SAINT LOUIS UNIVERSITY.

Program-Level Assessment Plan

Program: Master's in Aviation	Degree Level (e.g., UG or GR certificate, UG major, master's program, doctoral program): Master's
Department: Oliver L. Parks Department of Aviation Science	College/School: School of Science and Engineering
Date (Month/Year): June 2022	Primary Assessment Contact: Stephen G. Magoc

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

#	Student Learning Outcomes What do the program faculty expect all students to know or be able to do as a result of completing this program? Note: These should be measurable and manageable in number (typically 4-6 are sufficient).	Curriculum Mapping In which courses will faculty intentionally work to foster some level of student development toward achievement of the outcome? Please clarify the level at which student development is expected in each course (e.g., introduced, developed, reinforced, achieved, etc.).	Assessment Methods Artifacts of Student Learning (What) 1. What artifacts of student learning will be used to determine if students have achieved this outcome? 2. In which courses will these artifacts be collected?	Assessment Methods Evaluation Process (How) 1. What process will be used to evaluate the artifacts, and by whom? 2. What tools(s) (e.g., a rubric) will be used in the process? Note: Please include any rubrics as part of the submitted plan documents.
1	Apply mathematics, science, and applied sciences at a level appropriate to aviation-related disciplines at the master's level, including an adequate foundation in statistics.	AA5221 Applied Analytics and Methods I; Introduced ASCI 5010 Introduction to Aviation Research Methods; Introduced	1. Evidence from courses including, but not limited to, assignments, quizzes, papers, and student surveys are collected by the department. 2. Courses from which artifacts are to be collected: ASCI 5010 Introduction to Aviation Research Methods	1. Faculty of the department will meet at the conclusion of the spring semester to evaluate the artifacts. 2. The faculty will evaluate all courses noted by the curriculum mapping section using a rubric for each course. The faculty will use a rubric to determine if Student Learning Outcome 1 has been met. Examples of course rubrics used, and the rubric used to determine if Student Learning Outcome 1 has been met are found in Appendix A of this assessment

				plan.
2	Analyze and interpret data at the master's level.	ASCI 5010 Introduction to Aviation Research Methods; Introduced ASCI 5040 Human Factors in Aviation Safety; Developed ASCI 5150 Aviation Incident and Accident Analysis; Developed ASCI 5220 Aviation Safety Programs; Reinforced ASCI 5230 Professional Ethics and Standards; Reinforced ASCI 6020 Flight Operations Business and Administration; Achieved ASCI 6030 – Aviation and Public Policy; Achieved ASCI 6070 – Aviation Training Methods; Achieved	1. Evidence from courses including, but not limited to, assignments, quizzes, papers, and student surveys are collected by the department. 2. Courses from which artifacts are to be collected: ASCI 5010 Introduction to Aviation Research Methods ASCI 5040 Human Factors in Aviation Safety ASCI 5150 Aviation Incident and Accident Analysis ASCI 6030 – Aviation and Public Policy	1. Faculty of the department will meet at the conclusion of the spring semester to evaluate the artifacts. 2. The faculty will evaluate all courses noted by the curriculum mapping section using a rubric for each course. The faculty will use a rubric to determine if Student Learning Outcome 2 has been met. Examples of course rubrics used, and the rubric used to determine if Student Learning Outcome 2 has been met are found in Appendix A of this assessment plan.
3	Use the techniques, skills, and modern technology necessary for professional practice.	ASCI 5010 Introduction to Aviation Research Methods; Introduced ASCI 5030 Aviation Security Management; Developed ASCI 5040 Human Factors in Aviation Safety; Developed ASCI 5150 Aviation Incident and Accident Analysis; Developed ASCI 5210 – Aviation Organization Theory and Management; Reinforced ASCI 5230 Professional Ethics and Standards; Reinforced ASCI 6010 Federal and International Regulations; Achieved ASCI 6020 Flight Operations Business and Administration; Achieved ASCI 6030 Aviation and Public Policy; Achieved ASCI 6070 – Aviation Training Methods; Achieved	1. Evidence from courses including, but not limited to, assignments, quizzes, papers, and student surveys are collected by the department. 2. Courses from which artifacts are to be collected: ASCI 5040 Human Factors in Aviation Safety ASCI 5150 Aviation Incident and Accident Analysis ASCI 6020 Flight Operations Business and Administration ASCI 6030 Aviation and Public Policy ASCI 6070 – Aviation Training Methods	1. Faculty of the department will meet at the conclusion of the spring semester to evaluate the artifacts. 2. The faculty will evaluate all courses noted by the curriculum mapping section using a rubric for each course. The faculty will use a rubric to determine if Student Learning Outcome 3 has been met. Examples of course rubrics used, and the rubric used to determine if Student Learning Outcome 3 has been met are found in Appendix A of this assessment plan.

