

Assessment: Assessment Unit Four Column

Air Traffic Management

POA - Air Traffic Management, BS

College: Continuing Education

Department/School/Division: Aviation

Assessment Liaison: Todd P. Hubbard

Mission: Air Traffic Management

The mission of the Air Traffic Manager degree ensures students are immersed with a robust business management foundation that also includes training in all of the FAA's air traffic basics learning objectives so as to ensure the graduate is ready for a productive career as an air traffic control specialist. Graduates will possess an understanding of the ethical and responsible behavior required among the professionals in the local, regional, national and international aviation arena and within the organizational areas found within the Air Traffic Control system. The student's educational foundation will be enhanced through use of advanced ATC simulation scenarios to develop air traffic controller proficiency outcomes beyond what is necessary to enter the FAA Academy or begin on the job training at an Air Traffic Control facility. Through the curriculum and attendance at the University of Oklahoma the student will have the opportunity to study in a multi-cultural environment and obtain the knowledge which will allow the student to examine, evaluate and appreciate the economic, political, cultural, social, moral, and technological aspects of aviation and air traffic control. Graduates will be able to contribute positively to their organizations of employment and society through the varied roles and missions of being a professional air traffic controller

<i>Outcomes</i>	<i>Assessment Methods</i>	<i>Results</i>	<i>Use of Assessment Results</i>
ATM Outcome 1 - Ability to understand the mechanics of air traffic control within the national airspace system; Ability to understand the physiological effects on pilots and passengers aboard aircraft in the national airspace system; Ability to perform simple math problems when ensuring proper separation between aircraft; Ability to determine lead point for vectoring aircraft; Ability to understand the effects of weather on aircraft; Ability to separate aircraft using time and heading calculations; Ability to create	Direct - Examination - In Aviation Orientation (AVIA 1111) quiz measures student knowledge of basics about the national airspace system and the different types of airspace; quiz measures basic understanding of how aircraft are controlled by air traffic controllers; quiz measures understanding of how weather can affect the control of aircraft Performance Target: >85% Related Documents: Provost 2016 Assessment CCE		

<i>Outcomes</i>	<i>Assessment Methods</i>	<i>Results</i>	<i>Use of Assessment Results</i>
<p>a runway repair program by partnering with civil engineers; Standard of Excellence Score >85%</p> <p>Outcome Status: Active</p> <p>Student Learning Outcome Type: Student Learning</p> <p>Start Date: 05/28/2015</p>	<p>Aviation_Air Traffic Management.docx</p> <p>Provost Student Learning Outcomes Assessment 2017 Table of Data.docx</p> <p>Direct - Examination - In Aviation Safety (AVIA 2613) analysis of NTSB accident report measures student understanding of air traffic controller's role in unsafe actions leading to the accident</p> <p>Performance Target: >85%</p> <p>Related Documents:</p> <p>Provost 2016 Assessment CCE Aviation_Air Traffic Management.docx</p> <p>Provost Student Learning Outcomes Assessment 2017 Table of Data.docx</p>		
	<p>Direct - Performance - In Airport Traffic Procedures (AVIA 3213) labs measure students' ability to manage ground and air traffic at an airport in Class B, C, and D airspace; test measures time and distance calculation ability</p> <p>Performance Target: Performance standards for the safe control of traffic is 100% for a given period of time. As proficiency builds, student air traffic controllers should be able to manage more than 10 aircraft without making errors.</p> <p>Related Documents:</p> <p>Provost 2016 Assessment CCE Aviation_Air Traffic Management.docx</p>		
	<p>Direct - Performance - In IFR Air Traffic Procedures (AVIA 3313) labs measure students' ability to manage air traffic flying in the Instrument</p>		

