

Submission date: 1/31/2020

Program/s in this review: Aviation Administration AAS

Specialized accrediting agency (if applicable): _____

Campuses where the program is delivered: Anchorage

Members of the program review committee:

<u>Name</u>	<u>Title</u>	<u>Campus</u>
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1. Centrality of Program Mission and Supporting Role (700 words or less)

The focus of the AAS in Aviation Administration degree is to provide students a foundation in aviation management that will allow them to act as entry level managers in any aviation company. In the context of the missions of both UAA and the Community and Technical College (CTC), the AAS in Aviation Administration meets the operational needs of the Alaskan aviation workforce. Aviation Administration provides a foundation from which to enter aviation positions that do not require a Federal Aviation Administration (FAA) certificate.

Many of the students that enroll in the AAS are working professionals that have experience in the aviation field but need a degree to advance within a company. Graduates of the AAS Aviation Administration degree fill niches that pilots, controllers, and maintainers do not fill; specifically, the operational management at airports, airlines, and corporate flight departments. While a national focus has been put on the shortage of pilots and maintainers in the aviation industry, there is also a shortage of managers that work the logistics of operating flight departments and in support industries. The managerial shortages will become more acute as pilots and maintainers remain as practitioners. Our upper division aviation management courses teach specific skills that address the unique challenges in aviation management even without the full bachelor's degree. The program, while focused on management, applies well beyond just traditional managerial issues. Instruction includes aviation law and regulations, Aviation Safety, a Private Pilot Ground class, and operations courses. These unique courses are not taught anywhere else in the UA system.

The program's core set of competencies flow into the bachelor program and are co-taught to those students who are working toward the Bachelor of Science in Aviation Technology (BSAT). This overlap allows AAS students to transition to the BSAT, which many of them do. There have also been several airlines in the past that have arranged hiring workshops with the Aviation Technology Division (ATD) to prepare students for direct employment including students from this program. Additionally, there are internships available to both the AAS and BSAT students.

Most people have heard of the current issues with pilot and maintainer shortages within the industry. However, there has been little press about the operational side of aviation as there will also need to be more airline and airport managers. The piloting and maintainer shortages have led to fewer pilots and aviation maintenance technicians changing from line duty to management positions, leaving a gap in logistics and planning at aviation companies. Another demand identified is the development of the emerging Unmanned Aircraft Systems (UAS) industry worldwide. This new industry will require aviation administration professionals and was not included in AKDOL statistics and forecasts. Finally, there is a significant need for professionals that have knowledge of Safety Management Systems and management.

2. Program Demand (including service to other programs), Efficiency, and Productivity (7 year trend; 1400 words or less)

The AAS in Aviation Administration has seen degrees awarded trending upward. However, in 2019 the degrees awarded dropped to three. One possible reason this occurred is we streamlined the AAS curriculum to be more aviation-centric and aligned it better with the bachelor's degree. Many of the students have transitioned to the bachelor's degree rather than complete the associates. As these courses are shared by the AAS and BSAT, they have solid enrollment and have a high average pass rate, maintaining an average of 93.2%. The students are able to complete our courses the first time attempted, and it should be noted that while we have a high pass rate, our students meet our assessment goals and are respected in the industry. We expect the course pass rates to continue to remain high.

We have a higher than normal number of credits to complete the curriculum, with the average being 77, though this number is lower in the 2019 academic year. It is possible that the curriculum is leading students to start their bachelor's degree before they finally graduate with the AAS. Beginning last year the number of credits needed to complete the degree is trending downward, possibly because we now have more overlap with the BSAT.

Over the last seven years we have seen a wide variation in the number of majors. We peaked at 41 in 2014, but have declined down to 28 in 2019, with a recorded low of 9. Part of the issue stems from the overlap with the degree-required business courses. Students had trouble registering for the business courses and this caused some students to leave the program. Last year we adjusted the curriculum to be more aviation-centric, having less reliance on the offerings of the College of Business and Public Policy, which we expect to stabilize the enrollments in the program. With the decrease in majors we also saw a drop-in student credit hour production. The student credit hour production has been varied over the last seven years. The highest was in 2015 at 2382, and last year was 2087. However, when compared to our continued increase in credit hours per full time equivalent faculty it shows that we have less cost associated with the credit reduction. Aviation management courses are, in general, some of our most efficient courses with larger student to instructor ratios. We are also preparing to move a few aviation management courses to online delivery. Offering online courses should also increase credit hours.

The enrollment vs. FTEF has had a positive trend over the last seven years with last year being the highest at 152.2 enrollment per faculty. One possible reason for this trend is the limited dedicated

faculty to the Aviation Management program. Many division faculty teach across disciplines, creating flexibility and capability to cover courses. Our classes are also used in both the associates and bachelors programs for three out of the four main areas of study in the division. This overlap also leads to our classes being reasonably full, so we continue to have a positive trend in class size. Currently, we are maintaining an average of 18 students per course and expect those numbers to continue to increase. We have increased our course caps and are looking at the number of offerings annually to not only meet demand but also increase efficiency.

We have also increased our tuition per student credit hour, with last year being our highest at 231 dollars per student credit hour. We will continue to use scheduling and course adjustments to improve this statistic. Our demand is primarily internal to the division. While our courses could be marketed to other departments throughout the university, their specialized nature typically appeals only to students interested in aviation degrees. As such, aviation management courses are used in three of the four areas taught in the division and will continue to be necessary for each of those majors and degrees.

3. Program Quality, Improvement and Student Success (1500 words or less)

As part of our review process over the last year we have instituted a number of changes to the AAS degree. Our focus shifted from a generic business-centered approach to a more specific aviation management core. The new focus brought the degree in line with the BSAT and made the AAS a stackable credential. As this is a 2 year degree, there is limited time and options for what are classified as 'High Impact Practices' in instruction. We do however use simulation in our management classes, specifically the Airline and Airport Operations courses. The simulation programs give students the opportunity to make real decisions on operations, such as which aircraft to buy or which businesses to have at an airport and see the operational effect of those choices. The division also has improved our internship offerings to students in both the AAS and BS level management programs, including opportunities at Merrill Field.

We have a very high employment rate and our students are regarded as some of the most knowledgeable in Alaska. This creates one of our points of pride as many of our student's gain employment even before they graduate. All of our students are sought out by the aviation industry throughout Alaska and beyond. As such we monitor our Student Learning Outcomes closely, any changes that are indicated in our assessments are promptly addressed. Our Program Student Learning Outcomes are:

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- Demonstrate technical knowledge of aircraft operating limitations and performance
- Demonstrate knowledge of aviation law and regulations, and of the legal issues affecting the aviation industry.
- Demonstrate knowledge of the issues affecting aviation safety and safety management.
- Demonstrate knowledge of basic business management skills and supervisory techniques.

Our assessment of the program shows that we are maintaining a high level of knowledge and performance. The students are able to address aviation management concerns, understand basic aviation safety assessments and human factors to a better than 80% average. However, our largest finding over the last seven years was a lack of knowledge and understanding of aircraft operating limitations and performance. Many students did not see how aircraft performance applied to management, and the courses were not demonstrating how to use aircraft performance and limitations to make key business decisions. To address the shortcoming, we again used simulation in courses. If the students chose the wrong type of aircraft for a specific route, they would lose money on that route and, if done too often, go bankrupt. The airline operations simulation forced students to examine their individual fleet composition and usage. The simulation was such a success we are currently testing the use of an airport simulator as a tool to look at the issues associated with running airports of varying sizes. We also expanded the emphasis on fleet planning and aircraft choice in the Airline and Air Service courses. This has led to an improvement in the assessed measures.

We have also been adjusting our focus toward safety assessment and safety management systems. There have been several recent changes to the FAA and industry safety expectations in the United States. By 2018 all airlines were required to have, at a minimum, an FAA approved Safety Management System in place. The knowledge and application of these systems have been integrated into the Aviation Safety course. Our safety and human factors courses emphasize these topics and as such, our students have emerged as leaders in safety improvements to Alaskan aviation.

We are also looking to move the entire AAS degree to online delivery. The curriculum and requirements lend themselves well to this method, though the transition may require a few accommodations to account for the simulation element. Initially we have begun offering ATA A134 online once a year and next academic year we will be looking at offering most of the foundational courses online. We have also noticed that most of our students continue to move on to bachelor's degrees. It is our goal to make sure students are prepared to continue on to a bachelor's degree regardless of delivery method.

Finally, AAS and BS Aviation Management students have a high employment rate, both with government and private organizations. The AAS students are often currently employed and are working on a career advancement credential. With the changes instituted last year, the associate degree is now in-line with the BSAT degree. This will allow students to progress more seamlessly between the two programs and further enhance their employment/advancement opportunities.

4. Program Duplication / Distinctiveness (300 words or less)

There is no aviation management duplication within the UA system.

5. Summary Analysis (500 words or less)

The faculty and staff of the Aviation Technology Division have been working to improve all of our degree programs over the last seven years. During that time, we have refined and improved our program emphasis and modernized our curriculum. Our AAS in Aviation Administration is one of the

programs that often acts as the first step for aviation students unsure about attending college. With a curriculum that is not intimidating, yet rigorous, the opportunities afforded by this degree are limited only by the goals of the student. This is also an excellent degree for aviation business owners looking to improve their employee's knowledge and value to the company.

Our goal now is to continue examining the program and make improvements in response to industry needs. The AAS in Aviation Administration is the best candidate to be completely online and as such, over the next two years we intend to have all the courses available for online delivery. The primary pedagogy will be asynchronous to make it easier for students who are working, in different locals, or with limited/periodic internet access to be successful.