4	Assess the national and international aviation environment.	ASCI 5030 Aviation Security Management; Developed ASCI 5040 Human Factors in Aviation Safety; Developed ASCI 5150 Aviation Incident and Accident Analysis; Developed ASCI 5210 – Aviation Organization Theory and Management; Reinforced ASCI 5230 Professional Ethics and Standards; Reinforced ASCI 6010 Federal and International Regulations; Achieved ASCI 6020 Flight Operations Business and Administration; Achieved ASCI 6030 Aviation and Public Policy; Achieved	1. Evidence from courses including, but not limited to, assignments, quizzes, papers, and student surveys are collected by the department. 2. Courses from which artifacts are to be collected: ASCI 5030 Aviation Security Management ASCI 5040 Human Factors in Aviation Safety ASCI 5150 Aviation Incident and Accident Analysis ASCI 6010 Federal and International Regulations	1. Faculty of the department will meet at the conclusion of the spring semester to evaluate the artifacts. 2. The faculty will evaluate all courses noted by the curriculum mapping section using a rubric for each course. The faculty will use a rubric to determine if Student Learning Outcome 4 has been met. Examples of course rubrics used, and the rubric used to determine if Student Learning Outcome 4 has been met are found in Appendix A of this assessment plan.
5	Communicate effectively using skills appropriate to the master's level.	ASCI 5010 Introduction to Aviation Research Methods; Introduced ASCI 5030 Aviation Security Management; Developed ASCI 5040 Human Factors in Aviation Safety; Developed ASCI 5150 Aviation Incident and Accident Analysis; Developed ASCI 5210 – Aviation Organization Theory and Management; Reinforced ASCI 5220 Aviation Safety Programs; Reinforced ASCI 5230 Professional Ethics and Standards; Reinforced ASCI 6010 Federal and International Regulations; Achieved ASCI 6020 Flight Operations Business and Administration; Achieved ASCI 6030 – Aviation and Public Policy; Achieved ASCI 6070 – Aviation Training Methods; Achieved	1. Evidence from courses including, but not limited to, assignments, quizzes, papers, and student surveys are collected by the department. 2. Courses from which artifacts are to be collected: ASCI 5210 – Aviation Organization Theory and Management ASCI 5220 Aviation Safety Programs ASCI 5230 Professional Ethics and Standards	1. Faculty of the department will meet at the conclusion of the spring semester to evaluate the artifacts. 2. The faculty will evaluate all courses noted by the curriculum mapping section using a rubric for each course. The faculty will use a rubric to determine if Student Learning Outcome 5 has been met. Examples of course rubrics used, and the rubric used to determine if Student Learning Outcome 5 has been met are found in Appendix A of this assessment plan.

Use of Assessment Data

1. How and when will analyzed data be used by program faculty to make changes in pedagogy, curriculum design, and/or assessment practices?

The program student learning outcomes will be assessed on a five-year cycle that allows for a complete assessment of all program student learning outcomes during the cycle.

1. Apply mathematics, science, and applied sciences at a level appropriate to aviation-related disciplines at the master's level, including an adequate foundation in statistics.	Spring 2022	Spring 2027	Spring 2032	Spring 2037
2. Analyze and interpret data at the master's level.	Spring 2023	Spring 2028	Spring 2033	Spring 2038
3. Use the techniques, skills, and modern technology necessary for professional practice.	Spring 2024	Spring 2029	Spring 2034	Spring 2039
4. Assess the national and international aviation environment.	Spring 2025	Spring 2030	Spring 2035	Spring 2040
5. Communicate effectively using skills appropriate to the master's level.	Spring 2026	Spring 2031	Spring 2036	Spring 2041

2. How and when will the program faculty evaluate the impact of assessment-informed changes made in previous years?

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

Additional Questions

1. On what schedule/cycle will program faculty assess each of the program's student learning outcomes? (Please note: It is not recommended to try to assess every outcome every year.)