<i>Outcomes</i>	<i>Assessment Methods</i>	<i>Results</i>	<i>Use of Assessment Results</i>
	<p>Flight Rules environment</p> <p>Performance Target: Performance standards for the safe control of traffic is 100% for a given period of time. As proficiency builds, student air traffic controllers should be able to manage more than 10 aircraft without making errors.</p> <p>Related Documents: Provost 2016 Assessment CCE Aviation_Air Traffic Management.docx</p> <p>Direct - Examination - In Crew Resource Management (AVIA 4423) team projects measure students' understanding of the interaction of air traffic control and pilots which leads to an aircraft accident</p> <p>Performance Target: >85%</p> <p>Related Documents: Provost 2016 Assessment CCE Aviation_Air Traffic Management.docx Provost Student Learning Outcomes Assessment 2017 Table of Data.docx</p>		
	<p>Indirect - Student Course Evaluation</p> <p>- Analysis of course and instructor ratings on a 5-point scale</p> <p>Performance Target: >4.0</p> <p>Related Documents: Provost 2016 Program Assessment Aviation Department Final Draft Sep27.docx Provost Student Learning Outcomes Assessment 2017 Table of Data.docx</p>		
	<p>Indirect - Survey - Analysis of senior exit survey data</p> <p>Performance Target: Training was effective and prepared graduates for</p>		

<i>Outcomes</i>	<i>Assessment Methods</i>	<i>Results</i>	<i>Use of Assessment Results</i>
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careers

Related Documents:

[Provost 2016 Program Assessment Aviation Department Final Draft Sep27.docx](#)

Direct - Presentation - In 1013 Intro to ATC, students wrote a reflective paper and then presented their reasons why they chose ATC as a career.

Performance Target: 80%

Related Documents:

[Provost Student Learning Outcomes Assessment 2017 Table of Data.docx](#)
[Provost 2016 Program Assessment Aviation Department Final Draft Sep27.docx](#)

Direct - Examination - In AVIA 1013, Introduction to Air Traffic Control, knowledge is tested over structure of the National Airspace System

Performance Target: 85%

Additional Notes: Students majoring in Air Traffic Management start with the Introduction to Air Traffic Control. Knowledge tests are used often in this course. Labs and team projects are features of more advanced courses in ATM.

Direct - Examination - In AVIA 1013 (Intro to Air Traffic Control), AVIA 1213 Basic Air Traffic Regulations, AVIA 3213 (Airport Traffic Procedures), AVIA 4013 (En Route Radar), and AVIA 4023 (TRACON Radad Lab) students take paper and pencil tests to measure student understanding of basic air traffic procedures at Airports, in the

Reporting Period: 2018 - 2019

Result Type: Inconclusive

1013 = low of 79%, average of 92%; 1213 = average of 92%; 3213 = low of 74.3, average 90%; 4013 = average of 86%; 4023 = average of 88% (09/27/2019)

Number of Students Assessed: 29

Use of Assessment Results: Poor performance in 1013 might indicate a future problem; however, it is an introductory course. Nevertheless, a review of the course is required when actual grades are below the target scores. We see similar behavior in 3213, where the lowest average grade for the written test was

Outcomes	Assessment Methods	Results	Use of Assessment Results
	<p>Terminal Area, in the En Route airspace structure, to include the regulations that pertain to each segment of air traffic control</p> <p>Performance Target: AVIA 1013 (80%); AVIA 1213 (85%); AVIA 3213 (80%); AVIA 4013 (85%); AVIA 4023 (80%)</p> <p>Additional Notes: FAA minimum score is 70%</p>	<p>Reporting Period: 2018 - 2019</p> <p>Result Type: Target Not Met</p> <p>Average grade = 62.5% (09/27/2019)</p> <p>Number of Students Assessed: 6</p>	<p>74.3, well below the target score. A review of this course is also required. All reviews are conducted within 30 days of the end of the assessment cycle. Other average scores are above the target score, so no further attention needs to be given these courses until the next faculty meeting in January 2020. (09/27/2019)</p> <p>Use of Assessment Results: Our special accreditation through the Aviation Accreditation Board International requires good performance in all the Student Learning Outcomes. SLO-E states, "communicate effectively, using both written and oral communication skills." The average grade of 62.5% automatically requires the instructor and the Lead Faculty member to discuss the explanation for the lower grade. This could be the result of an outlier, but nonetheless, a review will be conducted within 30 days of the end of the assessment cycle. The Lead Faculty member will continue to monitor this course for at least two more cycles. (09/27/2019)</p>
	<p>Direct - Examination - Written test in 3213, Airport Traffic Procedures.</p> <p>Performance Target: 80%</p>	<p>Reporting Period: 2018 - 2019</p> <p>Result Type: Target Not Met</p> <p>Average grade = 74.35% (09/27/2019)</p> <p>Number of Students Assessed: 4</p>	<p>Use of Assessment Results: Student performance was well below the target score (80%). Although these students would have passed an FAA test (minimum score = 70%), we train</p>

<i>Outcomes</i>	<i>Assessment Methods</i>	<i>Results</i>	<i>Use of Assessment Results</i>
	<p>Indirect - Survey - eValuate end of course survey for 2013, General Air Traffic Control Procedures Performance Target: 4.0</p>	<p>Reporting Period: 2018 - 2019 Result Type: Target Met 4.56 for course effectiveness; 5 for instructor effectiveness (09/27/2019) Number of Students Assessed: 4</p>	<p>our students to achieve a higher level performance than what is minimally required. Performance on practice quizzes leading to the test was at an average of 90%. This grade requires that the instructor and the Lead Faculty member discuss the plausible reason for the poor performance. This meeting will take place within 30 days of the end of the assessment cycle. The Lead Faculty member will watch the outcomes of this course for two cycles. Doing poorly on a written test indicates a lack of preparation on the part of the students, but other possibilities for poor performance could be the result of an outlier where one student did seriously worse than the other students. What makes this more serious is that the written test incorporated 11 Student Learning Outcomes on the special accreditation list of SLOs. We question whether the quizzes truly prepared the students for the types of questions on the test. (09/27/2019)</p> <p>Use of Assessment Results: All eValuate results are posted on the School of Aviation Studies website. We want our current and future students to be aware of the effectiveness of our program. We take student comments seriously and continue to improve our courses with the guidance of the</p>

Outcomes	Assessment Methods	Results	Use of Assessment Results
	<p>Indirect - Student Course Evaluation - eValue end of course survey for 3313, IFR Air Traffic Procedures Performance Target: 4.0</p>	<p>Reporting Period: 2018 - 2019 Result Type: Target Met 4.79 course effectiveness; 4.67 instructor effectiveness (09/27/2019) Number of Students Assessed: 10</p>	<p>students. (09/27/2019) Use of Assessment Results: All eValue scores are made public through the School of Aviation Studies website. Any score higher than 4.0 is acceptable. No further action is necessary for this course. (09/27/2019)</p>
<p>ATM Outcome 2 - Analyze and interpret data: Ability to determine rates of climb and descent, based on type of aircraft; Ability to understand the effect of a bad clearance on system safety; Ability to keep aircraft separated in high volume control zones; Ability to think critically; Standard of Excellence Score >85% Outcome Status: Active Student Learning Outcome Type: Student Learning Start Date: 05/28/2015</p>	<p>Direct - Performance - Airport Traffic Procedures (AVIA 3213) labs measure student ability to judge time and distance between aircraft, closure rates, and rates of climb and descent Performance Target: Effectiveness communication is measured by how efficient aircraft are controlled within a given column of airspace. Performance ratings can be Ineffective, Marginally Effective, Effective, and Very Effective. Performance targets for phraseology should be near perfect. Basic facts understanding should be higher than 85% Related Documents: Provost 2016 Assessment CCE Aviation_Air Traffic Management.docx Provost Student Learning Outcomes Assessment 2017 Table of Data.docx</p>		
	<p>Direct - Performance - IFR Air Traffic Procedures (AVIA 3313) labs measure student controller ability to keep aircraft separated in high volume control zones Performance Target: Effectiveness communication is measured by how</p>		

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	<p>efficient aircraft are controlled within a given column of airspace. Performance ratings can be Ineffective, Marginally Effective, Effective, and Very Effective. Performance targets for phraseology should be near perfect. Basic facts understanding should be higher than 85%</p> <p>Related Documents: Provost 2016 Assessment CCE Aviation_Air Traffic Management.docx Provost Student Learning Outcomes Assessment 2017 Table of Data.docx</p> <p>Direct - Examination - Crew Resource Management (AVIA 4423) team project assesses effect of high volumes of air traffic in control zones, as a condition faced by pilots already challenged by fatigue, stress, and mechanical failures</p> <p>Performance Target: Effectiveness communication is measured by how efficient aircraft are controlled within a given column of airspace. Performance ratings can be Ineffective, Marginally Effective, Effective, and Very Effective. Performance targets for phraseology should be near perfect. Basic facts understanding should be higher than 85%</p> <p>Related Documents: Provost 2016 Assessment CCE Aviation_Air Traffic Management.docx Provost Student Learning Outcomes Assessment 2017 Table of Data.docx</p>		

<i>Outcomes</i>	<i>Assessment Methods</i>	<i>Results</i>	<i>Use of Assessment Results</i>
	<p>Indirect - Student Course Evaluation - Analysis of course and instructor indicators on a 5-point scale Performance Target: >4 Related Documents: APR Aviation Self-study Final sept 2017.pdf Provost Student Learning Outcomes Assessment 2017 Table of Data.docx</p> <p>Indirect - Survey - Analysis of senior exit survey Performance Target: Training was effective and prepared graduates for careers Related Documents: APR Aviation Self-study Final sept 2017.pdf Provost Student Learning Outcomes Assessment 2017 Table of Data.docx</p>		
	<p>Direct - Performance - In AVIA 4013, En Route Air Traffic Control, students perform air traffic controller functions during a simulated En Route lab experience. Performance Target: 85% Additional Notes: AVIA 4013 and 4023 have replaced AVIA 4015, providing students with a more focused approach to air traffic control in the En Route and TRACON control structures.</p>		
	<p>Direct - Performance - In AVIA 4023, TRACON Air Traffic Control Simulation, students are given simulated traffic to control in the Terminal Radar Control airspace structure. Performance Target: 85% Additional Notes: AVIA 4023 and</p>		

Outcomes	Assessment Methods	Results	Use of Assessment Results
	<p>4013 replaced AVIA 4015, giving the students targeted performance as controllers in the Terminal Radar and En Route airspace structures .</p> <p>Direct - Examination - In AVIA 1213 (Basic Air Traffic Regulations) students are tested on knowledge of FAA regulations, but some questions require the student to analyze the air traffic situation</p> <p>Performance Target: 80%</p> <p>Additional Notes: FAA minimum passing grade is 70%</p> <hr/> <p>Direct - Examination - In AVIA 1213 (Basic ATC regulations) students complete a writing assignment on the importance of ATC regulations</p> <p>Performance Target: 80%</p>	<p>Reporting Period: 2018 - 2019</p> <p>Result Type: Target Met</p> <p>Performance on written tests was consistent (94.3%) and was well above the target score (80%). (09/27/2019)</p> <p>Number of Students Assessed: 6</p>	<p>Use of Assessment Results:</p> <p>Scores well above the target are indicative of either good students, good reviews before the test, or a combination of both. FAA regulations are straight-forward, but FAA test questions are not. Higher scores indicate that the instructor prepared the students for the FAA test. No further action is required until the general review of courses in January 2020. (09/27/2019)</p>
<p>ATM Outcome 3 - Work effectively in teams</p> <p>Ability to understand how that cultural differences might affect communication</p> <p>Outcome Status: Active</p> <p>Student Learning Outcome Type: Student Learning</p> <p>Start Date: 05/28/2015</p>	<p>Direct - Examination - In Crew Resource Management (AVIA 4423) students use the Culture Compass App to measure differences between any two cultures, to determine compatibility between pilots and air traffic controllers</p> <p>Performance Target: Students must accurately report findings, based on the relative values assigned by Culture Compass</p> <p>Related Documents:</p> <p>Provost Student Learning Outcomes Assessment 2017 Table of Data.docx</p> <hr/> <p>Direct - Project - Senior Capstone (AVIA 4713) team project to build</p>		

<i>Outcomes</i>	<i>Assessment Methods</i>	<i>Results</i>	<i>Use of Assessment Results</i>
	<p>realistic scenarios for pilot teams, where air traffic control is a feature, and where cultural influences are examined</p> <p>Performance Target: >85%</p> <p>Related Documents: Provost 2016 Assessment CCE Aviation_Air Traffic Management.docx Provost Student Learning Outcomes Assessment 2017 Table of Data.docx</p>		
<p>ATM Outcome 5 - Communicate effectively, using both written and oral communication skills Ability to communicate effectively, given FAA Order 7110.65; Ability to explain control strategies; Ability to keep calm while controlling many aircraft; Standard of Excellence Score >85%</p> <p>Outcome Status: Active Student Learning Outcome Type: Student Learning Start Date: 05/28/2015</p>	<p>Direct - Examination - Aviation Orientation (AVIA 1111) reflective writing allows the instructor to measure communication effectiveness</p> <p>Performance Target: Scores on Written and Oral presentations must exceed 80%</p> <p>Related Documents: Provost 2016 Assessment CCE Aviation_Air Traffic Management.docx Provost Student Learning Outcomes Assessment 2017 Table of Data.docx</p>		
	<p>Direct - Performance - Airport Traffic Procedures (AVIA 3213) labs measure language proficiency and oral communication skills</p> <p>Performance Target: Scores on Written and Oral presentations must exceed 80%</p> <p>Related Documents: Provost 2016 Assessment CCE Aviation_Air Traffic Management.docx Provost Student Learning Outcomes Assessment 2017 Table of Data.docx</p>		

<i>Outcomes</i>	<i>Assessment Methods</i>	<i>Results</i>	<i>Use of Assessment Results</i>
	<p>Direct - Performance - IFR Air Traffic Procedures (AVIA 3313) labs measure language proficiency and oral communication skills</p> <p>Performance Target: Scores on Written and Oral presentations must exceed 80%</p> <p>Related Documents: Provost 2016 Assessment CCE Aviation_Air Traffic Management.docx Provost Student Learning Outcomes Assessment 2017 Table of Data.docx</p>		
	<p>Direct - Project - Crew Resource Management (AVIA 4423) team projects measure oral communication effectiveness</p> <p>Performance Target: Scores on Written and Oral presentations must exceed 80%</p> <p>Related Documents: Provost 2016 Assessment CCE Aviation_Air Traffic Management.docx Provost Student Learning Outcomes Assessment 2017 Table of Data.docx</p>		
	<p>Direct - Examination - Aerospace Ethics (AVIA 4663) four papers measure writing effectiveness</p> <p>Performance Target: Scores on Written and Oral presentations must exceed 80%</p> <p>Related Documents: Provost 2016 Assessment CCE Aviation_Air Traffic Management.docx Provost Student Learning Outcomes Assessment 2017 Table of Data.docx</p>		
	<p>Direct - Project, Research/Writing -</p>		

<i>Outcomes</i>	<i>Assessment Methods</i>	<i>Results</i>	<i>Use of Assessment Results</i>
	<p>Senior Capstone (AVIA 4713) project teams are judged on their ability to write a good statement of work and then to clearly present their project results in an oral presentation</p> <p>Performance Target: Scores on Written and Oral presentations must exceed 80%</p> <p>Related Documents: Provost 2016 Assessment CCE Aviation_Air Traffic Management.docx Provost Student Learning Outcomes Assessment 2017 Table of Data.docx</p> <p>Direct - Examination - Tests Performance Target: >80%</p> <p>Related Documents: Provost Student Learning Outcomes Assessment 2017 Table of Data.docx Provost 2016_Program Assessment Aviation Department Final Draft Sep27.docx</p>		
	<p>Direct - Performance - In AVIA 4013, En Route Air Traffic Control Simulation, students simulate controlling aircraft in En Route airspace.</p> <p>Performance Target: 85%</p> <p>Additional Notes: AVIA 4013 and 4023 have replaced AVIA 4015.</p>		
	<p>Direct - Performance - In AVIA 4023, TRACON Air Traffic Control Simulation, students control aircraft in the Terminal Radar Control airspace structure</p> <p>Performance Target: 85%</p> <p>Additional Notes: AVIA 4023 and 4013 have replaced AVIA 4015</p>		
	<p>Direct - Project, Research/Writing -</p>	<p>Reporting Period: 2018 - 2019</p>	<p>Use of Assessment Results: The</p>

<i>Outcomes</i>	<i>Assessment Methods</i>	<i>Results</i>	<i>Use of Assessment Results</i>
	<p>Writing assignment regarding airport traffic procedures for 3213, Airport Traffic Procedures.</p> <p>Performance Target: 80%</p>	<p>Result Type: Target Met</p> <p>The average grade on the writing assignment = 81.25% (09/27/2019)</p> <p>Number of Students Assessed: 4</p>	<p>average grade is above the target, but if other writing assignments in other ATM courses are considered, there appears to be a trend in poor performance on writing assignments. In 1213, the average score on the writing assignment was 62.5%. However, when compared with other years, the writing performance was higher in 2015 (93.8%) and in 2016 (92%). These same students performed better in writing assignments in 4663, Aerospace Ethical Issues (89%) and in 4713, Capstone (91.8%). We will monitor this course for two cycles before we give the green light. The Lead Faculty member will ask the instructor to provide a written explanation via email on why the writing assignment grade was just above the target. (09/27/2019)</p>
<p>ATM Outcome 6 - Engage in and recognize the need for life-long learning</p> <p>Ability to understand the benefit of experience when controlling aircraft;</p> <p>Ability to understand how that professional development is a life-long goal, not a short term goal</p> <p>Outcome Status: Active</p> <p>Student Learning Outcome Type: Student Learning</p> <p>Start Date: 05/28/2015</p>	<p>Direct - Examination - In Aviation Orientation (AVIA 1111) quizzes over each presentation capture not only knowledge, but also attitudes toward all elements of the aerospace industry</p> <p>Performance Target: >85%</p> <hr/> <p>Direct - Project, Research/Writing - In Aviation Safety (AVIA 2613) analysis of NTSB accident reports create a lifelong process for examining all aspects of aircraft accidents and incidents</p> <p>Performance Target: >85%</p> <hr/> <p>Direct - Performance - In Career</p>		

<i>Outcomes</i>	<i>Assessment Methods</i>	<i>Results</i>	<i>Use of Assessment Results</i>
	Development (AVIA 3013) practicing professionalism at an instructional formal dinner at the Union Performance Target: 80%		
	Direct - Performance - In Airport Traffic Procedures (AVIA 3213) professionalism in using precise phraseology during lab sessions promotes lifelong habits Performance Target: >85%		
	Direct - Performance - In IFR Air Traffic Procedures (AVIA 3313) professionalism in using precise procedures during lab sessions promotes lifelong habits Performance Target: >85%		
	Direct - Examination, Oral - Crew Resource Management (AVIA 4423) classroom discussion on mindset for pilots prepare students for team projects where professionalism is examined CRM Rubric Team projects for CRM rubric: Use of four-part outline of work; Knowledge of NTSB accident report: Comprehension of human factors experts' analysis of NTSB report; Identification of Omitted Behavioral Markers for each Phase of Flight; Proper analysis of why the behavioral markers were omitted Performance Target: >85%		
	Direct - Examination, Comprehensive/General - Aerospace Ethics (AVIA 4663) students complete a matrix, based on a scenario where ethics are violated, to determine how to		

<i>Outcomes</i>	<i>Assessment Methods</i>	<i>Results</i>	<i>Use of Assessment Results</i>
	<p>maneuver in a politically charged environment</p> <p>Performance Target: 85%</p> <p>Direct - Project, Research/Writing - Senior Capstone (AVIA 4713) habit patterns for project management success are practiced in team projects, where students solve real problems in the aerospace industry</p> <p>Capstone Rubric</p> <p>Team projects for Capstone rubric: Examination of the Problem; Statement of Objectives; Statement of Work; Fulfillment of Objectives; Statement of Deliverables; Final Presentation</p> <p>Performance Target: >85%</p> <hr/> <p>Indirect - Student Course Evaluation</p> <p>- eValueate</p> <p>Performance Target: >4</p> <hr/> <p>Direct - Project, Research/Writing -</p> <p>In AVIA 4713, Senior Capstone Projects</p> <p>Performance Target: 80%</p> <p>Additional Notes: Students solve real world problems and produce project reports, give presentations, and meet regularly with their clients and customers</p> <hr/> <p>Direct - Examination - In AVIA 1013, Introduction to Air Traffic Control, knowledge is tested on purpose of air traffic control in the United States</p> <p>Performance Target: 85%</p>		
<p>ATM Outcome 7 - Assess contemporary issues</p> <p>Ability to read about contemporary</p>	<p>Direct - Examination - In Airport Traffic Procedures (AVIA 3213) a paper assignment was used to</p>		

<i>Outcomes</i>	<i>Assessment Methods</i>	<i>Results</i>	<i>Use of Assessment Results</i>
<p>issues in flight and on the ground and discuss plausible solutions to issues that threaten system safety</p> <p>Outcome Status: Active Student Learning Outcome Type: Student Learning Start Date: 05/28/2015</p>	<p>address contemporary issues air traffic management, such as the effect of NextGen on future air traffic controller training</p> <p>Performance Target: >85%</p> <p>Direct - Examination - In IFR Air Traffic Procedures (AVIA 3313) a test covering NextGen benefits and risks Performance Target: >85%</p> <hr/> <p>Indirect - Survey - Survey of attitudes toward NextGen development Performance Target: >4</p>		
<p>ATM Outcome 8 - Use the techniques, skills and modern technology necessary for professional practice Ability to use electronic devices while controlling aircraft. Excellence Score >85%</p> <p>Outcome Status: Active Student Learning Outcome Type: Student Learning Start Date: 05/28/2015</p>	<p>Direct - Performance - In Airport Traffic Procedures (AVIA 3213) tower simulator labs require students to use simulation of real events, while also talking on the radio and maintaining an electronic strip for each aircraft with a flight plan</p> <p>Performance Target: >80%</p> <p>Direct - Performance - In IFR Air Traffic Procedures (AVIA 3313) terminal approach procedures are tested in the terminal approach lab, where air traffic control students remain in contact with pseudo pilots via radio, and keep track of aircraft position through an electronic strip device Performance Target: >80%</p> <hr/> <p>Direct - Project, Research/Writing - In Senior Capstone, project team for CRM LOFT scenarios created a flight scenario for two pilots and then tested their ideas in the simulator Performance Target: >80%</p>		

<i>Outcomes</i>	<i>Assessment Methods</i>	<i>Results</i>	<i>Use of Assessment Results</i>
	<p>Indirect - Survey - Survey attitudes and motivation toward the use of electronic devices Performance Target: >4</p> <p>Direct - Performance - In 4013, En Route ATC and 4023, TRACON ATC simulation is used to determine knowledge/skill integration Performance Target: 85% Additional Notes: 4013 and 4023 were created to replace 4015</p>		
<p>ATM Outcome 9 - Assess the national and international aviation environment Ability to understand the differences between the FAA and ICAO ways of controlling aircraft; Ability to understand how cultural differences might cause an unsafe situation if the controller does not mitigate threats and risks</p> <p>Outcome Status: Active Student Learning Outcome Type: Student Learning Start Date: 05/28/2015</p>	<p>Direct - Examination - In Airport Traffic Procedures (AVIA 3213) test used to determine student knowledge of FAA and ICAO ways of controlling aircraft Performance Target: FAA expects >70%; Department expects >85%</p> <p>Direct - Examination - In IFR Air Traffic Procedures (AVIA 3313) test used to determine student knowledge of differences between FAA Order 7110.65 and ICAO 4444. Performance Target: FAA expects >70%; Department expects >85%</p> <p>Direct - Examination - Crew Resource Management (AVIA 4423) test measures understanding of differences in phraseology between FAA and ICAO controller that led to the Tenerife accident between KLM and Pan Am 747 aircraft Performance Target: FAA expects >70%; Department expects >85%</p> <p>Indirect - Survey - Survey attitudes toward international and maybe universal air traffic control system Performance Target: >4</p>		

<i>Outcomes</i>	<i>Assessment Methods</i>	<i>Results</i>	<i>Use of Assessment Results</i>
	<p>Direct - Performance - In 4013, En Route ATC students use simulators to practice controlling air traffic Performance Target: 85%</p> <p>Additional Notes: 4013 replaced a portion of the form 4015 course</p> <p>Direct - Performance - IN 4023, TRACON ATC students use the simulator to control air traffic Performance Target: 85%</p> <p>Additional Notes: 4023 replaces a portion of the former 4015 course</p>		
<p>ATM Outcome 10 - Apply pertinent knowledge in identifying and solving problems Ability to accurately apply rules to stabilize air traffic in high volume airspace; Standard of Excellence Score >85%</p>	<p>Direct - Performance - In Airport Traffic Procedures (AVIA 3213) lab used to determine student ability to stabilize aircraft in high volume airspace Performance Target: FAA expects >70%; Department expects >85%</p>		
<p>Outcome Status: Active Student Learning Outcome Type: Student Learning Start Date: 05/28/2015</p>	<p>Direct - Performance - In IFR Air Traffic Procedures (AVIA 3313) lab used to determine student ability to stabilize aircraft in high volume airspace Performance Target: FAA expects >70%; Department expects >85%</p>		
	<p>Direct - Project - Crew Resource Management (AVIA 4423) team project measured student awareness of problems associated with congested airspace Performance Target: >85%</p>		
	<p>Indirect - Survey - Survey of student attitudes and motivation toward operations in congested airspace Performance Target: >4</p>		
	<p>Direct - Project - Program development project on real world</p>		

Outcomes	Assessment Methods	Results	Use of Assessment Results
	<p>problems in aerospace</p> <p>Performance Target: In 4713, 85%</p> <p>Direct - Performance - 4013, En Route Radar, has a lab component. Students practice controlling aircraft in the En-Route environment.</p> <p>Performance Target: 80%</p>	<p>Reporting Period: 2018 - 2019</p> <p>Result Type: Target Met</p> <p>Student average performance was measured at 91.5% (09/27/2019)</p> <p>Number of Students Assessed: 9</p> <p>Related Documents:</p> <p>AVIA 4013 AABI Self Study Questionnaire (1).docx</p> <p>AVIA 4023 AABI Self Study Questionnaire (1).docx</p>	<p>Use of Assessment Results: We compared the lab grades for 4013 (En-Route Radar) with lab grades in 4023 (TRACON Radar, N=4). In 4013, average lab grades were at the 91.5% level. In 4023, average lab grades were at the 94.9% level. Both courses are taken in a student's senior year, after other lab experiences in the lower division courses. This affirms the lead air traffic faculty member's notion that with practice student performance will continually get better. It appears this is true. No further action is required. (09/27/2019)</p>
<p>ATM Outcome 11 - Apply knowledge of business sustainability to aviation issues</p> <p>Ability to operate in an IFR environment, while saving fuel and time</p> <p>Excellence Score >85%</p> <p>Outcome Status: Active</p> <p>Student Learning Outcome Type: Student Learning</p> <p>Start Date: 05/28/2015</p>	<p>Direct - Performance - In Airport Traffic Procedures labs allow students to manage aircraft in a way that saves fuel and time</p> <p>Performance Target: FAA expects >70%; Department expects >85%</p> <hr/> <p>Direct - Performance - In IFR Air Traffic Procedures labs allow students to manage aircraft in the IFR environment.</p> <p>Performance Target: FAA expects >70%; Department expects >85%</p> <hr/> <p>Indirect - Survey - Survey attitudes toward air traffic control</p> <p>Performance Target: >4</p>		
<p>Professionalism - practices professional deportment</p> <p>Outcome Status: Active</p>	<p>Indirect - Survey - Students put a check in boxes beside numerous descriptors of professionalism that</p>		

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<p>Student Learning Outcome Type: Student Learning Start Date: 08/21/2019</p>	<p>they feel describe them professionally. Performance Target: A majority of the descriptors of professionalism have been selected. Additional Notes: This new Student Learning Outcome is the direct result of years of collecting data on examples of professionalism in aviation student behavior Courses that directly relate to this outcome are AVIA 1111, Aviation Orientation; AVIA 4663, Ethics; AVIA 4713 Capstone; AVIA 3013, Career Development; and, AVIA 4423 CRM. The rubric closely matches the professionalism rubric published by the National Business Aviation Association. Related Documents: Rubric - Professionalism (1).doc Indirect - Interview - Faculty members will review each student's professionalism record and will then schedule a personal interview. Performance Target: Growth as an aviation/aerospace professional</p>		