Standing Requirements
Program Mission Statement

The Aeronautical Science Program of the Prescott Campus shall prepare graduates to become productive members of the Aviation Industry. The Aeronautical Science degree program blends flight training with rigorous academic study in a unique manner that provides a strong foundation for a career as a leader in the aviation industry including airlines, corporate and commercial aviation, or the military. This approach to aviation education gives the students an added value over traditional flight training programs by focusing on the skills and knowledge required by today's industry. The curriculum provides for skills in mathematics, physics, communications and aeronautics, including FAA certification as a multi-engine instrument rated pilot. The last two years of matriculation include extensive professional level Aeronautical Science and flight courses that prepare the graduate for a career as a professional pilot, including airline flight crew operations in multi-crew member jet transport aircraft. Critical thinking and problem solving skills are developed via computer simulations in aircraft performance, navigation, and aircraft systems operation. Effective resource management, human factors, and safety awareness are constantly emphasized throughout the curriculum.

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Standing Requirements
Program Outcomes

BS Aeronautical Science Outcome Set

Outcome

Outcome	Mapping
1A. Prepared to apply basic knowledge Program graduates will demonstrate that they are adequately prepared and have the ability to apply knowledge of mathematics, science and applied sciences at various levels of education.	**INTL- AABI General Outcomes:** Criterion 3.3.1.a
2B. Ability to analyze and interpret data Program graduates will possess the ability to analyze and interpret data provided from various sources.	**INTL- AABI General Outcomes:** Criterion 3.3.1.b
3C. Ability to function and contribute in a team environment Program graduates will demonstrate the ability to make positive contributions and function on multi-disciplinary teams in a crew-type environment.	**INTL- AABI General Outcomes:** Criterion 3.3.1.c
4D. Understanding professional and ethical responsibility Program graduates will have an understanding of professional and ethical responsibility as it applies to the aviation industry.	**INTL- AABI General Outcomes:** Criterion 3.3.1.d
5E. Communication in both technical writing and verbal skills Program graduates will demonstrate that they are adequately prepared and have the ability to effectively communicate using technical writing and verbal communication skills.	**INTL- AABI General Outcomes:** Criterion 3.3.1.e

6F. Prepared for continued ground/flight training experiences Program graduates will recognize the need for, and have an ability to engage in, lifelong learning.	**INTL- AABI General Outcomes:** Criterion 3.3.1.f
7G. Actions of students reflect knowledge gained Actions and attitudes of program graduates will reflect knowledge of contemporary issues affecting the aviation industry.	**INTL- AABI General Outcomes:** Criterion 3.3.1.g
8H. Ability to use skills, techniques and technology Program graduates will possess the ability to use the techniques, skills and modern technology necessary for professional practice.	**INTL- AABI General Outcomes:** Criterion 3.3.1.h
9I. Ability to understand the environment Program Graduates will possess an understanding of the national and international aviation environment.	**INTL- AABI General Outcomes:** Criterion 3.3.1.i
10J. Preparation in decision-making and judgment skills Program graduates will demonstrate the ability to apply pertinent knowledge in identifying and solving problems.	**INTL- AABI General Outcomes:** Criterion 3.3.1.j
11K. Ability to apply business knowledge Program graduates will demonstrate the ability to apply knowledge of accepted business practices to aviation issues.	**INTL- AABI General Outcomes:** Criterion 3.3.1.k

FL - Embry-Riddle General Education Competency Set (Copy 1)

General Education Competencies

Competency	Mapping
Critical Thinking (DB, PC, WW) The student will apply knowledge at the	**Embry-Riddle General Education Competency Set:** Critical Thinking (DB, PC, WW)

synthesis level to define and solve problems within professional and personal environments.