Assessment of student learning outcomes will be conducted at least once per year and the records of these reviews will be maintained by the department.

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

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

IMPORTANT: Please remember to submit any rubrics or other assessment tools along with this plan.

Appendix A

M.S. in Aviation

Student Learning Outcome Assessment Rubrics

and

Course Performance Indicator Rubrics

Assessment of M.S. in Aviation Student Learning Outcomes

Student Learning Outcome #1: Apply mathematics, science, and applied sciences at a level appropriate to aviation-related disciplines at the master's level, including an adequate foundation in statistics.

Date of this assessment:

The following assessment is based on prior coursework of graduates and surveys of graduates.

Performance Indicator Assessed	Do not Meet	Meet
Students and graduates develop preliminary skills in statistics needed to carry out research in aviation.		
Students and graduates discuss the fundamental underpinnings of both qualitative and quantitative research methods.		

List any prior change(s) made to the curriculum to aid students and graduates in meeting this student learning outcome:

Describe the effect of any change(s) made to the curriculum:

List recommendation(s) for changes to be made to the curriculum as a result of this assessment:

Assessment of M.S. in Aviation Student Learning Outcomes

Student Learning Outcome #2: Analyze and interpret data at the master's level.

Date of this assessment:

The following assessment is based on coursework of students and surveys of graduates.

Performance Indicator Assesses	Do not Meet	Meet
Students and graduates interpret research findings published in peer-reviewed journals and technical reports.		
Students and graduates report statistical findings in the APA format.		
Students and graduates assess contemporary issues in aviation and interpret the outcomes.		

List any prior change(s) made to the curriculum to aid students and graduates in meeting this student learning outcome:

Describe the effect of any change(s) made to the curriculum:

List recommendation(s) for changes to be made to the curriculum as a result of this assessment:

Assessment of M.S. in Aviation Student Learning Outcomes

Student Learning Outcome #3: Use the techniques, skills, and modern technology necessary for professional practice.

Date of this assessment:

The following assessment is based on coursework of students and surveys of graduates.

Performance Indicator Assessed	Do not Meet	Meet
Students and graduates analyze the current key issues and highly cited papers in the aviation field and identify emerging trends.		
Students and graduates identify important historical contributions in the aviation field and outline their importance.		
Students and graduates refine their presentation skills.		

List any prior change(s) made to the curriculum to aid students and graduates in meeting this student learning outcome:

Describe the effect of any change(s) made to the curriculum:

List recommendation(s) for changes to be made to the curriculum as a result of this assessment:

Assessment of M.S. in Aviation Student Learning Outcomes

Student Learning Outcome #4: Assess the national and international aviation environment.

Date of this assessment:

The following assessment is based on coursework of students and surveys of graduates.

Performance Indicator Assessed	Do not Meet	Meet
Students and graduates identify major practices in the national and international aviation environment.		
Students and graduates interpret the similarities and differences in regulations and policies in the national and international aviation environment.		
Students and graduates assess the national and international aviation environment from a multi-cultural perspective.		

List any prior change(s) made to the curriculum to aid students and graduates in meeting this student learning outcome:

Describe the effect of any change(s) made to the curriculum:

List recommendation(s) for changes to be made to the curriculum as a result of this assessment:

Assessment of M.S. in Aviation Student Learning Outcomes

Student Learning Outcome #5: Communicate effectively using skills appropriate to the master's level.

Date of this assessment:

The following assessment is based on coursework of students and surveys of graduates.

Performance Indicator Assessed	Do not Meet	Meet
Students and graduates create an engaging presentation to the department about their knowledge.		
Students and graduates use appropriate figures and graphics in their papers and presentations.		
Students and graduates communicate effectively with their peers on emerging issues in aviation.		
Students and graduates submit written assignments using appropriate terminology, grammar, and formatting.		

List any prior change(s) made to the curriculum to aid student and graduates in meeting this student learning outcome:

Describe the effect of any change(s) made to the curriculum:

List recommendation(s) for changes to be made to the curriculum as a result of this assessment:

M.S. in Aviation Course Performance Indicator Rubric

Student Learning Outcome #1: Apply mathematics, science, and applied sciences at a level appropriate to aviation-related disciplines at the master's level, including an adequate foundation in statistics.

