to apply what I learned in new ways.

	Strongly Agree	Agree	Disagree	Strongly Disagree	Average	Total Responses
Overall	125	47	15	2	3.56	189

	Strongly Agree	Agree	Disagree	Strongly Disagree	Average	Total Responses
FL2017 ASCI-1010-01-Professional Orientation	11	6	3	0	3.40	20
FL2017 ASCI-1300-01-Aviation Weather	6	10	2	1	3.11	19
FL2017 ASCI-1300-10-Aviation Weather	10	5	0	0	3.67	15
FL2017 ASCI-2200-01-Concepts in Aerodynamics	7	2	1	0	3.60	10
FL2017 ASCI-3010-01-Jet Transport Systems I	1	1	3	0	2.60	5
FL2017 ASCI-4012-01-Jet Flying Tech I Lect	6	1	0	0	3.86	7
FL2017 ASCI-4050-01-Human Factors	3	3	1	0	3.29	7
FL2017 ASCI-4050-10-Human Factors	9	1	3	0	3.46	13
FL2017 ASCI-4250-01-Prof Ethics and Standards	7	4	0	1	3.42	12
FL2017 ASCI-4450-01-Aviation Law	6	3	0	0	3.67	9
FL2017 ASCI-4450-10-Aviation Law	10	1	1	0	3.75	12
FL2017 ASCI-5220-10-Aviation Safety Programs	6	1	0	0	3.86	7
FL2017 ASCI-5460-02-Qualitative Data Analysis	5	2	1	0	3.50	8
FL2017 FSCI-1150-01-Flight 1	11	2	0	0	3.85	13
FL2017 FSCI-1250-01-Basic Flight Foundations	16	1	0	0	3.94	17
FL2017 FSCI-2150-01-Flight 3	4	2	0	0	3.67	6
FL2017 FSCI-2250-01-Instrument Flight Foundations	7	2	0	0	3.78	9

The course challenged me intellectually.

	Strongly Agree	Agree	Disagree	Strongly Disagree	Average	Total Responses
Overall	128	51	8	2	3.61	189
FL2017 ASCI-1010-01-Professional Orientation	10	6	3	1	3.25	20
FL2017 ASCI-1300-01-Aviation Weather	7	11	0	1	3.26	19
FL2017 ASCI-1300-10-Aviation Weather	9	6	0	0	3.60	15
FL2017 ASCI-2200-01-Concepts in Aerodynamics	9	1	0	0	3.90	10
FL2017 ASCI-3010-01-Jet Transport Systems I	0	3	2	0	2.60	5
FL2017 ASCI-4012-01-Jet Flying Tech I Lect	7	0	0	0	4.00	7
FL2017 ASCI-4050-01-Human Factors	4	3	0	0	3.57	7
FL2017 ASCI-4050-10-Human Factors	8	4	1	0	3.54	13
FL2017 ASCI-4250-01-Prof Ethics and Standards	9	3	0	0	3.75	12
FL2017 ASCI-4450-01-Aviation Law	7	1	1	0	3.67	9
FL2017 ASCI-4450-10-Aviation Law	10	2	0	0	3.83	12
FL2017 ASCI-5220-10-Aviation Safety Programs	5	2	0	0	3.71	7
FL2017 ASCI-5460-02-Qualitative Data Analysis	5	3	0	0	3.63	8
FL2017 FSCI-1150-01-Flight 1	10	3	0	0	3.77	13
FL2017 FSCI-1250-01-Basic Flight Foundations	15	1	1	0	3.82	17
FL2017 FSCI-2150-01-Flight 3	5	1	0	0	3.83	6
FL2017 FSCI-2250-01-Instrument Flight Foundations	8	1	0	0	3.89	9

Overall, I think this course was excellent.

	Strongly Agree	Agree	Disagree	Strongly Disagree	Average	Total Responses

	Strongly Agree	Agree	Disagree	Strongly Disagree	Average	Total Responses
Overall	107	60	19	3	3.43	189
FL2017 ASCI-1010-01-Professional Orientation	11	7	2	0	3.45	20
FL2017 ASCI-1300-01-Aviation Weather	6	7	5	1	2.95	19
FL2017 ASCI-1300-10-Aviation Weather	9	5	1	0	3.53	15
FL2017 ASCI-2200-01-Concepts in Aerodynamics	7	2	1	0	3.60	10
FL2017 ASCI-3010-01-Jet Transport Systems I	1	4	0	0	3.20	5
FL2017 ASCI-4012-01-Jet Flying Tech I Lect	3	3	1	0	3.29	7
FL2017 ASCI-4050-01-Human Factors	4	2	1	0	3.43	7
FL2017 ASCI-4050-10-Human Factors	8	1	3	1	3.23	13
FL2017 ASCI-4250-01-Prof Ethics and Standards	6	5	1	0	3.42	12
FL2017 ASCI-4450-01-Aviation Law	5	3	1	0	3.44	9
FL2017 ASCI-4450-10-Aviation Law	10	1	1	0	3.75	12
FL2017 ASCI-5220-10-Aviation Safety Programs	6	1	0	0	3.86	7
FL2017 ASCI-5460-02-Qualitative Data Analysis	1	4	2	1	2.63	8
FL2017 FSCI-1150-01-Flight 1	9	4	0	0	3.69	13
FL2017 FSCI-1250-01-Basic Flight Foundations	15	2	0	0	3.88	17
FL2017 FSCI-2150-01-Flight 3	2	4	0	0	3.33	6
FL2017 FSCI-2250-01-Instrument Flight Foundations	4	5	0	0	3.44	9

Questions about the Instructor: (Aggregate)

	Always	Often	Sometimes	Never	Average	Total Responses
The instructor communicated ideas and information clearly.	126	47	14	2	3.57	189
The instructor demonstrated enthusiasm for the subject matter.	155	24	9	1	3.76	189
The instructor provided feedback/critique that helped me with subsequent work in the course.	122	40	20	7	3.47	189
The instructor treated students with respect.	173	12	4	0	3.89	189
The instructor was available for assistance when needed.	142	33	13	1	3.67	189
Overall, I think this instructor was excellent.	138	35	13	3	3.63	189

Questions about the Instructor: (Breakdown by Course)

The instructor communicated ideas and information clearly.

	Always	Often	Sometimes	Never	Average	Total Responses
Overall	126	47	14	2	3.57	189
FL2017 ASCI-1010-01-Professional Orientation	14	5	1	0	3.65	20
FL2017 ASCI-1300-01-Aviation Weather	11	4	4	0	3.37	19
FL2017 ASCI-1300-10-Aviation Weather	12	2	0	1	3.67	15
FL2017 ASCI-2200-01-Concepts in Aerodynamics	8	2	0	0	3.80	10
FL2017 ASCI-3010-01-Jet Transport Systems I	3	2	0	0	3.60	5

	Always	Often	Sometimes	Never	Average	Total Responses
FL2017 ASCI-4012-01-Jet Flying Tech I Lect	4	3	0	0	3.57	7
FL2017 ASCI-4050-01-Human Factors	5	1	1	0	3.57	7
FL2017 ASCI-4050-10-Human Factors	6	4	2	1	3.15	13
FL2017 ASCI-4250-01-Prof Ethics and Standards	8	3	1	0	3.58	12
FL2017 ASCI-4450-01-Aviation Law	7	2	0	0	3.78	9
FL2017 ASCI-4450-10-Aviation Law	11	0	1	0	3.83	12
FL2017 ASCI-5220-10-Aviation Safety Programs	3	4	0	0	3.43	7
FL2017 ASCI-5460-02-Qualitative Data Analysis	2	3	3	0	2.88	8
FL2017 FSCI-1150-01-Flight 1	11	2	0	0	3.85	13
FL2017 FSCI-1250-01-Basic Flight Foundations	15	2	0	0	3.88	17
FL2017 FSCI-2150-01-Flight 3	3	3	0	0	3.50	6
FL2017 FSCI-2250-01-Instrument Flight Foundations	3	5	1	0	3.22	9

The instructor demonstrated enthusiasm for the subject matter.

	Always	Often	Sometimes	Never	Average	Total Responses
Overall	155	24	9	1	3.76	189
FL2017 ASCI-1010-01-Professional Orientation	16	4	0	0	3.80	20
FL2017 ASCI-1300-01-Aviation Weather	16	3	0	0	3.84	19
FL2017 ASCI-1300-10-Aviation Weather	12	2	1	0	3.73	15
FL2017 ASCI-2200-01-Concepts in Aerodynamics	9	1	0	0	3.90	10
FL2017 ASCI-3010-01-Jet Transport Systems I	3	0	2	0	3.20	5
FL2017 ASCI-4012-01-Jet Flying Tech I Lect	6	1	0	0	3.86	7
FL2017 ASCI-4050-01-Human Factors	6	1	0	0	3.86	7
FL2017 ASCI-4050-10-Human Factors	10	2	0	1	3.62	13
FL2017 ASCI-4250-01-Prof Ethics and Standards	11	1	0	0	3.92	12
FL2017 ASCI-4450-01-Aviation Law	9	0	0	0	4.00	9
FL2017 ASCI-4450-10-Aviation Law	10	1	1	0	3.75	12
FL2017 ASCI-5220-10-Aviation Safety Programs	7	0	0	0	4.00	7
FL2017 ASCI-5460-02-Qualitative Data Analysis	4	1	3	0	3.13	8
FL2017 FSCI-1150-01-Flight 1	11	2	0	0	3.85	13
FL2017 FSCI-1250-01-Basic Flight Foundations	14	2	1	0	3.76	17
FL2017 FSCI-2150-01-Flight 3	3	2	1	0	3.33	6
FL2017 FSCI-2250-01-Instrument Flight Foundations	8	1	0	0	3.89	9

The instructor provided feedback/critique that helped me with subsequent work in the course.

	Always	Often	Sometimes	Never	Average	Total Responses
Overall	122	40	20	7	3.47	189
FL2017 ASCI-1010-01-Professional Orientation	15	4	1	0	3.70	20
FL2017 ASCI-1300-01-Aviation Weather	12	3	1	3	3.26	19
FL2017 ASCI-1300-10-Aviation Weather	9	2	3	1	3.27	15
FL2017 ASCI-2200-01-Concepts in Aerodynamics	5	2	3	0	3.20	10

	Always	Often	Sometimes	Never	Average	Total Responses
FL2017 ASCI-3010-01-Jet Transport Systems I	3	1	1	0	3.40	5
FL2017 ASCI-4012-01-Jet Flying Tech I Lect	5	2	0	0	3.71	7
FL2017 ASCI-4050-01-Human Factors	4	1	2	0	3.29	7
FL2017 ASCI-4050-10-Human Factors	7	2	2	2	3.08	13
FL2017 ASCI-4250-01-Prof Ethics and Standards	8	4	0	0	3.67	12
FL2017 ASCI-4450-01-Aviation Law	6	3	0	0	3.67	9
FL2017 ASCI-4450-10-Aviation Law	9	2	1	0	3.67	12
FL2017 ASCI-5220-10-Aviation Safety Programs	7	0	0	0	4.00	7
FL2017 ASCI-5460-02-Qualitative Data Analysis	1	2	4	1	2.38	8
FL2017 FSCI-1150-01-Flight 1	12	1	0	0	3.92	13
FL2017 FSCI-1250-01-Basic Flight Foundations	12	4	1	0	3.65	17
FL2017 FSCI-2150-01-Flight 3	3	3	0	0	3.50	6
FL2017 FSCI-2250-01-Instrument Flight Foundations	4	4	1	0	3.33	9

The instructor treated students with respect.

	Always	Often	Sometimes	Never	Average	Total Responses
Overall	173	12	4	0	3.89	189
FL2017 ASCI-1010-01-Professional Orientation	18	2	0	0	3.90	20
FL2017 ASCI-1300-01-Aviation Weather	17	2	0	0	3.89	19
FL2017 ASCI-1300-10-Aviation Weather	15	0	0	0	4.00	15
FL2017 ASCI-2200-01-Concepts in Aerodynamics	9	1	0	0	3.90	10
FL2017 ASCI-3010-01-Jet Transport Systems I	5	0	0	0	4.00	5
FL2017 ASCI-4012-01-Jet Flying Tech I Lect	7	0	0	0	4.00	7
FL2017 ASCI-4050-01-Human Factors	7	0	0	0	4.00	7
FL2017 ASCI-4050-10-Human Factors	11	1	1	0	3.77	13
FL2017 ASCI-4250-01-Prof Ethics and Standards	9	1	2	0	3.58	12
FL2017 ASCI-4450-01-Aviation Law	9	0	0	0	4.00	9
FL2017 ASCI-4450-10-Aviation Law	12	0	0	0	4.00	12
FL2017 ASCI-5220-10-Aviation Safety Programs	7	0	0	0	4.00	7
FL2017 ASCI-5460-02-Qualitative Data Analysis	8	0	0	0	4.00	8
FL2017 FSCI-1150-01-Flight 1	11	2	0	0	3.85	13
FL2017 FSCI-1250-01-Basic Flight Foundations	16	1	0	0	3.94	17
FL2017 FSCI-2150-01-Flight 3	4	1	1	0	3.50	6
FL2017 FSCI-2250-01-Instrument Flight Foundations	8	1	0	0	3.89	9

The instructor was available for assistance when needed.

	Always	Often	Sometimes	Never	Average	Total Responses
Overall	142	33	13	1	3.67	189
FL2017 ASCI-1010-01-Professional Orientation	16	4	0	0	3.80	20
FL2017 ASCI-1300-01-Aviation Weather	12	2	5	0	3.37	19
FL2017 ASCI-1300-10-Aviation Weather	11	0	4	0	3.47	15

	Always	Often	Sometimes	Never	Average	Total Responses
FL2017 ASCI-2200-01-Concepts in Aerodynamics	6	3	1	0	3.50	10
FL2017 ASCI-3010-01-Jet Transport Systems I	5	0	0	0	4.00	5
FL2017 ASCI-4012-01-Jet Flying Tech I Lect	6	1	0	0	3.86	7
FL2017 ASCI-4050-01-Human Factors	5	2	0	0	3.71	7
FL2017 ASCI-4050-10-Human Factors	10	1	1	1	3.54	13
FL2017 ASCI-4250-01-Prof Ethics and Standards	7	5	0	0	3.58	12
FL2017 ASCI-4450-01-Aviation Law	8	1	0	0	3.89	9
FL2017 ASCI-4450-10-Aviation Law	11	1	0	0	3.92	12
FL2017 ASCI-5220-10-Aviation Safety Programs	6	1	0	0	3.86	7
FL2017 ASCI-5460-02-Qualitative Data Analysis	5	2	1	0	3.50	8
FL2017 FSCI-1150-01-Flight 1	11	2	0	0	3.85	13
FL2017 FSCI-1250-01-Basic Flight Foundations	14	3	0	0	3.82	17
FL2017 FSCI-2150-01-Flight 3	3	3	0	0	3.50	6
FL2017 FSCI-2250-01-Instrument Flight Foundations	6	2	1	0	3.56	9

Overall, I think this instructor was excellent.

	Always	Often	Sometimes	Never	Average	Total Responses
Overall	138	35	13	3	3.63	189
FL2017 ASCI-1010-01-Professional Orientation	13	6	1	0	3.60	20
FL2017 ASCI-1300-01-Aviation Weather	11	4	3	1	3.32	19
FL2017 ASCI-1300-10-Aviation Weather	11	2	2	0	3.60	15
FL2017 ASCI-2200-01-Concepts in Aerodynamics	8	2	0	0	3.80	10
FL2017 ASCI-3010-01-Jet Transport Systems I	3	2	0	0	3.60	5
FL2017 ASCI-4012-01-Jet Flying Tech I Lect	5	1	1	0	3.57	7
FL2017 ASCI-4050-01-Human Factors	6	1	0	0	3.86	7
FL2017 ASCI-4050-10-Human Factors	9	2	1	1	3.46	13
FL2017 ASCI-4250-01-Prof Ethics and Standards	8	3	1	0	3.58	12
FL2017 ASCI-4450-01-Aviation Law	7	2	0	0	3.78	9
FL2017 ASCI-4450-10-Aviation Law	11	1	0	0	3.92	12
FL2017 ASCI-5220-10-Aviation Safety Programs	7	0	0	0	4.00	7
FL2017 ASCI-5460-02-Qualitative Data Analysis	3	2	2	1	2.88	8
FL2017 FSCI-1150-01-Flight 1	11	2	0	0	3.85	13
FL2017 FSCI-1250-01-Basic Flight Foundations	15	2	0	0	3.88	17
FL2017 FSCI-2150-01-Flight 3	4	0	2	0	3.33	6
FL2017 FSCI-2250-01-Instrument Flight Foundations	6	3	0	0	3.67	9

Indirect Measures of Assessment

Alumni Surveys

Progress %	Finished	RecordedDate	Q2 Please select which program you studied. If your academic program is not included in the list below, it is merely because there is not space for an exhaustive list of all possible majors once offered at Parks College. We have limited the list to those programs that are currently being offered. We value the input of all alumni. If your program is not listed, please select "Other" to enter the name of your program and continue with the survey. - Selected Choice
Progress	Finished	Recorded Date	
100	TRUE	5/15/2018 11:25	Aviation Management
100	TRUE	5/15/2018 11:42	Aviation Management
100	TRUE	5/15/2018 11:45	Aviation Management
100	TRUE	5/15/2018 14:05	Aviation Management
100	TRUE	5/15/2018 14:05	Aviation Management
100	TRUE	5/15/2018 14:28	Aviation Management
100	TRUE	5/17/2018 15:23	Aviation Management
100	TRUE	5/18/2018 13:34	Aviation Management

Q16 AM Name:	Q17 What year did you graduate?	Q18 What is the name of the company you currently work for?
	2015	Level Green Landscaping
	2015	Saint Louis University
	2015	Endeavor Air
	2015	University of North Dakota
	2016	Aero Charter, Inc.
	2017	IL Army National Guard
	2016	US Department of Defense
	2017	Saudi airlines

Q19 What is your current job title?	Q20 What is your preferred email address?	Q22 Did you pursue higher studies after graduating from Parks College?
Operations Manager		Yes
Dispatcher		Yes
First Officer		No
Graduate Research Assistant		Yes
Charter Pilot (First Officer)		No
Quality Control Maintenance Test Pilot		No
Aeronautical Analyst		Yes
First officer trainee		No

Q23 Please list school(s) attended, degrees/certificates earned and what year you graduated:	Q24_1 How well do you feel your education at Saint Louis University prepared you in fulfilling the following program objectives: - To enhance your broad-based knowledge:
University of Maryland College Park, M	Strongly Agree
Saint Louis University, MS Aviation, 20	Agree
	Strongly Agree
University of North Dakota, Masters in	Strongly Agree
	Strongly Agree
	Strongly Agree
Embry-Riddle Aeronautical University,	Agree
	Strongly Agree

Q24_2
How well do you feel your education at Saint Louis University prepared you in fulfilling the following program objectives: - To develop skills surrounding piloting, communication, research and critical thinking, decision making and team building:

Strongly Agree
Agree
Strongly Agree
Strongly Agree
Strongly Agree
Agree
Strongly Agree
Strongly Agree

Q24_3

How well do you feel your education at Saint Louis University prepared you in fulfilling the following program objectives: - To develop abilities to succeed in life regardless of their chosen fields:

Strongly Agree
Agree
Strongly Agree
Strongly Agree
Strongly Agree
Neither Agree nor Disagree
Strongly Agree
Strongly Agree

Q24_4 How well do you feel your education at Saint Louis University prepared you in fulfilling the following program objectives: - To develop an attitude reflecting an education at a Jesuit University:	Q25 Of the undergraduate courses in Aviation Management, tell us which was your favorite and why:
Strongly Agree	Likely Airport Management, the project po
Agree	Aviation Ethics, most engaging and broadly
Agree	Aviation Law with Bruce Hoover. He was ar
Strongly Agree	Aviation Law because I gained a strong kno
Strongly Agree	Economics of Air Transportation: This cours
Neither Agree nor Disagree	Aviation Law. I found it interesting and use
Strongly Agree	I absolutely loved my air traffic control clas
Neither Agree nor Disagree	Because we had a chance to simulate

Q26 How could we better prepare students to satisfy these objectives? (e.g., additional topics, courses, concentration areas, minors, etc.)	Q27_1 When you graduated from Parks College with a degree in Aviation Management, you were prepared to do the following: - Apply knowledge of mathematics, science, and applied sciences to aviation-related disciplines
rtion that we worked on was both really fu	Strongly Agree
Offer aviation management students spec	Neither Agree nor Disagree
I think students are currently well prepare	Agree
More hands on experience- guest speaker	Agree
se exposed me to the relationship betwee	Strongly Agree
ful in terms of how I think about regulatio	Agree
I didn't have a lot of room for electives wh	Strongly Agree
By mentoring and advising with senior stu	Strongly Agree

Q27_2 When you graduated from Parks College with a degree in Aviation Management, you were prepared to do the following: - Analyze and interpret data	Q27_4 When you graduated from Parks College with a degree in Aviation Management, you were prepared to do the following: - Function on multi-disciplinary and diverse teams
Agree	Strongly Agree
Agree	Agree
Strongly Agree	Strongly Agree
Agree	Strongly Agree
Strongly Agree	Agree
Agree	Agree
Strongly Agree	Strongly Agree
Strongly Agree	Strongly Agree

Q27_5 When you graduated from Parks College with a degree in Aviation Management, you were prepared to do the following: - Understand professional and ethical responsibility	Q27_6 When you graduated from Parks College with a degree in Aviation Management, you were prepared to do the following: - Communicate effectively, including both written and oral communication skills
Strongly Agree	Strongly Agree
Strongly Agree	Strongly Agree
Strongly Agree	Strongly Agree
Strongly Agree	Strongly Agree
Strongly Agree	Strongly Agree
Agree	Agree
Strongly Agree	Strongly Agree
Strongly Agree	Strongly Agree

Q27_3 When you graduated from Parks College with a degree in Aviation Management, you were prepared to do the following: - Recognize the need for, and engage in, life-long learning	Q27_7 When you graduated from Parks College with a degree in Aviation Management, you were prepared to do the following: - Have knowledge of contemporary issues
Strongly Agree	Strongly Agree
Agree	Agree
Strongly Agree	Strongly Agree
Strongly Agree	Strongly Agree
Strongly Agree	Strongly Agree
Agree	Strongly Agree
Strongly Agree	Strongly Agree
Strongly Agree	Strongly Agree

Q27_8 When you graduated from Parks College with a degree in Aviation Management, you were prepared to do the following: - Use the techniques, skills, and modern technology necessary for professional practice	Q27_9 When you graduated from Parks College with a degree in Aviation Management, you were prepared to do the following: - Understand the national and international aviation environment
Strongly Agree	Strongly Agree
Neither Agree nor Disagree	Agree
Agree	Strongly Agree
Agree	Strongly Agree
Strongly Agree	Strongly Agree
Agree	Agree
Strongly Agree	Strongly Agree
Strongly Agree	Strongly Agree