Quantitative Reasoning (DB, PC, WW) The student will demonstrate the use of digitally-enabled technology (including concepts, techniques and tools of computing), mathematics proficiency & analysis techniques to interpret data for the purpose of drawing valid conclusions and solving associated problems.	**Embry-Riddle General Education Competency Set:** Quantitative Reasoning (DB, PC, WW)
Information Literacy (DB, PC, WW) The student will conduct meaningful research, including gathering information from primary and secondary sources and incorporating and documenting source material in his or her writing.	**Embry-Riddle General Education Competency Set:** Information Literacy (DB, PC, WW)
Communication (DB, PC, WW) The student will communicate concepts in written, digital and oral forms to present technical and non-technical information.	**Embry-Riddle General Education Competency Set:** Communication (DB, PC, WW)
Scientific Literacy (DB, PC, WW) The student will be able to analyze scientific evidence as it relates to the physical world and its interrelationship with human values and interests.	**Embry-Riddle General Education Competency Set:** Scientific Literacy (DB, PC, WW)
Cultural Literacy (DB, PC, WW) The student will be able to analyze historical events, cultural artifacts, and philosophical concepts.	**Embry-Riddle General Education Competency Set:** Cultural Literacy (DB, PC, WW)

INTL- AABI Aviation Core Outcomes (Copy 1)

Aviation Accreditation Outcomes for Embry-Riddle
(Effective September 2013)

Aviation Core Outcomes

Students should be able to demonstrate an understanding and application of the following:

Outcome	Mapping

Criterion 3.3.2.1 Attributes of an aviation professional, career planning and certification.	**BS Aeronautical Science Outcome Set:** 4D. Understanding professional and ethical responsibility
Criterion 3.3.2.2 Aircraft design, performance, operating characteristics and maintenance.	No Mapping
Criterion 3.3.2.3 Aviation safety and human factors.	No Mapping
Criterion 3.3.2.4 National and international aviation law, regulations and labor issues.	No Mapping
Criterion 3.3.2.5 Airports, airspace, and air traffic control.	No Mapping
Criterion 3.3.2.6 Meteorology and environmental issues.	No Mapping

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2017-2018 Assessment Cycle
Assessment Plan

Measures

BS Aeronautical Science Outcome Set

Outcome

Outcome: 2B. Ability to analyze and interpret data
Program graduates will possess the ability to analyze and interpret data provided from various sources.

▼ **Measure:** Graduating Student Survey - Ability to Analyze and Interpret Data
Program level Indirect - Survey

Details/Description:	Students will rate their knowledge gained with regard to the ability to analyze and interpret data.
Criterion for Success:	80% of students surveyed will report that they are 'Very Much" or "Quite A Bit" prepared regarding this question.
Timeframe of Data Collection:	Most recent GSS that is available from ERAU Institutional Research (IR).
Key/Responsible Personnel:	Key/Responsible Personnel: 1) IR to disseminate data and publish report. 2) COA Assessment Coordinator to retrieve and analyze data. 3) AS Chair.

▼ **Measure:** Student performance in course outcomes associated with the ability to analyze and interpret data.
Course level Direct - Other

Details/Description:	Analysis of applicable student learning outcomes as diagrammed in the Taskstream curriculum map and

attached Excel spreadsheet defining specific course outcomes associated with each program outcome.

Aeronautical Science Courses included in the analysis are AS121, AS221, AS309, AS310, AS321, AS350, AS356, AS387, AS402, AS405, AS408, AS410, AS411, AS420, and AS435. Meteorology Courses included are WX201, WX301 and WX364.

Criterion for Success:	80% or more of of individual course outcome criteria analyzed shall pass the criteria stated in the Master Course Outline Assessment Document.
Timeframe of Data Collection:	Course assessment data from two prior semesters within the previous 3 semesters.
Key/Responsible Personnel:	1) Course monitor responsible for data collection, analysis and submission on university shared drive. 2) Assessment coordinator. 3) Aeronautical Science Chair.

Supporting Attachments:

📎 College of Aviation Aeronautical Science Assessment Matrix 05-21-2019 (Excel Workbook (Open XML))

Outcome: 3C. Ability to function and contribute in a team environment

Program graduates will demonstrate the ability to make positive contributions and function on multi-disciplinary teams in a crew-type environment.

▼ **Measure:** Graduating Student Survey - Ability to Function and Contribute in a Team Environment
Program level Indirect - Survey

Details/Description:	Students will rate their knowledge gained with regard to the ability to function and contribute in a team environment.

Criterion for Success:	80% of students surveyed will report that they are 'Very Much" or "Quite A Bit" prepared regarding this question.
Timeframe of Data Collection:	Most recent GSS that is available from ERAU Institutional Research (IR).
Key/Responsible Personnel:	Key/Responsible Personnel: 1) IR to disseminate data and publish report. 2) COA Assessment Coordinator to retrieve and analyze data. 3) AS Chair.