Course Instructor:_____ Course: _____

Semester Taught:_____ Number of Students Scored: _____

Performance Indicator Assessed	Assessment Results: (Indicate what % of class achieved a minimum score of 80%)	Benchmark achieved? (Benchmark: 80% of students will score a minimum of 80% = "B")
Students and graduates develop preliminary skills in statistics needed to carry out research in aviation.		
Students and graduates discuss the fundamental underpinnings of both qualitative and quantitative research methods.		
Students and graduates develop preliminary skills in statistics needed to carry out research in aviation.		

List any prior change(s) made to the curriculum to aid students and graduates in meeting this student learning outcome:

Describe the effect of any change(s) made to the curriculum:

List recommendation(s) for changes to be made to the curriculum as a result of this assessment:

M.S. in Aviation Course Performance Indicator Rubric

Student Learning Outcome #2: Analyze and interpret data at the master's level.

Course Instructor:_____ Course: _____

Semester Taught:_____ Number of Students Scored: _____

Performance Indicator Assesses	Assessment Results: (Indicate what % of class achieved a minimum score of 80%)	Benchmark achieved? (Benchmark: 80% of students will score a minimum of 80% = "B")
Students and graduates interpret research findings published in peer-reviewed journals and technical reports.		
Students and graduates report statistical findings in the APA format.		
Students and graduates assess contemporary issues in aviation and interpret the outcomes.		

List any prior change(s) made to the curriculum to aid students and graduates in meeting this student learning outcome:

Describe the effect of any change(s) made to the curriculum:

List recommendation(s) for changes to be made to the curriculum as a result of this assessment:

M.S. in Aviation Course Performance Indicator Rubric

Student Learning Outcome #3: Use the techniques, skills, and modern technology necessary for professional practice.

Course Instructor:_____ Course: _____

Semester Taught:_____ Number of Students Scored: _____

Performance Indicator Assessed	Assessment Results: (Indicate what % of class achieved a minimum score of 80%)	Benchmark achieved? (Benchmark: 80% of students will score a minimum of 80% = "B")
Students and graduates analyze the current key issues and highly cited papers in the aviation field and identify emerging trends.		
Students and graduates identify important historical contributions in the aviation field and outline their importance.		
Students and graduates refine their presentation skills.		

List any prior change(s) made to the curriculum to aid students and graduates in meeting this student learning outcome:

Describe the effect of any change(s) made to the curriculum:

List recommendation(s) for changes to be made to the curriculum as a result of this assessment:

M.S. in Aviation Course Performance Indicator Rubric

Student Learning Outcome #4: Assess the national and international aviation environment.

Course Instructor:_____ Course: _____

Semester Taught:_____ Number of Students Scored: _____

Performance Indicator Assessed	Assessment Results: (Indicate what % of class achieved a minimum score of 80%)	Benchmark achieved? (Benchmark: 80% of students will score a minimum of 80% = "B")
Students and graduates identify major practices in the national and international aviation environment.		
Students and graduates interpret the similarities and differences in regulations and policies in the national and international aviation environment.		
Students and graduates assess the national and international aviation environment from a multi-cultural perspective.		

List any prior change(s) made to the curriculum to aid students and graduates in meeting this student learning outcome:

Describe the effect of any change(s) made to the curriculum:

List recommendation(s) for changes to be made to the curriculum as a result of this assessment:

M.S. in Aviation Course Performance Indicator Rubric

Student Learning Outcome #5: Communicate effectively using skills appropriate to the master's level.

Course Instructor:_____ Course: _____

Semester Taught:_____ Number of Students Scored: _____

Performance Indicator Assessed	Assessment Results: (Indicate what % of class achieved a minimum score of 80%)	Benchmark achieved? (Benchmark: 80% of students will score a minimum of 80% = "B")
Students and graduates create an engaging presentation to the department about their knowledge.		
Students and graduates use appropriate figures and graphics in their papers and presentations.		
Students and graduates communicate effectively with their peers on emerging issues in aviation.		
Students and graduates submit written assignments using appropriate terminology, grammar, and formatting.		

List any prior change(s) made to the curriculum to aid students and graduates in meeting this student learning outcome:

Describe the effect of any change(s) made to the curriculum:

List recommendation(s) for changes to be made to the curriculum as a result of this assessment: