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Date: March 9, 2020

To: Cathy Sandeen, Chancellor

From: John Stalvey, Interim Provost

Cc: Denise Runge, Dean, Community & Technical College
Paul Herrick, Director, Aviation Technology Division
Ray Weber, Associate Professor, Aviation Technology
Brian Keller, Assistant Professor, Aviation Technology
Susan Kalina, Vice Provost for Academic Affairs
Claudia Lampman, Vice Provost for Student Success

Re: **AY20 Expedited Program Review Findings – Professional Piloting AAS**

I have reviewed the dean's findings and the completed Expedited Program Review Template for the Professional Piloting AAS. The Provost's Office did not receive an Optional Program Response Form from the program.

Recommendations

My recommendation is to accept the decision and recommendations of the dean with the additional commentary that the program explore the issues with retention as well as ways to help students understand the cost of the program prior to admission. An interim progress report on all recommendations is due to the dean by March 1, 2021. The dean will submit a review along with the program's interim progress report to the provost by April 1, 2021. A follow-up Program Review will be conducted in AY22.

Decision

Recommend Continued Review

UAA Community & Technical College
University of Alaska Anchorage

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Date: February 2, 2020

To: John Stalvey, Interim Provost

From: Denise Runge, Dean

Re: AY20 Expedited Program Review Findings

Program/s in this review: Professional Piloting (AAS)

Specialized accrediting agency (if applicable): none, but programs fall under certification requirements of the Federal Aviation Administration (FAA)

Campuses where the program is delivered: Anchorage

Members of the program review committee:

- Paul Herrick, Director
- Ray Weber, Associate Professor
- Brian Keller, Assistant Professor

Centrality of Program Mission and Supporting Role The Professional Piloting program is very well-aligned with the mission of UAA and of the CTC. The program meets a clear workforce need in an industry designated by the Department of Labor as "High Demand," preparing individuals who obtain immediate employment with air carriers or in related piloting positions. It enjoys strong external partnership support, serving the needs of industry and of its enrolled students.

Program Demand (including service to other programs), Efficiency, and Productivity Demand for the program has grown during the review period despite general enrollment declines at UAA, and the program has taken steps to become increasingly efficient. The programs had an average of 56 majors per year, with 64 during the 2019 review year. While by its nature pilot education is expensive, the program's costs are in line with those of other pilot training programs, both within Alaska and in the lower 48. For 2019, the student credit hours per full time equivalent faculty member, or SCH/FTEF was 465.9. Its tuition revenue per credit hour is $219.4 and its cost per credit hour is $211.0 for a ratio of 1.04, indicating the program is covering its direct instructional costs. Other costs, including the indirect costs of providing in-house flight training, are high and recent analysis indicates they may not be fully covered by student flight fees. The program continues to examine these costs and seek alternatives. Overall the program is experiencing constrained capacity while keeping its direct instructional costs relatively low.

Program Quality, Improvement and Student Success The quality of the program is evidenced by its FAA certification, and by industry support, including high degree of job

placement for its graduates. The program and its curriculum must meet the strict standards of the FAA and must regularly update to remain in compliance. The program has only graduated an average of 3 students per year, and as faculty explain in their review, non-completion is exacerbated by the option to move seamlessly into the Bachelor of Science in Aviation Technology (BSAT) (good for the student, but give the appearance of a “failure” from a graduation rate standpoint for the AAS program) and by the ability to be hired into various aviation positions prior to completion of an AAS degree.

Following a recent regular program review, the faculty revised the curriculum to better align it to the BSAT degree. As the review committee notes, several major challenges remain that are partially beyond the program’s control, especially an insufficient number of available Certified Flight Instructors, and flight training costs leading to delayed enrollment, as students often stop-out to work in order to earn money for their flight training.