▼ **Measure:** Student performance in course outcomes associated with ability to function in a team environment.
Program level Direct - Other

Details/Description:	Analysis of applicable student learning outcomes as diagrammed in the Taskstream curriculum map and attached Excel spreadsheet defining specific course outcomes associated with each program outcome.
	Aeronautical Science Courses included in the analysis are AS221, AS350, AS357, AS387, AS402, AS405, AS411, AS420 and AS435.
Criterion for Success:	80% or more of individual course outcome criteria analyzed shall pass the criteria stated in the Master Course Outline Assessment Document.
Timeframe of Data Collection:	Course assessment data from two prior semesters within the previous 3 semesters.
Key/Responsible Personnel:	1) Course monitor responsible for data collection, analysis and submission on university shared drive. 2) Assessment coordinator. 3) Aeronautical Science Chair.

Outcome: 4D. Understanding professional and ethical responsibility

Program graduates will have an understanding of professional and ethical responsibility as it applies to the aviation industry.

Measure: Graduating Student Survey - Understanding Professional and Ethical Responsibility
Program level Indirect - Survey

Details/Description:	Students will rate their knowledge gained with regard to understanding professional and ethical responsibility.
Criterion for Success:	80% of students surveyed will report that they are 'Very Much" or "Quite A Bit" prepared regarding this question.
Timeframe of Data Collection:	Most recent GSS that is available from ERAU Institutional Research (IR).
Key/Responsible Personnel:	Key/Responsible Personnel: 1) IR to disseminate data and publish report. 2) COA Assessment Coordinator to retrieve and analyze data. 3) AS Chair.

Measure: Student performance in course outcomes associated with ability to understand professional and ethical responsibility.
Program level Direct - Other

Details/Description:	Analysis of applicable student learning outcomes as diagrammed in the Taskstream curriculum map and attached Excel spreadsheet defining specific course outcomes associated with each program outcome. Aeronautical Science Courses included in the analysis are AS121, AS221, AS321, AS356, AS357, AS380, AS387, AS405, AS408 and AS410.
Criterion for Success:	80% or more of individual course outcome criteria analyzed shall pass the criteria stated in the Master Course Outline Assessment Document.
Timeframe of Data Collection:	Course assessment data from two prior semesters within the previous 3 semesters.
Key/Responsible	1) Course monitor responsible for data collection,

Personnel:	analysis and submission on university shared drive. 2) Assessment coordinator. 3) Aeronautical Science Chair.

Outcome: 5E. Communication in both technical writing and verbal skills

Program graduates will demonstrate that they are adequately prepared and have the ability to effectively communicate using technical writing and verbal communication skills.

▼ **Measure:** Graduating Student Survey - Technical Writing and Verbal Communication Skills
Program level Indirect - Survey

Details/Description:	Students will rate their knowledge gained with regard to communication in both technical writing and verbal skills.
Criterion for Success:	80% of students surveyed will report that they are 'Very Much" or "Quite A Bit" prepared regarding this question.
Timeframe of Data Collection:	Most recent GSS that is available from ERAU Institutional Research (IR).
Key/Responsible Personnel:	Key/Responsible Personnel: 1) IR to disseminate data and publish report. 2) COA Assessment Coordinator to retrieve and analyze data. 3) AS Chair.

▼ **Measure:** Student performance in course outcomes associated with communication.
Program level Direct - Other

Details/Description:	Diagrammed in the Taskstream curriculum map and attached Excel spreadsheet defining specific course outcomes associated with each program

outcome.

Aeronautical Science Courses included in the analysis are AS221, AS310, AS402, AS405, AS408, AS410, AS420 and AS435.

Criterion for Success:	80% or more of individual course outcome criteria analyzed shall pass the criteria stated in the Master Course Outline Assessment Document.
Timeframe of Data Collection:	Course assessment data from two prior semesters within the previous 3 semesters.
Key/Responsible Personnel:	1) Course monitor responsible for data collection, analysis and submission on university shared drive. 2) Assessment coordinator. 3) Aeronautical Science Chair.

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