

Aviation Science Program Review
2018/2019

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1. Program/Discipline Overview:

A. Educational Goals

The Aviation Science program offers three Associate of Applied Science (AAS) degree options:

- Airplane with Flight Instructor
- Airplane without Flight Instructor
- Helicopter

In each case, students earn their FAA certificates as part of the degree. These certificates, along with the additional aviation academic work and general education required for the degree, allow graduates to begin their career as professional pilots. Most students begin their career as a Certified Flight Instructor (CFI). After building some experience, they move on to airlines, corporate flight departments, scenic tour industries, life flight, off-shore oil rig support and a number of other exciting and challenging careers. These careers offer good family wages in a wide variety of locations.

The educational objectives for the Aviation Science program have not changed. Like all two-year professional pilot programs, the goal is employability as a pilot as part of an AAS degree experience. Though we will always be fine-tuning the individual program and course outcomes to meet the current needs of the industries we serve, the overriding goal of employability will not change. A current list of Program Outcomes, mapped to PCC Core Outcomes, is provided in Appendix D.

B. Changes since the last review

I. *Ground School Courses*

In the previous SAC review, a need for reorganization of how we taught the FAA ground required knowledge areas training methods for the flight courses was assessed. In the ensuing years, the PCC online courses that had presented that knowledge with limited success were eliminated. Instead, extra hours of one-on-one training with the Certified Flight Instructors (CFIs) was included in the flight courses. The intent was that instructional quality would increase and course content would better coincide with flight training progress.

After initial successes, however, the CFI shortage (see section 4.A.) resulted in inconsistent quality using individual instruction, and higher cost for the students. Whereas before the Flight Instructors were grateful for the opportunity to spend one-on-one revenue time with students doing ground instruction, they now see a shorter path to more lucrative jobs by focusing their time on building flight experience and have become reluctant to spend time on quality ground instruction.

Given this change in industry conditions, the Aviation Science SAC decided that students would be better served by bringing the ground school courses back into the PCC. Instead of online, they will be offered in the classroom. This will result in a significant reduction in the overall cost of the program to the student. We are also hopeful that PCC's PT Faculty pay will attract and retain some quality classroom instructors for these classes. This will also make the program more compatible with the Hillsboro School District Aviation Pathway project, currently under development (see section 3.E.).

The SAC discussed the exact organization of these courses during the fall 2018 inservice, and the changes are in the revision process as of this writing (probably approved by the time this is published). The department is currently looking into incorporating a "flipped" classroom method for appropriate courses, as well as recruiting appropriate instructors.

II. *Curriculum Processes*

The PCC curriculum processes and catalog publication dates butting up against the dynamic nature of the aviation industry was an issue cited in the previous program review. The process for revising courses and programs remains long; The current revisions were submitted into the curriculum process in January 2019, and will not be available for use by the program until fall of 2019. While waiting for the revisions to complete the process, new revisions cannot be made within the normal process, which can be awkward if there are changes in the FAA requirements for flight training or changes in VA rules.

We want to acknowledge, though, that the program has received a great deal of support and flexibility from the Deans, Administration and all the committees that oversee the curriculum here at PCC with regard to the circumstances surrounding VA audits and the resulting required changes. Several of the required changes were rushed through on an emergency basis in a fraction of the usual time, some of them during summer, in an effort to continue to serve our VA-funded students. These efforts kept VA approval from being fully withdrawn, as happened at other colleges in Oregon, which would have meant an immediate termination of training for VA-funded students. We are grateful for this support.

III. Tracking of graduates

A standardized process of graduate tracking or exit interviews was explored in previous program reviews. As of this writing, we have developed a survey that has recently been disseminated to program alumni. This survey explores student experiences and satisfaction, as well as whether alumni are working in the aviation industry following program completion. This survey will be given to all graduating students going forward to track changes in perceived attainment of degree outcomes and satisfaction overall. This survey will also be given to transfer students who plan to use credits from the program to continue a BA/BS at another university, which should give us a better idea of the number of students transitioning from PCC's Aviation Science program to the greater fields of aviation.

Getting feedback from graduates who have been out in industry for a while, though, remains a challenge. The results of the survey done for this review, mostly through requests participation through social media, are in [Appendix B](#).

IV. Simulators

Previous reviews cited the need for additional resources in the form of airplane and helicopter simulators to better prepare PCC students for their flight courses. Based in part on the last program review, funding was secured for four airplane and two helicopter Basic Aviation Training Devices (BATDs). These are computer-based simulators that employ multiple touch screens along with physical controls to provide enough realism to practice procedures and subject students to realistic scenarios. With these, the Aviation Science program, with the support of a student technician, has built a working simulator lab, known simply as "The Sim Room", at the Rock Creek hangar ,building 6 room 113. The lab is staffed two days a week by a work-study student who benefits from the experience, and we expect to at least double that availability soon. In addition, the lab is available to students on all weekdays by prior arrangement. Lab utilization has been steadily increasing, with an average of 25 hours of student use per month, in addition to the utilization from various Aviation Science courses, such as AVS-255 *Multi-Crew Operations*. This course focuses on two-person crew resource management, and the simulators have been invaluable for exercising and building these skills.

Though it is still too early in the process of integrating the simulators into the program to do a formal assessment, anecdotally it appears that students who are regularly utilizing them are benefiting and the feedback has been very positive.

These simulators have the potential to lower the cost of training by thousands of dollars for each student during the course of the program. With current VA rules, however, we are not allowed to reduce hours of training for students who take advantage of these in order to reach proficiency sooner. As we more fully develop the use of the sim room in the program, we will reduce the hours for all students to reflect the benefit of using simulators to prepare for lessons.

The Aviation Maintenance Technology program has also been able to take advantage of the Sim Room, using the simulators to teach students basic engine run-up procedures and checklist usage.

V. *Closure of SE Campus Aviation Science*

The Aviation Science program began offering courses at the PCC SE Campus in 2005, with flying at the Troutdale Airport. This was in response to Mt. Hood Community College closing their aviation program. It was felt that there would be adequate demand on the east side of the district to support offering the program at that campus. However, declining enrollment led to the decision to close the satellite program at SE campus altogether in 2017. This allowed resources to be focused on creating an *Aviation Center of Excellence* at the Rock Creek Campus hangar to better address student needs in a focused manner. The Michael D. Reece Aviation Hangar, the home of PCC's Aviation Maintenance Technology program, provides the ideal space for teaching all aviation subject matter. Students still had the option of doing their flight training at the Troutdale Airport.

VI. *Reorganization of Flight Course Locations*

In late fall of 2018, Hillsboro Aero Academy (HAA) began reorganizing their flight operations to focus specific types of operations at each campus. As of this writing, the transition is underway to have all helicopter training take place at Troutdale Airport, and all airplane training take place at Hillsboro Airport. It is anticipated that there will be some inconvenience for students during the transition, and HAA is working with those students to make sure that they are in a position to finish their current rating at the location where they started. Long term however, this should concentrate the resources (aircraft and Flight Instructors) for each category of training so that students can get better service. We anticipate that the transition will be complete in March of 2019.

2. Outcomes and Assessment

A. SAC Review of Course Outcomes

The formal assessment process provided validation for some of our informal conclusions, but no surprises. In a theme that will reprise in the Degree Outcomes section, the assessment of outcomes related to FAA pilot certificates and ratings indicates strong student success.

Most of the Aviation Science courses that provide FAA flight training are also assessed through the Perkins-required Technical Skills Assessment (TSA) process by referencing the associated FAA tests. For example, the outcomes for AVS-115 *Helicopter Private Flight* are:

1. Qualify to take the FAA Helicopter Private Pilot knowledge and practical tests.
2. Take responsibility as pilot-in-command to competently perform pre-flight duties and all other procedures necessary for the safe conduct of a flight as a Private Pilot.
3. Draw from a broad base of experience gained from training scenarios to exercise safe judgment in all flight related decisions.

Students who pass our flight courses are, by definition, qualified to take the FAA tests associated with that course and, therefore achieve outcome 1. Some students require more than one attempt at passing the check ride or written test, but with rare exception all do pass, which shows strength on the TSA. This, of course, only applies to students who pass the course. These courses have an unacceptably high failure rate, which is addressed in section 3.B.