Q27_10 When you graduated from Parks College with a degree in Aviation Management, you were prepared to do the following: - Apply pertinent knowledge in identifying and solving problems	Q27_11 When you graduated from Parks College with a degree in Aviation Management, you were prepared to do the following: - Apply knowledge of business sustainability to aviation issues	Q28 Additional Comments:
Strongly Agree	Strongly Agree	
Agree	Agree	
Strongly Agree	Agree	
Strongly Agree	Agree	
Strongly Agree	Agree	
Agree	Agree	
Strongly Agree	Strongly Agree	
Strongly Agree	Strongly Agree	

Progress %	Finished	RecordedDate	Q2	Q67	Q68
Progress	Finished	Recorded Date	Please select which program you studied. If your academic program is not included in the list below, it is merely because there is not space for an exhaustive list of all possible majors once offered at Parks College. We have limited the list to those programs that are currently being offered. We value the input of all alumni. If your program is not listed, please select "Other" to enter the name of your program and continue with the survey. - Selected Choice	FS Name	What year did you graduate?
100	TRUE	5/15/2018 11:59	Flight Science		2015
100	TRUE	5/15/2018 14:23	Flight Science		2017
100	TRUE	5/15/2018 14:40	Flight Science		2017
100	TRUE	5/16/2018 13:28	Flight Science		2015
100	TRUE	5/16/2018 23:18	Flight Science		2015
100	TRUE	5/17/2018 8:13	Flight Science		2017
100	TRUE	5/17/2018 16:52	Flight Science		2017
100	TRUE	5/18/2018 15:08	Flight Science		2017
100	TRUE	5/18/2018 21:19	Flight Science		2015
100	TRUE	5/19/2018 14:10	Flight Science		2015

Q69 What is the name of the company you currently work for?	Q70 What is your current job title?	Q71 What is your preferred email address?	Q73 Did you pursue higher studies after graduating from Parks College?
Saint Louis university	Flight instructor		Yes
Meisinger Aviation	Pilot		No
Leidos	Aeronautical Analyst		No
GoJet Airlines	First Officer		No
Cathay Pacific Airways	Second officer		No
United States Marine Corps	Marine Corps General Officer		No
United States Navy	Student Naval Aviator		No
Boutique Air	First Officer		No
GoJet Airlines	Captain		No
MAT Aire, Inc.	Chief Pilot		No

Q74 Please list school(s) attended, degrees/certificates earned and what year you graduated:	Q75_1 How well do you feel your education at Saint Louis University prepared you in fulfilling the following program objectives: - To enhance your broad-based knowledge:	Q75_2 How well do you feel your education at Saint Louis University prepared you in fulfilling the following program objectives: - To develop skills surrounding piloting, communication, research and critical thinking, decision making and team building:
Masters of business administration, graduation date December 2018	Neither Agree nor Disagree	Agree
	Disagree	Agree
	Neither Agree nor Disagree	Agree
	Strongly Agree	Strongly Agree
	Neither Agree nor Disagree	Strongly Agree
	Disagree	Agree
	Disagree	Disagree
	Agree	Strongly Agree
	Neither Agree nor Disagree	Agree
	Strongly Agree	Strongly Agree

Q75_3 How well do you feel your education at Saint Louis University prepared you in fulfilling the following program objectives: - To develop abilities to succeed in life regardless of their chosen fields:	Q75_4 How well do you feel your education at Saint Louis University prepared you in fulfilling the following program objectives: - To develop an attitude reflecting an education at a Jesuit University:	Q76 Of the undergraduate courses in Flight Science, tell us which was your favorite and why:	Q77 How could we better prepare students to satisfy these objectives? (e.g., additional topics, courses, concentration areas, minors, etc.)
		Aviation law. I found this class challenging and I feel like I learned about how to protect myself legally as a flight instructor.	I think all students should be encouraged to pursue a minor outside of the flight science minors to broaden their knowledge and future prospects.
		course was the most valuable aviation	be repaired or replaced to allow
Strongly Agree	Strongly Agree	Saul Robinson was a joy to work with. He Both are applicable to my career and I	course should be mandatory. Also, other internship opportunities. It is tough to
Disagree		was helpful in preparing my career as an	be offered.
			activities or situational examples
			required to make decisions. In the Marine Corps, we are all briefed on a
		Concepts in Aerodynamics with Saul Robinson. The class felt advanced and challenged us to understand new concepts.	general scenario, then we make decisions afterwards. They are called Tactical Decision Games (TDGs). This promotes creativity, innovation,
Disagree	Disagree	semesters). I had a blast with Dr.	science department runs into is old
Agree	Agree	a fun environment and good corse	situations, itâ€™s easy when you get
Agree	Agree	Accident Investigation. Because Terry	The careers that Flight Science students
Strongly Agree	Neither Agree nor Disagree	This gave me real-world practical	well as essential skills necessary for real-

Q78_1 When you graduated from Parks College with a degree in Flight Science, you were prepared to do the following: - Apply knowledge of mathematics, science, and applied sciences to aviation-related disciplines	Q78_2 When you graduated from Parks College with a degree in Flight Science, you were prepared to do the following: - Analyze and interpret data	Q78_3 When you graduated from Parks College with a degree in Flight Science, you were prepared to do the following: - Function on multi-disciplinary and diverse teams	Q78_4 When you graduated from Parks College with a degree in Flight Science, you were prepared to do the following: - Understand professional and ethical responsibility
Strongly Agree	Agree	Agree	Strongly Agree
Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
Agree	Agree	Agree	Agree
Agree	Agree	Agree	Agree
Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
Agree	Agree	Agree	Strongly Agree
Strongly Agree	Strongly Agree	Agree	Strongly Agree
Agree	Agree	Agree	Agree
Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree

Q78_5 When you graduated from Parks College with a degree in Flight Science, you were prepared to do the following: - Communicate effectively, including both written and oral communication skills	Q78_6 When you graduated from Parks College with a degree in Flight Science, you were prepared to do the following: - Recognize the need for, and engage in, life-long learning	Q78_7 When you graduated from Parks College with a degree in Flight Science, you were prepared to do the following: - Have knowledge of contemporary issues	Q78_8 When you graduated from Parks College with a degree in Flight Science, you were prepared to do the following: - Use the techniques, skills, and modern technology necessary for professional practice
Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
Agree	Agree	Agree	Agree
Neither Agree nor Disagree	Agree	Agree	Agree
Strongly Agree	Strongly Agree	Agree	Agree
Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
Strongly Agree	Agree	Agree	Strongly Agree
Agree	Neither Agree nor Disagree	Neither Agree nor Disagree	Agree
Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree

Q78_9 When you graduated from Parks College with a degree in Flight Science, you were prepared to do the following: - Understand the national and international aviation environment	Q78_10 When you graduated from Parks College with a degree in Flight Science, you were prepared to do the following: - Apply pertinent knowledge in identifying and solving problems	Q78_11 When you graduated from Parks College with a degree in Flight Science, you were prepared to do the following: - Apply knowledge of business sustainability to aviation issues
Strongly Agree	Strongly Agree	Strongly Agree
Agree	Strongly Agree	Neither Agree nor Disagree
Strongly Agree	Strongly Agree	Strongly Agree
Strongly Agree	Agree	Disagree
Disagree	Neither Agree nor Disagree	Disagree
Agree	Strongly Agree	Agree
Agree	Strongly Agree	Neither Agree nor Disagree
Strongly Agree	Strongly Agree	Strongly Agree
Agree	Agree	Neither Agree nor Disagree
Agree	Strongly Agree	Neither Agree nor Disagree

Q79
Additional Comments:

Some of my communciation/writing ability stems from taking classes outside the flight science courses. I had a minor in business administration which gave me a broader perspective with regards to global issues.

I did not actively research aviation (commercial, corporate, private, etc) while at Parks College. I think it would be beneficial to require some research different airlines etc. in order to build up the understanding of every student. Maybe even try to plan for non-mandatory field trips to see what the airlines are all about, inside and out.