Program Duplication / Distinctiveness Duplication: UAF offers a pilot training program, as do a number of private piloting schools in the state. Distinctiveness: The UAA program is the only post-secondary program in Alaska that operates under FAA regulations (part 141) with an R-ATP authorization, which allows our graduates to gain their Airline Transport Pilot certificate with only 1,250 flight hours, saving them substantial time and money in potential flight costs. Further, as the only part 141 post-secondary institution, our in-house flight program affords our students and graduates the opportunity to serve as Certified Flight Instructors (CFI) with UAA students, earning flight hours toward their R-ATP along with their wages. This creates a substantial win-win, filling a need for current students, for UAA, and for the graduate CFI.

Commendations and Recommendations Commendations: The program is commended for its outreach and partnership efforts in recent years, including its work with the Alaska Air Carriers, school districts, and others on alternative pathways such as concurrent enrollment opportunities and internships. Recommendations: The program should continue to evaluate all available options to increase degree completion rates for its students. The program should work closely with its Student Success Advisor, industry partners, advancement/development staff, and financial aid staff to support a variety of options to assist students in completing their flight training in a timely fashion. The program should continue to explore alternative modes of delivering its programs in order to further enhance productivity and efficiency.

Decision *Continued Review:* Program is required to address specific issues and to undergo another review within the next two academic years.

Submission date: 1/31/2020

Program/s in this review: Professional Piloting AAS

Specialized accrediting agency (if applicable): Federal Aviation Regulation Part 141

Campuses where the program is delivered: Anchorage

Members of the program review committee:

Name	Title	Campus	Email
Ray Weber	Associate Professor	Anchorage	rweber15@alaska.edu
Brian Keller	Assistant Professor	Anchorage	blkeller3@alaska.edu
Paul Herrick	Director	Anchorage	peherrick@alaska.edu

1. Centrality of Program Mission and Supporting Role (700 words or less)

In the context of the missions of both UAA and the Community and Technical College, the AAS in Professional Piloting meets the foundational piloting needs of Alaska's workforce. Without a healthy and robust aviation system, the State of Alaska, as we know it, does not exist. Aviation is the only year-round transportation mode available in much of rural Alaska. Over 200 Alaskan communities are off the road system, requiring aircraft and pilots to transport critical goods and people.

The focus of the AAS Professional Piloting degree is to provide students a foundational knowledge of the aviation industry and mastery of the skills required for certification as an entry level commercial pilot for small air carriers. The degree is structured such that it serves two main demographics, those that already have a degree, and the traditional student, each with a goal of being a commercial pilot. The program is designed to allow students with a degree to receive a foundation in aviation as well as attain pilot certifications. Traditional students typically start in the AAS but often continue to the Bachelor of Science in Aviation Technology (BSAT) Professional Piloting emphasis. The AAS curriculum currently is 100% in line with the BSAT which serves to shorten the graduation path for those who continue onto the bachelors.

During the Alaska Air Carriers annual convention in March 2015, many Alaskan aviation industry leaders indicated they must recruit from the lower 48 to fill their pilot rosters but they prefer graduates of our program as pilots from and for Alaska. This reflects the difficulty the industry faces due to an overall pilot shortage and the goal of the AAS is to provide those pilots. We also work closely with the Federal Aviation Administration (FAA), our certifying government agency, as one of only four 14 CFR Part 141 Pilot Schools in Alaska and the only one that offers a comprehensive education as well as pilot certificates. The FAA awarded UAA institutional authority to certify its graduates as eligible for a Restricted Airline Transport Pilot (R-ATP) Certificate, needed to fly for the major air carriers (airlines), with reduced aeronautical experience. UAA graduates are eligible to earn their R-ATP with as few as 1250 flight hours with the AAS rather than 1500 flight hours required for non-UAA graduates. This allows the graduate to begin working for an airline sooner and less expensively than a non-UAA graduate.

Currently, with the exception of VA students, we have minimal external funding available for flight training. However, UAA Aviation has received well over $1,000,000 in cash and in-kind contributions over the last five years. Much of these are in the way of scholarship funds or course materials that would be nearly impossible to get any other way. Examples include over $100,000 in aviation scholarship donations, $20,000 contribution to the Aviation General Support fund, and General Operations Manuals from several local and national airlines. We

are also working on a number of flow-through programs with airlines such as Ravn and Horizon Air. It should be noted that our costs associated with flight training are covered through student fees.

Professional Piloting graduates of either the AAS or BSAT Professional Piloting program possess the professional credentials necessary to immediately go to work as commercial pilots for smaller air carriers that operate under 14 CFR Part 135 and many carriers in Alaska are Part 135 operators. Commercial pilots (transportation workers) are classified as high demand and all of our piloting graduates possess FAA Commercial Pilot Certificates with Instrument Ratings. With the continued estimated pilot needs exceeding half a million over the next 10 years, our students will continue to find employment. Overall, we maintain a near perfect job placement after graduation, and sometimes before.

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

Over the last seven years we have had a positive trend in most assessed areas. However, last year we did have a decrease in enrollments. This was largely due to our limiting enrollments into the flight courses due to capacity limitations on aircraft and flight instructors. Over the last several years there has been a lack of qualified flight instructors in the industry, but especially in Alaska. The instructor shortage parallels the shortage of airline pilots, leading airlines to recruit flight instructors more than ever before resulting in less total flight instructors available. However, through judicious recruiting of our own students as instructors and adjusting our scheduling process over the last year we are achieving improved completion rates which also allows more students into the program. Another reason that the enrollments prior to last year have been increasing was due to a previous advising method which placed students into the AAS as a starting point. We now recommend students who are looking primarily to get their piloting credentials, but already had a degree, to take the AAS. Even with that recommendation, most students choose to do the BSAT and we advise them accordingly. Because of the associated flight courses, most if not all the internal demand is associated with the aviation program, helping us with advising and guiding students.

Since our enrollments were reduced last year, like many of the degrees in CTC and university, the SCH of the program was lower as well but, the AAS in piloting was trending upward for several years previous. Our course pass rates associated with the flight courses tend to be lower and are mostly due to students not progressing through a course in a timely manner. Flight training requires currency to maintain skill proficiency and sometimes students will start a course and then stop for a period due to a lack of funds, weather, or scheduling conflicts. However, our flight course completion rate is on par with the aviation industry. The non-flight aviation courses within the AAS have a higher pass rate than average though.

We, as explained, had a slight drop last year in our instructional productivity, with a 170.5 SCH/FTFE. Again, we restricted our enrollments, so this means fewer students per instructor. However, we had been seeing an increase over the six years before with the seven year average at a respectable 197.8 SCH/FTEF. Our enrollment verses FTEF, as expected, has decreased as well, however, the seven year trend has been positive. Additionally, like much of the CTC, most of our students do not attend full time. A majority of part-time students has caused a relatively flat level of FTES/FTEF, with last year being the lowest at 6.5 and the highest only being 9. We have a low average class size showing as well, however this is to be expected. Flight instruction is, of necessity, one-on-one in actual aircraft as per the regulatory requirements. Flight instruction also leads to a higher Cost/SCH, though we are lower now than our highest point. Flight fees associated with the courses are used to offset these costs to a breakeven point.

The overall trend in the degrees awarded continues to be positive. Last year we had the most degrees awarded in the review period with 5. There are reasons for our lower degree awards compared to other AAS programs in the university, the most common being students that transfer to the BSAT before completing the AAS. Secondly, once a student receives their commercial pilot certificate, they are legally allowed to fly for hire and can be hired by any number of employers, as such students that already have a degree are often hired before completing the AAS. Since many of these students are using this degree to get employment in a second career, this meets their student success goal. It should also be noted that our students complete the AAS in Professional Piloting on average in 60 credit hours, exactly where we are aiming.

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

Last year the AAS in Professional Piloting curriculum was completely redesigned to align it with the BSAT. This included removing courses that were not directly relevant to flying, making the AAS more attractive to students that already have a degree. By focusing the degree strictly on piloting, we expect an improvement in the graduation rates of the program. Graduates will have earned their Commercial Pilot Certificate with Instrument rating, leading directly to employment. In essence the program is an extensive practicum with students focused on flying in actual aircraft. Additionally, since graduates of the program are qualified to receive their R-ATP with 1250 hours of flight time they can enter employment sooner and less expensively than non-UAA graduates. The AAS also provides a credentialed exit point for those who must or want to begin their flying career before completing a bachelor's degree. However, with the recent changes to the AAS in Professional Piloting, students can seamlessly move from the AAS to the BSAT which serves as a tiered gateway for traditional or financially limited students. It should also be noted that the AAS satisfies the education level of a majority of Alaska based air carriers. Should the graduate wish to pursue employment with a large air carrier, they can return and obtain their bachelor's degree with ease.

As mentioned, many students switch to the BSAT prior to completing their AAS requirements. A bachelor's degree makes them more marketable to large air carriers, if that is their career goal. Under the new curriculum, a student will satisfy the requirements for AAS while progressing toward the BSAT. Thus, a student who has a job opportunity before completing the BSAT can apply for graduation from the AAS and have a credential that will follow them through the rest of their career. To guide the student through the degree they are advised by our Student Success Advisor and ATP faculty. The flight instructors who provide the one-on-one flight training are also an additional source of support as many of UAA's instructors are current or former students and offer relevant advice to younger students navigating the program.

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:

- Demonstrate proficiency in instrument pilot and commercial pilot knowledge and flight skills.
- 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 aviation weather and of aviation weather services

Our piloting students have a very high pass rate on the FAA certification exams. We are over 80% first attempt pass rate and most years it approaches 90%. This is through all seven of our offered certificates and ratings.

However, we were not getting quality feedback from the FAA examiners, so we are now measuring the final stage check from our own instructors, improving our ability to assess our flight courses. For the most part our students maintain a high level of knowledge about the regulations of aviation. The law aspect of the outcome is slightly lower, around an 80% but meets our internal expected standards. We noticed that with a consistent course adjunct, whom is a practicing aviation lawyer, students are showing a better understanding of the material. We have recently expanded (within the last five years) our discussion about current aviation safety theories and practice. We now spend more time on Safety Management Systems and discussions about alternative aspects of aviation safety. These changes have improved our student's knowledge and employability. Aviation safety in Alaska appears to be lagging behind the rest of the nation, but our students are showing the knowledge necessary to improve the industry and bring Alaska in-line with aviation systems across the globe. Finally, the students are meeting our expectations for understanding and using aviation weather for safe decision making. The overall assessment of the program shows the students are meeting or exceeding our expectations.

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

As discussed above, we are one of the four FAA Part 141 Pilot Schools in Alaska and are the only one that offers a comprehensive education as well as pilot certificates. In September 2013, the FAA awarded UAA institutional authority to certify its graduates as eligible for a Restricted Airline Transport Pilot (R-ATP) Certificate with reduced aeronautical experience. This designation means UAA graduates are eligible to earn their R-ATP with 1250 flight hours with the AAS. This gives our graduates up to a one-year, and thousands of dollars, advantage over most pilots seeking careers with a major air carrier. While there is a basic piloting program at UAF, they are not a FAA Part 141 school and do not do flight instruction within the program. As such they cannot grant the R-ATP authorization.

5. Summary Analysis (500 words or less)

The faculty and staff of the Aviation Technology Division have been working to improve the AAS over the last seven years. During that time, we have refined and improved our fee structures and modernized our curriculum. These changes are beginning to show great improvements in our student numbers and industry recognition. While we have been the face of Alaska aviation education for years, we have created more partnerships and opportunities for our graduates than ever before. We have the Ravn Airlines internships, the flow-through program with Horizon Airlines, our graduation rates are still increasing, and we have most students completing close to the minimal credits required. Our goal now is to continue examining the program and make improvements to keep our curriculum current, our graduates competitive, providing flight training more efficiently, and assisting students with locating financial aid.

Professional Piloting is a critical degree in the state of Alaska. There is a worldwide shortage of pilots, and Alaska is no different. One positive aspect of this shortage is a near perfect job placement for our graduates, if a graduate wants a job, they will have multiple offers. Again, our students have the advantage of receiving a R-ATP certificate, which places our program in line with leading aviation institutions across the country. We also hold to a high professional standard as evidenced by our safety record. Overall, our piloting program is one of the best in Alaska which plans to provide increasing numbers of pilots to meet the needs of the state.