We also attempted to assess some of the other outcomes in these classes through Flight Instructor and student surveys and other means, but response to those surveys was not sufficient to yield a meaningful result.

We also assessed some non-technical course outcomes in our Aviation Science academic courses, such as AVS-227 *Aviation Careers*. That assessment looked at the students' ability to "Plan for smooth transitions in their upcoming career." By reviewing their term projects, we found that students appeared to be hesitant to reach out and contact people in industry in-person, something the instructors for that course had already identified as a challenge. Though it validated our impressions, the assessment process did not provide any hints at a solution. In response to both the assessment and instructor input, we took that course from the Online Learning mode to Hybrid, meeting once a week in an effort to more effectively engage the students. The feedback from the instructors has indicated that the opportunity for in-class guest speakers may have helped, but further changes to that class will be discussed in the Spring inservice. A follow-up to the previous assessment of this class is in process.

Given our experience with assessing non-technical course outcomes, either the assessment strategies or the outcomes for many of our courses need to be reviewed for ease of assessment. Most Aviation Science outcomes were written very early in PCC's movement towards outcome-driven instruction, and in that spirit were written with the sole intent to provide the instructor guidance on what the goals were for the course. The idea at that time was, adapt your content and instructional methods to these outcomes, and you will be proving the instruction intended for the course. It is hard to believe now, but assessment of outcomes were not of primary importance at that time. Subsequent outcome changes have tended to remain focused on quality rather than whether they lend themselves to statistical assessment. If a statistical approach is going to continue to be required, therefore, an overhaul of outcomes is anticipated to be at the top of the agenda* for the 2019/2020 Aviation Science SAC agenda, a project that may take some time to complete. Care will have to be taken during this process to resist the temptation to make the outcomes assessment-centered rather than student-centered.

*Note: Work in this area has been on the SAC agenda, but has been displaced by the demands of VA-driven changes. With the exception of the fall 2018 Inservice, which was focused on the creation of the new ground courses, *most* of the SAC Inservice time has been taken up entirely with VA considerations.

B. PCC Core Outcomes

Please see [Appendix A](#) for the Aviation Science Core Outcome Mapping.

The Aviation Science program is rigorous and broad, covering PCC's Core Outcomes well overall. Like most technical programs, the Cultural Awareness and Community and Environmental Responsibility are the most difficult to fit into a variety of classes at a high level. We do address them whenever appropriate and provide a few opportunities to focus on them. Both outcomes are points of focus from the beginning, however, in AVS-127 *Introduction to Aviation*, for instance. In that class, we focus on diversity, differences in cultures, and the impact of aviation on the community and environment. Both their importance and the pilot's role in these areas are explored. The Aviation Science SAC continues to seek ways to fit these Core Outcomes into more Aviation Science courses, and we value the fact that the AAS degree includes general education requirements that should help fill that gap.

Aviation Science is an excellent fit for all the other Core Outcomes, and are well covered in multiple courses in each of our degrees.

C. Assessment of Degree and Certificate (CTE) Outcomes.

As with course outcomes, assessment of the technical (professional competence) degree outcomes is straightforward, as the FAA testing covers these outcomes well. Students who pass these courses meet these outcomes by definition. The failure rate in these courses requires attention and will be addressed in section 3.B.

As previously stated, we have difficulty assessing *non-technical* course outcomes and either the assessment strategies or the outcomes for many of our courses need to be reviewed for ease of assessment. These outcomes were written and revised more recently than the course outcomes. It is our understanding that the preference now is for outcomes that can be assessed within the program. This is understandable given the lack of tracking systems for students after they graduate from PCC. The most recent revision of the program outcomes reflects this by having at least one assignment inside of an existing course that can be used for assessment purposes.

There has been concern expressed within the SAC that this might defeat, or at least weaken the purpose of having degree outcomes as opposed to just a robust set of course outcomes. When we first started down the path of outcome-driven programs, outcomes were encouraged to be things that our graduates could do, "Out There," in the workplace. The gradual move towards outcomes that can all be assessed during the program in order to meet outcome assessment requirements seems at odds with this. However, care was taken during the last revision to pick outcome language that was both assessable within the program and reflective of how the graduate might perform in the field. The challenge, though, is assessing in a way that allows statistical analysis.

In an effort to validate the outcome assessment effectiveness, we conducted a graduate survey for the purpose of this program review. You can view the results in [Appendix B](#). The survey asked the students to self-assess themselves on each degree outcome by simply asking if they felt that the outcome was met upon leaving PCC. The results, at 21 returns, are by no means scientific. They include a few students who did not in fact earn the degree before leaving. However, they do correlate with the conclusion of previous assessment efforts around the students' hesitancy to interact with others in the industry, both at the course and degree outcome level. For AVS-227 *Aviation Careers*, as previously stated, we have switched from online to hybrid mode for that course to increase engagement with the students and increase exposure to professional pilots, and efforts are underway to further modify that course to help students learn to interact professionally around career advancement. The 2019 assessment cycle should show whether moving to hybrid made a difference, and hopefully provide some insight where to go from here. We see the outcomes associated with career development as being key to the success of our graduates.

Note: More work would have been done in the area of program outcome development and assessment strategies if our time had not been taken up with numerous VA-driven program overhauls. With the exception of the Fall 2018 Inservice, *most* of the SAC Inservice time has been taken up entirely with VA considerations.

3. Other Instructional Issues

A. Enrollment

I. Impact of VA suspension on enrollment

Enrollments in the Aviation Science department remain relatively steady over time in a broad sense, however, FTE drops drastically in 2017 - 2018. The primary factor that is the complications resulting from VA audits.

We were under VA suspension for 18 months beginning in April of 2017 and ending in September of 2018 due to findings in the spring 2017 audit. The suspension meant that we were not allowed to admit any new VA-funded students to the program. Exacerbating this decline is the narrow interpretation of the rules that is implied by the audit findings. In effort to have the suspension removed, we have tried to comply with the rules as implied by the various findings. This makes the program less attractive to non-VA students, so with no new VA students and few non-VA students applying, our admissions into the program have not kept up with those students graduating or leaving the program.

The suspension was finally, after 12 separate revisions to the program, lifted, but too late for the fall 2018 term. We are restricted by VA rules to no more than 85% VA funded students for any program, counted by FTE with a complicated set of provisions. As of this writing, the helicopter program is over 85%, meaning that we are unable to accept new VA-funded helicopter students until we are below that mark. We are well under the mark for both of our Airplane degrees, and could have accepted a number of airplane students for winter term. However, due to uncertainty about whether we could retain our PCC Flight Instructors in the current marketplace, only students who could be placed later in the program were admitted.

II. Future Markets for Aviation Science

With a decrease in VA-funded students being admitted, the program needs to turn its attention to other markets in order to sustain enrollment.

High school graduates and high school Career Technical Pathways will be an important part of future efforts. With pilot and technician demand soaring, the investment in the education required for these career paths makes financial sense more than ever before. With that in mind, both the Aviation Science and Aviation Maintenance Technology programs have begun development of a career pathway with the Hillsboro School District (HSD). Under this program, students are exposed to aviation subject matter beginning in their seventh grade science classes. Upon entering high school, they can choose the Aviation Career Pathway, and then choose between pilot and technician in the junior year. They will earn dual credit in this program. It is hoped that HSD will have the program staffed beginning in late 2019 or early 2020. An overview of the program is provided in Appendix C. There will also be an opportunity to grow recruitment of high school graduates outside of the career pathway programs.

There has been increasing interest from high school students and their parents as news of the pilot shortage gets more media attention. This bodes well for future local, non-VA recruitment from both inside and outside the HSD Aviation Career Pathway.

The other important potential market is international students. International students already comprise a large part of Hillsboro Aero Academy's (HAA's) business. Most of HAA's international students either already have a degree or do not need one. There have been some that have chosen to attend our program, however, and we feel that with the right marketing we can attract more of these students.

The two primary challenges with both these markets is the impact that the VA rules have on the program (see section 4 for details) and attaining funding for the flight training. Until we can reintroduce student-centered flexibility in the flight training, it will be difficult to attract self-funded students. In terms of funding, the only student loans big enough to cover the flight training are credit-based. See Appendix F for flight training fees associated with each degree. Efforts are currently underway to reduce these fees through the use of less expensive aircraft where possible and the inclusion of more simulator time in the program, but it will remain difficult for many perspective self-funded students to afford. We see this as our main barrier to providing better equity and inclusion in our program.

III. Reputation

Finally, it is important to mention that potential students today are adept at researching online. PCC's Aviation Science program has an excellent reputation overall. Some recent airplane students have been frustrated with their experience at Hillsboro Aero Academy during the actual flight training, and word of that experience is bound to be circulated at some point. That makes improving the students experience in that part of the program vitally important to future marketing efforts. HAA is taking steps to address the concerns raised.

B. Review of Grades

A review of the grade data provided by Institutional Effectiveness revealed the following:

Overall, our students fare well in the Aviation Academic (non-flying) courses, with pass rates averaging 89.3%, with a standard deviation of 6.9%, since 2013/14. Three aviation academic courses fall below these norms, as do the courses that include the FAA-required flight training, as described below.

I. AVS-127 Introduction to Aviation

This is the only course open to the public. Its pass rate ranges from 73% to 90%. A higher rate of withdrawals and students who take the course out of a need for an elective rather than out of a genuine interest in aviation may explain this. We have discussed this as a SAC, and will continue to do so. We do not intend to change whether it is open to the public, however, as this is the ideal place for the student to explore whether a pilot career is the right choice.

II. AVS-217 Aviation Weather Services

This class was introduced for the first time in the 2013/2014 academic year. The pass rate was around 80% the first three times it was offered, and then improved. It is an online course with a lot of scenario-based work, and may have demanded too much of the students' time. Students in the most recent two offerings fared better, with 95% and 93% pass rates. Overall, it is a well-designed online course.

III. AVS-227 Aviation Careers

This course struggled as an online course, and the SAC decided to move to a hybrid mode for future offerings. This brought the course up from 72% in 2013/2014 to 79% - 84% since. This is still below norms, and this may relate to the findings in the alumni survey that revealed a weakness in the career-related program outcome. The course involves a lot of introspective work based around the text *What Color Is Your Parachute* (Bolles). The challenge has been to motivate students to do the more introspective work and interact with industry professionals. The hybrid format helped with this somewhat, but more work is needed on this course, and it will be on the agenda for the spring 2019 SAC inservice.

IV. The Flight Courses

These are courses that involve actual FAA-required flight training, and are contracted to Hillsboro Aero Academy (HAA) with the exception of AVS-115 and AVS-125 (the Private Pilot courses), which are taught by PCC Certified Flight Instructors (CFIs), but under a similar structure and in the same facilities. The flight courses remain the most difficult for students to pass. Unfortunately, due to fact that most students initially receive a Course In Progress (CIP) grade, a pass rate is not generated by PCC's systems. Nonetheless, through a less formal audit of the grades we can see that students fail these courses at high rates compared with the academic courses, especially over the last two or three academic years. For instance, of the 20 students who registered for these courses in winter of 2018, only eight have successfully completed, with the rest either having failed or are still struggling to finish a year later (the CIP expires at the end of winter 2019 for these students).

Based on discussions with numerous individual students, we feel safe in attributing this to at least these factors:

1. The VA rules that we are required to follow create a lot of stress for the students, CFIs, flight school management and PCC faculty and staff. The rigid nature of the rules and the inability to include any student-centered flexibility result in a high level of frustration, to the point that both VA- and non-VA-funded students have chosen to leave the program.
2. The difficulty of following the VA rules and the shadow of potential harsh consequences make CFIs less willing to give PCC students the priority they deserve.
3. The pilot shortage has caused massive turnover of airplane CFIs, and both PCC and HAA initially struggled to adapt to the new realities of the flight-training industry. With well-paying jobs in the airlines for anyone with the required flight experience, we can no longer expect the devotion that CFIs had to their students in the past. By their own admission, HAA took on too many customers just as CFI shortage began take hold. This situation developed just as we encountered a particular bad weather winter (even for here), and it took over a year to recover. Though HAA has made enormous efforts to equip themselves with tools to deal with the new realities of increased demand changing CFI markets, the changes they have made have failed to help many PCC students.

4. PCC students have complicated lives that include families, jobs and other academic courses here at PCC. HAA's systems, by nature, seem to favor students who can be available at all times.
5. Learning to fly is one of the most challenging endeavors that a human can embark on. It is often mistakenly viewed as just a physical skill, akin to learning to ride a bicycle or drive a car. It is far more complex and demanding, though, and this often takes students by surprise.

C. Online courses

The ground school courses that are associated with each flight class have shifted from an online platform, to being outsourced to HAA, and are now being reintegrated into PCC classroom based courses. This step was necessary to address wide-ranging issues of consistency and instructor availability at HAA. However, certain courses, such as AVS-130 *Instrument Ground*, could lend themselves well to a flipped classroom or hybrid model. Hybridizing a number of ground classes could increase efficiency for students in terms of freeing up more time for flight lessons each week while still maintaining the benefits of a traditional classroom environment.

All but one of the 200-level aviation academic courses are offered online. With the exception of AVS-227, which is discussed in section B above, these courses lend themselves well to online learning due to the extensive research involved in each course. Informal feedback from students indicates that there is value in having the later courses in the program available online so that they can be completed while working as a pilot.

D. Curricular changes resulting from educational initiatives.

The PCC Aviation Science program has followed the recommendation of the FAA and adjusted its courses to make increasing use of Scenario Based Training (SBT) for the education of student pilots. SBT is a training system that utilizes a highly structured script of real world experiences to meet training objectives in an operational environment.

In 2011, the FAA began to shift its gold standard for airman testing from a system of Practical Test Standards (PTS) which pilots must meet, to one of Airman Certification Standards (ACS). The ACS are enhanced versions of the PTS that add task specific knowledge and risk management elements to each Area of Operation that airmen are tested on for a flight rating. They integrate risk management, academic knowledge and skill and highlight SBT thinking and contextual problem solving. As the FAA continues to convert old testing standards to this new integrated testing ideology, the PCC Aviation Science program is also moving to integrate risk assessment and contextual problem solving across its academic courses. The timing was particularly good for the addition of AVS-177 *Pilot Human Factors*, as it focuses on risk management techniques.

E. Dual Credit

Career Technical Pathways will be an important part of future efforts. With pilot and technician demand soaring, the investment in the education required for these career paths makes financial sense more than

ever before. With that in mind, both the Aviation Science and Aviation Maintenance Technology programs have begun development of a career pathway with the Hillsboro School District (HSD). The Oregon International Airshow Foundation has been instrumental in helping to build this relationship, and is an enthusiastic partner. Under this program, students in the HSD are exposed to aviation subject matter beginning in their seventh and eighth grade science classes. Upon entering high school, they can choose the Aviation Career Pathway, and then choose between pilot and technician tracks in their junior year. They will earn dual credit in this program, entering the Aviation Science program with up to approximately 20 credits. It is hoped that HSD will have the program staffed beginning in late 2019 or early 2020. An overview of the program is provided in Appendix C. We view this as an opportunity to provide more equitable access to the program for the community. If successful, this may lend itself to being replicated with other school districts.

F. Course Evaluations

The standard college questions are used on the course evaluations, with the addition of a few instructor questions. Overall, the feedback is positive across the program. Unfortunately, the response rate on the course evaluations remains low compared with the old written evaluations. In addition, we have noticed a reluctance for most students to provide constructive criticism, electing instead to focus on the positive aspects of their experience. Nonetheless, the feedback is included in discussions about how we teach the course material and has been used as one of the tools we use when deciding on which assignments to modify.

4. Needs of Students and the Community

A. Impact of VA and Pilot Shortage on Students

1. PCC Flight Instructors

In fall of 2015, the VA determined that programs that include training for the Private Pilot certificate, as we do, cannot be contracted to a school like Hillsboro Aero Academy (HAA). The guidance in the beginning was confusing, to say the least, and initially we were forced to announce to all the VA-funded students that all flight training activity must stop. Shortly thereafter, the VA walked this policy back and decided to give schools until August 1, 2016 to bring the flight instruction for the Private Pilot certificate “in-house.”

To qualify as in-house, instruction for the Private Pilot certificate (AVS-115 for helicopter and AVS-125 for airplane) had to be provided by PCC instructors. This meant that Certified Flight Instructors (CFIs) had to be hired by PCC. The CFIs provide credit instruction, which makes them covered by the Faculty/AP Agreement. Because of this, the new salary schedule for CFIs had to be rapidly negotiated and agreed to with the Federation of Faculty and Academic Professionals. The funds from the student fees had to be kept here at PCC to be used to pay the flight instructors. We were allowed to continue to use HAA’s aircraft and facilities, for an hourly fee, under a contract negotiated between HAA and PCC.

On August 1, 2016, in the middle of summer term, PCC CFIs began working with PCC students within those courses requiring all private pilot students to be transferred from HAA to PCC CFIs. All post-Private Pilot courses remained contracted to HAA. PCC hired CFIs mostly from the ranks of HAA CFIs. Without cooperation between PCC, HAA, the Faculty/AP Federation and the CFIs, this could not have worked.

It has not been without its challenges, though. All of this comes in the midst of an historic pilot shortage, which means that CFIs are very difficult to recruit, hire and retain. As HAA grappled with the shortage, they adjusted the pay structure for their CFIs and at one point left us at an hourly rate of \$0.50 less, and we lost most of our CFIs. We were able to adjust, but it takes longer within PCC's processes to negotiate pay changes.

It cannot be overstated how much support and advocacy PCC has provided to the Aviation Science program in trying to comply with the ever-changing VA rules for aviation programs. Their focus on providing access for Veterans to the education of their choice has been steadfast.

HAA is once again considering a pay increase as of this writing. This discouraged us from admitting new Private Pilot students for winter term 2019, as we were uncertain whether we could retain the PCC CFIs if our compensation fell behind HAA.

PCC students are restricted to only using PCC CFIs during their Private Pilot training, which means that they have a harder time finding CFIs to conduct their stage checks and it makes the transition more difficult when their CFI moves on to the airlines. This can cause frustrating delays in training. Another source of frustration, especially for non-VA-funded students, is that some of their money is kept here at PCC where the instructional hours are tracked, while the rest is kept at HAA for aircraft rental. PCC has provided statements to students for their instructional funds on a bi-weekly basis, and their balance at HAA is always available, but they find it confusing when they run out of money at one place while still have funds at the other. The funds are not interchangeable, so the student often ends up owing money to either PCC or HAA, in spite of being provided with the information. This has caused several non-VA students to leave the college in frustration.

The PCC Flight Instructor issues affect all students, whether or not they are VA-funded.

II. Flight Prep Lab Change

In 2009, repeatable 1-credit Flight Prep Labs were created, AVS-107 and AVS-207. These were intended to be guided study time for students working on PCC courses involving flight training. The labs met once each week for three hours, and were cross-listed such that students from every stage of the program could work together as they prepared for their upcoming flights. These were an effective tool for students to connect with one another and get questions answered. Since they were all in one place, it also allowed us the opportunity to communicate changes and safety information to them. We were thus able to support them not only for the term in which they started their flight course, but as long as they were working on the Course In Progress (CIP).

As part of the VA audit in the spring of 2017, the VA informed us that repeatable labs were not allowed to be part of an approved program. We were forced to break the repeating labs into individual, course-specific labs. For example, AVS-107A goes with AVS-125, AVS-107B goes with AVS-135, etc. Under threat of withdrawing our approval and forcing termination of all VA-funded flight training, this was accomplished in a period of less than 60 days with the extraordinary cooperation of PCC's Deans, Administration, the Curriculum Committee and the Degrees and Certificates committee.

Students now take these during the term in which they register for the corequisite flight course, but not if they are working on a CIP. This drastically decreased the value of these courses as there are far fewer students there to work together, and we can no longer use the class to communicate program information.

The current instructor has been creatively restructuring the course, including moving it next to the Sim Room (described in section 1.B.IV.) so that they can utilize the simulators during lab. We are confident that we will recover most of the benefit of these courses over time, but are missing an effective replacement for the program communication component.

III. Restrictive flight training rules

With the changes in interpretation of VA rules for flight training in the fall of 2015, followed by several re-interpretations, ever more restrictive rules have to be followed. In the spring of 2017 the VA conducted another audit. After 8 years of annual audits with no findings, the VA suspended the program for *operating exactly as we had been approved to operate*. We will not go into the findings in this document, as they are currently in dispute. However, their impact is that they further narrowed the VA's apparent interpretation of their rules.

The VA specifies that the number of hours of each type of training (eg: hours of ground instruction, hours of flight instruction, hours of a/c rental, etc.) must be defined at a specific rate. Furthermore, they specify that students may not use the funding for one type of training for another. For instance, a student who needs extra help with the knowledge cannot trade some flight time for extra ground instruction. Also, a student who excels at either the knowledge or the flight skills cannot finish the course and must continue the training until all hours are complete *regardless of the expense or the need for the training*. The FAA rules for flight training are quite complex, but they do have room for flexibility. Due to the VA, that flexibility is now missing from the program.

A non-flying analogy might be driving a car with a certain EPA gas mileage rating. The driver fills the gas tank and oil in expectation of driving a certain number of miles for the week, but finds that they got a little better mileage than anticipated. It would be reasonable to save the gas for the next week, but instead they are now required to either drive around the block until the gas is gone or dump it out on the ground, only to buy additional fuel the next week.

This is frustrating for VA-funded students, but generates particularly high levels of anger with non-VA students who pay for the training out of pocket. We have lost many of our recent, new non-VA students due to frustration over this and the issues surrounding the pilot shortage. Both VA and non-VA students are frustrated when they have money left on account for one type of training, but must spend out of pocket for the another type.

Other restrictions that came with the findings include the inability to use prerequisite overrides. Students nearing the end of one flight training course cannot register for the next unless they are complete and have a grade. If they finish the course near the beginning of the next term, they must wait for the following term to register for the next course, leaving a large gap in their training. This causes much undo stress for the students and CFIs towards the end of each term as students struggle to finish their current flight course.

IV. Difficulty of making changes under VA

Every change to the program, including changes to course descriptions, flight fees, training course outlines for the flying, or even changes in personnel, have to be submitted to the VA for approval. Responses can take months, and during that time, no further changes are possible. This kept the program locked up as we responded to the VA with changes they required during the 18-month suspension; we were unable to make progress on changes aimed at improving quality. Now that the suspension is lifted, we have begun making a series of changes aimed at improving quality and accessibility, including the new ground courses mentioned earlier. Every change is akin to walking in a minefield, though, because we do not know how the VA will react.

V. The pilot shortage/training demand impacts on HAA

We now face the biggest worldwide airplane pilot shortage in history. The good news is that our graduates will have no trouble finding employment as a professional pilot. Not surprisingly, Hillsboro Aero Academy's (HAA's) other customers, some of whom are international airlines that send students here for pilot training, are pounding on the door with more students than can possibly be processed.

Simultaneously, the US regional airlines are hiring Certified Flight Instructors (CFIs) the moment they have accrued enough hours to be legal as a First Officer. As a result, recruiting and retaining CFIs has become a monumental challenge. HAA now has to use recruiters who travel the country to find CFIs willing to come work for them.

Given these factors, HAA has had to adapt to providing more instruction with fewer CFIs, and has moved to a more structured academy-style model. This has been a good fit for their international students, who are here in Oregon only to do flight training.

It has been challenging to make work for all of PCC's students, however. PCC students typically have other activities on their schedule, including classes here at PCC, work, family, etc. While we believe that most PCC students do make an effort to prioritize their flight training, they cannot be as available as someone who is in the country only for that purpose and has all their living expenses covered. The result is that PCC airplane students have not fit into HAA's new model well, and have trouble getting on the schedule enough to make good progress. In addition, CFIs who have all the students they can handle and are trying to maximize both their income and the rate at which they build hours for their career are reluctant to take on students who may struggle with availability.

PCC students sometime perceive the resulting difficulties as being due to prioritization of other HAA customers over them. We have investigated this claim a number of times, and it has had no substance that we can find.

HAA has been an excellent partner for the Aviation Science program and PCC. They have put enormous effort and resources into fixing these issues, and it is exceedingly frustrating to see that the efforts do not always reach the students in a meaningful way. Further work, including a close look at the relationship between PCC students and HAA, are needed, as stated in section 8.A.I.

VI. Classroom ground

Another aspect of the Certified Flight Instructor (CFI) shortage has been the difficulty in finding CFIs willing to do quality ground instruction. As discussed under section 1.B.I., we are moving the ground instruction associate with the FAA certificates from individual instruction with CFIs back in the PCC classroom. We will open these courses to the public. It is hoped that this will have several benefits including helping alleviate the impacts of the CFI shortage *while increasing the demographic range of students in the program*:

1. It will reduce the cost of the program significantly by replacing individual ground instruction with PCC tuition;
2. Adjunct faculty are compensated better than individual ground instructors, so we hope to attract and retain higher quality ground instructors;
3. We can offer these courses to the public, improving the diversity of demographics for our program;
4. The classroom ground courses will be a better fit for the Hillsboro School District Aviation Career Pathway project.

B. Strategies for students with disabilities

The fact that an FAA medical certificate is required for professional pilots discourages most students with disabilities from entering the field, sometimes under false impressions about what kinds of disabilities are allowed. There are exceptions, however, and it has been our viewpoint that a pilot's fitness to fly is wholly in the purview of the FAA's Medical Certification branch. In other words, if they come to us with a valid FAA medical certificate, it is our job to provide any accommodations that the Disability Services office approves for the student. This has ranged from note-taking assistants, to tutoring with our Perkins Skills Specialist, to extra time on tests. The key to success has been openness to meeting with the student and instructor about their needs and asking for help from Disability Services when there are questions or challenges.

C. Strategies for online learning

The ground instruction related to the FAA certificates was, for a period, offered online. We made this choice primarily due to enrollment management and to increase course offerings for the convenience of the students. The failure rate was too high, however. We feel that it was due to the volume and complexity of the very technical material. AVS-227 *Aviation Careers* was offered online for some years in order to offer it regularly for students regardless of campus. Again, students struggled with the course, in this case because much of the course involved interpersonal interaction. AVS-227 does have a large component of research, so rather than bringing it fully back to the classroom we decided to offer it in hybrid mode. This allowed room for more interaction, while still providing more time for independent research.

The lesson we took away from these experiences was that the appropriate mode must be chosen that will *lead to the desired outcomes for the course*. While well intentioned, offering courses online for enrollment management or student convenience has not worked well. In addition, though in each case we did try numerous ways to improve the experience online, we have found it important to recognize and accept that the choice was incorrect and change modes when needed.

The development of video content may help with online courses, but we lack the expertise or budget to develop quality material. Given the movement towards “flipped” classroom teaching, an investment towards development and maintenance of video material may be appropriate for the future. A request for support towards this can be found in section 8.B.

D. Inclusion of industry, community and student feedback

I. *New courses developed in response to feedback*

AVS-177 Pilot Human Factors was developed in direct response to industry trends and industry feedback from our Industry Advisory Committee. This course covers physiological issues for pilots, decision-making, threat / error management and crew resource management. The course emphasizes how pilots can play a part in the safety culture of a company and participate in the Safety Management Systems (SMS) that are becoming predominant in the industry.

AVS-217 Aviation Weather Services was developed in response to student feedback and performance on stage checks and check rides (i.e., practical testing) during their flight training. It was found that students were relying inappropriately on just a few weather products that applied to their local training flights. This course focuses on content, limitations and how to use the full array of FAA weather products that are generated by the National Weather Service. Because this course has the student getting in-depth weather briefings for a variety of realistic flight scenarios, it was a good fit for online learning.

Student feedback is also partially responsible for the recreation of PCC Ground courses (e.g.: *AVS-120 Private Pilot Ground*). Though some students were receiving high quality individual ground, others were not and it was becoming increasingly frustrating for them to get on the schedule of it. In addition, we have consistently had interest from the public in having access to this type of course. As discussed in section 3.B.IV., these courses are in the curriculum process and we hope to offer them beginning fall of 2019.

Last year, *AVS-255 Airplane Pilot Performance*, was changed to *AVS-255 Multi-Crew Operations* and added as a requirement to the Helicopter degree. This was in response to feedback from the Industry Advisory Committee that two-person operations were becoming more prevalent in the helicopter industry. This one-credit course is now being taught in the Sim Room, described in section 1.B.IV., as a series of realistic scenarios with two students to an aircraft.

5. Development of Aviation Science faculty

A. Development of faculty cultural competence

The Aviation Science faculty have always expressed interest in furthering the diversity, equity and inclusion in the program and the industry. Though we have not felt particularly enriched by PCC’s training in this area, we do have internal discussions about these areas in almost every SAC Inservice. Work is never really done in this area, but material revolving around these issues have been inserted into each appropriate course, and we feel like there is a high level of awareness and competence to teach it among the current faculty.

Moving forward, we anticipate a larger number of adjunct faculty due to the addition of the classroom ground courses, which were previously discussed. This presents more of a challenge, as we may have some of these instructors for a shorter time, and not having the benefit of the history of discussions on these topics their awareness is likely to be lower. We are currently looking for solutions to this anticipated challenge.

B. Changes to instructor qualifications

An overhaul of Aviation Science instructor qualifications was accomplished at the fall 2018 SAC Inservice. They were submitted and approved after some editing to fit current guidelines, and are included in [Appendix C](#). These qualifications were created with the pilot shortage in mind, exercising caution to keep them attainable while ensuring quality instruction.

It is worth noting that the pilot shortage will likely make recruitment of faculty more challenging as time goes on. Industry pay scales are on the rise, and pilot qualifications for certain positions getting lower, meaning that experience CFIs and classroom instructors will be harder to find.

C. Professional development activities

PCC faculty have engaged in a variety of professional development activities, mostly outside of the college, and they have benefited the program in a variety of ways.

Most of the efforts have been related to earning new FAA certificates and undergoing required currency training and activities to maintain the certificates. These types of professional development activities mean that the students receive up-to-date instruction.

Some faculty have also taken advantage of the online learning FOOT training, with the intention of qualifying to teach online courses in the future. This is an important investment, as this training takes a considerable amount of time to complete, making last-minute online teaching assignments impossible.

Finally, some conference and seminar work has been funded. A trip to the Women in Aviation International (WAI) was particularly helpful for one of our faculty. Helping the faculty stay connected to organizations such as WAI means they can help our students to connect with support they might not have found on their own.

6. Facilities, Instructional, and Student Support

A. Classroom space, classroom technology, laboratory space, and equipment

I. The Hangar

Most Aviation Science courses are now taught in the Aviation Maintenance Technology hangar classrooms. This allows us to enjoy a wide variety of equipment to demonstrate the various concepts that we teach. In addition to housing the Sim Room, the hangar has a computer lab where our students can do research and homework.

II. Sim Room

As previously stated in section 1. B. IV., the addition of the simulators to the program provides students with the opportunity to prepare for flight lessons. Helping them succeed, in this case, means helping to make the program more affordable as it can allow them to accomplish the flight training in less hours. This in turn makes equity and inclusion more attainable.

III. Classrooms

PCC provides good technology for the classrooms, which means that instructors can generally rely on being able to present information effectively using computer-equipped podiums with projectors and/or Smart Boards. These tools allow us to present content to the students in a variety of ways to help them understand the material. Using classrooms that are located in the Hangar means that numerous related teaching aids are always at hand.

IV. Aircraft

Hillsboro Aero Academy (HAA) has invested millions of dollars over the past few years to ensure that their aircraft have the latest technology to assist not only with learning, but with keeping our students safe during their lessons. They were early adopters of Automatic Dependent Surveillance – Broadcast (ADS-B) equipment for their fleet, installing it years before it will be required by the FAA in 2020. ADS-B allows pilots to receive traffic and weather information either on a screen installed in the aircraft or on their iPad via wireless connection. The equipment also provides highly precise navigation. All this allows for a safer learning environment as well as exposure to modern avionics that are closer to what they will see in the industry. In addition, they have purchased three Diamond DA-42 multi-engine airplanes in order to evaluate whether they will be a good replacement for the aging Piper PA-44s. If they prove reliable, they have a number of advantages including better fuel consumption (nearly half that of the PA-44), they are diesel (meaning lead-free fuel), are equipped for known icing and more closely represent aircraft that students will fly later in their career.

V. Safety Management System

Hillsboro Aero Academy (HAA) operates a Safety Management System (SMS) that is accredited by the International Standard for Business Aircraft Operations (IS-BAO). They are the first primary flight school to receive this accreditation. The SMS ensures that a culture of safety exists at every level of the company, and that a system is in place to track safety-related incidents in order to identify and manage operational risk. A number of changes have been made because of this system, including modification of several Standard Operating Procedures, early adoption of traffic avoidance equipment and utilization of a Flight Risk Assessment matrix prior to every flight. Operating within this system gives PCC students valuable experience that is applicable regardless of where their career takes them.

B. Outside student resources

I. Online

Aviation Science students tend to rely heavily on online resources, in part because the aviation industry utilizes it heavily to convey important information and training material. Most of the textbooks for Aviation

Science courses are provided free online by the FAA, for instance. The NTSB accident database, FAA regulations, aviation weather briefings and free online courses are all available online. Couple this with the trend to do more online here at PCC, from email to the learning management system D2L, and the computer lab in the hangar becomes a focal point for student activity. Most students have computers or at least iPads, but having up-to-date computers and equipment here in our Computer Resource Centers and the Computer Lab in the Hangar is crucial.

II. Tutoring

While we have not historically had aviation-specific tutors in the Student Learning Center, we hope to put that in place in time for the rollout of the new PCC classroom ground courses in fall of 2019. Currently, our Flight Prep Labs provide opportunities for students to help one another with the material and most of them take advantage of it. We have found that small groups of students that form organically in the Flight Prep Lab will often stick together through the program and aid each other in succeeding.

In addition, we have a highly-qualified and experience Perkins Learning Skills Specialist that can help students with math challenges. Though her time is much taken up with advising, she has been invaluable for students who struggle in this area.

Students needing tutoring in their flight training courses purchase it directly from Hillsboro Aero Academy.

III. Veterans Resource Center

Given the number of veterans in the Aviation Science program, the Veterans Resource Center (VRC) has played a key role. The VRC serves as a starting place for most Veterans seeking information about the program, whether they are prospective students or current students seeking advice on getting the most from their education benefits. In addition to providing information, the VRC can also serve as a starting place for seeking support when Veterans are struggling with their transition into civilian life. They have also served to represent the interests of Veteran students to PCC and Congressional Representatives on occasion.

C. Academic advising and student support

1. Perkins Learning Skills Specialist

The Aviation Science program advisor and Perkins Learning Skills Specialist is an invaluable resource for our students in navigating their degrees. She hosts regular information sessions about the program for prospective students (and often parents) as well as meeting one on one with students interested in pursuing Aviation Science degrees. Prospective students not only need to know about the degrees and classes, but understand the program application process as well. She helps students understand and plan for meeting the specific requirements of the program, including planning for the costs, the medical certificate requirements, and the academic prerequisites.

The Learning Skills Specialist then works with students throughout their time in the program to adjust academic plans, flight-training plans, apply for private loans through the Financial Aid office, Trade Act paperwork, and the usual challenges of financial aid appeals and Standards of Academic Progress learning contracts. The Specialist has become an expert on VA rules, which add a deep layer of complexity that is

specific to this program. A large portion of the VA funded students meet every term as their housing allowance can be impacted by their academic planning and flight training progress. Most students work with the Specialist to create at least three or more plans while in the program.

Our Learning Skills Specialist also works with students as they near graduation. They must work with the Department Chair and Student Records to provide Course Substitution Requests appropriate to specific student degree completion. She also lets students know about various opportunities such as articulation agreements for transfer to four-year colleges, Credit for Prior Learning, and scholarships specifically related to their career and education path. Occasionally, she also tutors students in applied aviation math. The Specialist is also an active member of our program SAC and Advisory committees and assists with keeping the Aviation Science webpage up to date.

The Aviation Science program presents extensive, high-stakes challenges in the advising arena. The role of the Learning Skills Specialist is invaluable.

7. Keeping pace with changing employer needs

A. Industry Advisory Committee

The Aviation Industry Advisory Committee has always played a key role in making sure that we are preparing our students for a career as professional pilots. As previously stated, the following two courses were developed specifically based on feedback from industry:

AVS-177 Pilot Human Factors was developed in direct response to industry trends and industry feedback from our Industry Advisory Committee. This course covers physiological issues for pilots, decision-making, threat / error management and crew resource management. The course emphasizes how pilots can play a part in the safety culture of a company and participate in the Safety Management Systems (SMS) that are becoming predominant in the industry.

AVS-217 Aviation Weather Services was developed in response to student feedback and performance on stage checks and check rides (i.e., practical testing) during their flight training. It was found that students were relying inappropriately on just a few weather products that applied to their local training flights. This course focuses on content, limitations and how to use the full array of FAA weather products that are generated by the National Weather Service. Because this course has the student getting in-depth weather briefings for a variety of realistic flight scenarios, it was a good fit for online learning.

In addition, the Industry Advisory Committee provided direction that the program should begin moving towards teaching cross-country planning and flying using the iPad and the ForeFlight app. There has been some differences of opinion among CFIs and faculty in philosophies regarding how early to introduce this technology and to what purpose. We anticipate that these inconsistencies will be resolved in time, at which point we will require this equipment beginning early in the program, if not at the very beginning.

B. Current and Projected Enrollment Patterns

As with many aspects of this review, enrollment is heavily impacted by our status with the VA and the capacity of Hillsboro Aero Academy (HAA) with regards to airplane Flight Instructors. After years of high enrollment due primarily to VA funding, the suspension from spring of 2017 through fall of 2018 caused a

drastic decrease, though we still have enough students to fill our academic courses. The lifting of the suspension would allow for recovery but for two factors: The capacity of HAA for airplane enrollment, and the ratio of VA- to non-VA-funded students for helicopter enrollment.

We currently have more VA-funded students wanting into the airplane program than we have capacity for at HAA. We have reserved new enrollment spots with HAA that should result in a slow recovery to near our previous levels over about a two-year period, provided our status with the VA remains solid and we can comply with the new interpretation of the rules. Should we again lose VA funding for the program, there will be a period of lower enrollment while we refocus the program on the needs of the non-VA students and shift our marketing efforts.

We are currently very near the 85% limit of VA-funded students in the helicopter program. Before the suspension, PCC had a waiver for the limit (the only school in the country to have such a waiver). Because of the audit and suspension, we lost that waiver and it has taken several terms to get under 85%. With the VA rules as they are (see section 4.A.), it will be difficult to attract enough non-VA students grow that program significantly. Nonetheless, we are actively reviewing helicopter program for opportunities to make it more attractive to non-VA students while staying compliant with the VA rules. If we succeed, we may be able to grow that program again. If we lose VA funding entirely, without the VA rules we could make further overhauls to the program and perhaps attract more non-VA students. We do not anticipate growing the helicopter program back to pre-2017 levels, however.

C. Admission process

The Aviation Science program is a “closed” program, which means students must apply to the program and be admitted separately from the PCC admissions process. Admission is based on a number of factors, including capacity, the ratio of VA- to non-VA-funded students and some prerequisites. The prerequisites for the program are placement into Math 65 and Writing 121, as well as attaining an FAA Class II medical certificate. The math and writing prerequisites ensure that the students will be prepared to learn cross-country navigation, weight and balance and the Federal Aviation Regulations (FARs). The medical certificate ensures that the student will qualify to be a Commercial Pilot once they complete the program.

Applications and supporting documents are processed and reviewed by the program approximately 6-8 weeks prior to each term so that those accepted into the program can register.

D. Job placement

Neither PCC nor the Aviation Science program has a reliable way to track students after graduation. Based on anecdotal evidence such as social media (e.g.: LinkedIn and FaceBook) we feel confident that both graduates and non-graduates who earned most of their FAA certificates have no problem finding employment at this time. The airplane graduates have been finding employment easily for the past 8-10 years. After a 10-year recession in helicopter hiring, those graduates are also finding employment.

Initial placement is typically as a Certified Flight Instructor (CFI). CFIs typically make between \$24,000 and \$35,000 per year, though we occasionally hear about higher salaries. Working as a flight instructor for approximately two years allows a pilot to build the experience required for their first job as a regional

airline pilot or turbine helicopter pilot. Those jobs start just over \$50,000 per year, sometimes with hiring or retention bonuses, with potential for well into six figures after just a few years.

The industry anticipates strong continued demand for both airplane and helicopter pilots for the foreseeable future.

E. Graduation rates

ID	Description	Degree	Year				
			2013-14	2014-15	2015-16	2016-17	2017-18
AVS	Aviation Science - Airplane	AAS		3	1		1
AVSA	AVS: Airplane w/Flight Instruc	AAS	2	4	4	3	2
AVSH	Aviation Science - Helicopter	AAS	6	11	16	5	7
Grand Total			8	18	21	8	10

There is a disparity between the graduation rates of students pursuing degrees in the airplane degree programs versus those in the helicopter degree program. Over a five-year period on average 69% of graduates were helicopter degree seeking students, which exceeds their representation in the program.

There may be a couple of factors at work here. One is that many airplane students transfer to four-year universities prior to earning their Associate degree, or find employment opportunities without needing any flight training beyond the Commercial Pilot certificate. Another is the frustration students have had with their flight training due to the airplane Flight Instructor shortage (see 4. A. for details), which results in early termination of their flight training and, in many cases, the program. For self-funded students, money is often cited as the primary factor for leaving the program.

To address the first issue, in the interest of adapting to changing industry pressures and making degree completion more accessible, changes in degree requirements are currently being assessed. One change already in the curriculum process is the elimination of a time-building course, *AVS-275 Pilot Performance*, from the “Airplane without Flight Instructor” degree. Previously, industry had provided guidance that some additional cross-country flight experience would help these graduates gain employment, and so AVS-275 was included in the degree. Currently, small airlines, whose pilots need not meet the same experience requirements for First Officers at the regional airlines, will hire pilots with no additional experience beyond the Commercial Pilot certificate. Most students who were pursuing a career without the Flight Instructor certificate, therefore, did not need the additional flight experience, and so were unlikely to take the course to complete the degree. We also need to explore whether all of the Flight Instructor ratings that are now included in the Airplane with Flight Instructor degree are necessary.

The students’ frustration over their progress through the flight training, particularly airplane students, has been identified as our biggest and most important challenge. See section 4.A. and 8.A.I. for further details. The Aviation Science program and Hillsboro Aero Academy are exploring ways to ensure that airplane students have a smoother flight training experience during their time here. As with many other issues, the VA rules for flight training programs exacerbate the frustration levels of our students, both VA- and non-VA-funded alike, by eliminating flexibility and therefore many of the potential solutions. It cannot be overstated, however, how much support PCC has provided in trying to comply with the ever-changing VA

rules for aviation programs. Their focus on providing access for Veterans to the education of their choice has been steadfast.

There are other cyclical factors, such as weather and availability of Designated Pilot Examiners (DPEs) to test the students. Each of these challenges has to be taken individually.

Aside from this, however, we need to find ways to help PCC students get what they need from an academy-style flight-training environment, which is likely here to stay given the state of pilot demand, while acknowledging that their lives may make fitting into that environment more difficult.

F. Perkins

I. Alignment with secondary schools

The subject matter in the automotive program at the following high schools align with our aircraft systems training:

- St Helens
- Hillsboro High School
- Aloha High School
- Tigard High School
- Benson
- Alliance at Meek

We are also currently working on creating an Aviation Career Pathway with the Hillsboro School District. It is anticipated to roll-out within the next year or two. Please see section 3.E. for details.

II. Technical Skills Assessments (TSAs)

Aviation Science students must pass FAA written and practical tests at various points in the program in order to earn the required FAA certificates. These certificates are directly aligned with the course and degree outcomes. The results of these tests (pass or fail) are reported annually. The following FAA tests must be taken as part of the degree:

Airplane with Flight Instructor:

PCC Course and FAA Certificate	Written Test	Practical Test
AVS-125 Private certificate	Yes	Yes
AVS-135 Instrument rating	Yes	Yes
AVS-225 Commercial certificate (SEL)	Yes	Yes
AVS-225 Commercial certificate (MEL)	No	Yes
AVS-236 Flight Instructor Certificate (MEL)	Yes (2)	Yes
AVS-243 Flight Instructor Certificate (SEL)	No	Yes
AVS-244 Instrument Flight Instructor	Yes	Yes

Airplane Without Flight Instructor:

PCC Course and FAA Certificate	Written Test	Practical Test
AVS-125 Private certificate	Yes	Yes
AVS-135 Instrument rating	Yes	Yes
AVS-225 Commercial certificate (SEL)	Yes	Yes
AVS-225 Commercial certificate (MEL)	No	Yes

Helicopter:

PCC Course and FAA Certificate	Written Test	Practical Test
AVS-115 Private certificate	Yes	Yes
AVS-156 Instrument rating	Yes	Yes
AVS-216 Commercial certificate	Yes	Yes
AVS-265 Flight Instructor Certificate	Yes (2)	Yes
AVS-266 Instrument Flight Instructor	Yes	Yes

All students who pass these courses also pass the associated FAA written and practical tests.

III. Use of Perkins funding

The primary and most important use of Perkins funding is for our Learning Skills Specialist. She hosts regular information sessions about the program for prospective students (and often parents) as well as meeting one on one with students interested in pursuing Aviation Science degrees. Prospective students not only need to know about the degrees and classes, but understand the program application process as well. She helps students understand and plan for meeting the specific requirements of the program, including planning for the costs, the medical certificate requirements, and the academic prerequisites.

The Learning Skills Specialist then works with students throughout their time in the program to adjust academic plans, flight-training plans, apply for private loans through the Financial Aid office, Trade Act paperwork, and the usual challenges of financial aid appeals and Standards of Academic Progress learning contracts. The Specialist has become an expert on VA rules, which add a layer of complexity that is specific to this program. A large portion of the VA funded students meet every term as their housing allowance can be impacted by their academic planning and flight training progress. Most students work with the Specialist to create at least three or more plans while in the program.

Our Learning Skills Specialist also works with students as they near graduation. They must work with the Department Chair and Student Records to provide Course Substitution Requests appropriate to specific student degree completion. She also lets students know about various opportunities such as articulation agreements for transfer to four-year colleges, Credit for Prior Learning, and scholarships specifically related to their career and education path. Occasionally, she also tutors students in applied aviation math. The Specialist is also an active member of our program SAC and Advisory committees and assists with keeping the Aviation Science webpage up to date.

The Aviation Science program presents extensive, high-stakes challenges in the advising arena. The role of the Learning Skills Specialist is invaluable.

G. Post Degree Educational Opportunities

There are many options for graduates of the Aviation Science AAS program to continue their education in aviation. Some take the form of follow-on four-year degrees, including Embry-Riddle Aeronautical University (ERAU), with whom we have an articulation agreement. Many students choose this option if they wish to pursue further college, as grant significant credit towards their Professional Aeronautics BS degree.

Advanced training and additional FAA certificates are built-into a typical career track, as well. Graduates of the airplane program earn their Airline Transport Pilot (ATP) certificate as part of the new-hire process at the regional airline level. Helicopter graduates will often earn their Airline Transport Pilot certificate when they start flying larger aircraft that are capable of instrument flight. In addition, both airplane and helicopter graduates must earn type ratings for each large (over 12,000 pounds) aircraft that they fly.

In addition to these, the industry and the FAA provide numerous opportunities for continuing education in the form of seminars.

8. Recommendations

A. Plans for Improvement

I. *Flight training improvement efforts*

Steps need to be taken to address the student frustration (identified in sections 4.A. and 7.E.) with their flight training progress, particularly in, but not limited to, the airplane program. HAA has been a steadfast and excellent partner to the program over the last 20 years, and continues to make efforts to improve the experience for our students. It is our recommendation that we conduct a thorough examination of the relationship between HAA, PCC students and the Aviation Science program to identify ways to improve, with the goal that the students' experience at Hillsboro Aero Academy (HAA) be as positive as the experience here at PCC, as it has been in the past.

II. *VA Compliance*

It cannot be overstated how much support PCC has provided in trying to comply with the ever-changing VA rules for aviation programs. Their focus on providing access for Veterans to the education of their choice has been steadfast. However, the incremental narrowing of VA interpretation of the rules, as well as the capricious nature of enforcement, has resulted in higher expense for the students (and taxpayers), less flexibility and higher frustration for the students and potential financial liability for the college should

further retroactive reinterpretations occur. Given our current understanding of the rules for VA approval, we recommend that an honest look be taken at whether compliance with VA rules and a quality flight-training program are still compatible. To remain VA approved, we recommend that a full-time compliance officer/program manager be hired immediately.

III. Aviation Career Pathway Project

The Hillsboro School District (HSD) Aviation Career Pathway project has the full support of our Industry Advisory Committee and SAC. If successful, it has the potential of being replicated in other school districts in the PCC area, potentially providing a flow of local students to the program. It has the highest potential of any source of students to move us towards a more equitable student demographic. The Oregon International Airshow is standing ready to provide some funding, and is playing the role of coordinator between HSD and PCC. HSD has committed to hiring faculty as early as fall of 2019. It is our recommendation that we pursue this opportunity with all available resources.

B. Resources

I. Aviation Career Pathway Development

Though it is too soon to know exactly what the demands will be, it may become necessary to support the Hillsboro School District (HSD) in development of curriculum for the Aviation Career Pathway Project. PCC has already invested some travel resources and grant funding to investigate other, similar programs. HSD has also made this investment and is intending to hire faculty, but there will need to be heavy interface between the HSD faculty and PCC faculty in both the Aviation Science and Aviation Maintenance Technology programs during the curriculum development phase. Future resources may be required in the way of release time for the current Aviation Science full-time faculty or special project funds for Aviation Science part-time faculty. There may also be a need to host an “Aviation Summer Camp” for middle school students who have chosen the Aviation Career Pathway.

II. Compliance Officer / Program Manager

In order to stay in compliance under the VA rules, we recommend immediate hire of a full-time Compliance Officer who can give their full attention to making sure that the program and every Aviation Science student stays in compliance with current understanding of the regulations.

III. Sim Room Support

The simulator room is proving to be an excellent investment for our students. They are computer-based simulators and, like all computers, they will need updates, upgrades and repairs. We have approval for work-study hours to keep the room attended, and currently have one student helper with technical expertise that has helped to keep the simulators running. Some provisions for ongoing maintenance needs to be made.

IV. Curriculum Development

As we begin teaching the new classroom ground courses this fall, we recommend taking a close look at each course to see if it makes sense to “flip” the course, offering the lecture online so that class time can be spent exercising the knowledge. We may need funding for existing full- and part-time faculty to accomplish

this, and help from faculty in other departments, such as Rock Creek Math, who have already been successfully involved in flipped classroom teaching.

1. **Assurances**

Please put X's next to all three boxes to verify that...

- faculty and FDCs at all of the campuses offering courses in this discipline/program have received a late-stage draft of the Program Review document.
- all of the division deans offering courses in this discipline/program have been sent the late-stage draft.
- the SAC administrative liaison has reviewed and had the opportunity to provide feedback on the final report.

Appendixes

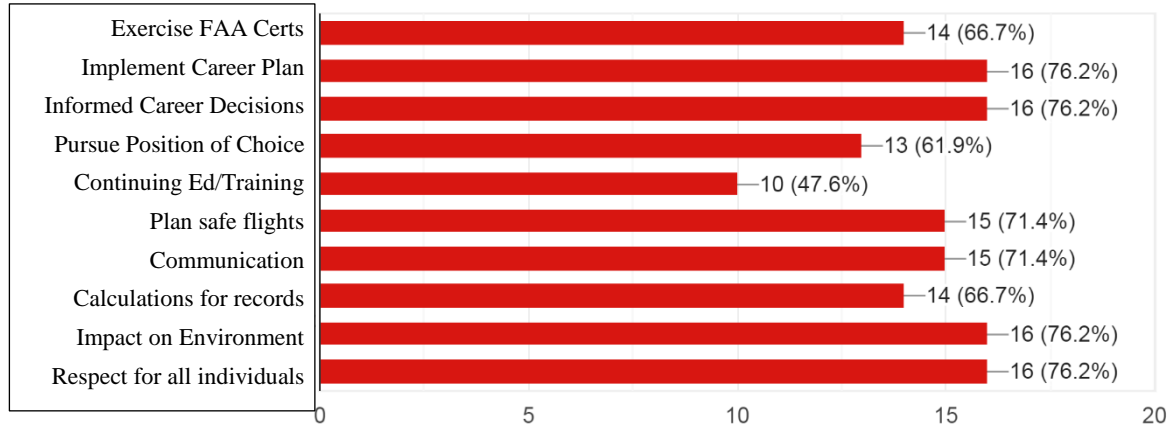
Appendix A: PCC Core Outcomes Mapping Matrix

Course #	Course Name	CO1	CO2	CO3	CO4	CO5	CO6	Core Outcomes											
AVS 107A	Flight Prep Lab Private Airplane	3	3	4	0	4	4	CO1	Communication										
AVS 107B	Flight Prep Lab Instrument Airplane	3	3	4	0	4	4	CO2	Community and Environmental Responsibility										
AVS 107C	Flight Prep Lab Intro Comm Airplane	3	3	4	0	4	4	CO3	Critical Thinking and Problem Solving										
AVS 108A	Flight Prep Lab Private Helicopter	3	3	4	0	4	4	CO4	Cultural Awareness										
AVS 108B	Flight Prep Lab Heli Basic Comm/Instr	3	3	4	0	4	4	CO5	Professional Competence										
AVS 115	Helicopter Private Flight	3	3	4	0	4	4	CO6	Self-Reflection										
AVS 125	Airplane: Private Pilot Flight	3	3	4	0	4	4	0	Not applicable.										
AVS 127	Introduction to Aviation	3	4	4	4	3	4	1	Limited demonstration or application of knowledge and skills.										
AVS 135	Airplane: Instrument Flight	2	2	4	1	4	4	2	Basic demonstration and application of knowledge and skills.										
AVS 137	Applied Aerodynamics	1	1	3	0	3	3	3	Demonstrated comprehension and is able to apply essential knowledge and skills.										
AVS 145	Introduction to Comm Airplane	3	3	4	0	4	4	4	Demonstrates thorough, effective and/or sophisticated application of knowledge and skills.										
AVS 156	Helicopter: Basic Comm/Instrument	3	3	4	0	4	4												
AVS 157	Aircraft Systems: Airframe	1	2	4	1	3	3												
AVS 167	Aircraft Systems: Powerplant	1	2	4	1	3	3												
AVS 177	Pilot Human Factors	4	4	4	2	4	4												
AVS 207A	Flight Prep Lab Comm Flight	3	3	4	0	4	4												
AVS 207B	Flight Prep Lab MEI Flt	3	3	4	0	4	4												
AVS 208A	Flight Prep Lab Heli Comm	3	3	4	0	4	4												
AVS 208B	Flight Prep Lab CFI Flight	3	3	4	0	4	4												
AVS 208C	Flight Prep Lab CFII Flight	3	3	4	0	4	4												
AVS 216	Helicopter:Commercial Flight	3	3	4	0	4	4												
AVS 217	Aviation Weather Services	3	0	4	0	4	2												
AVS 225	Airplane: Commercial Flight	3	3	4	0	4	4												
AVS 227	Aviation Careers	4	2	4	1	4	4												
AVS 236	Airplane: MEI Flt	4	3	4	0	4	4												
AVS 237	Aviation Law & Regulations	3	3	4	0	4	2												
AVS 243	Airplane: CFI SEL	4	3	4	0	4	4												
AVS 244	Airplane: CFII Flight	4	3	4	0	4	4												
AVS 255	Multi-Crew Operations	4	3	4	3	4	4												
AVS 265	Helicopter: CFI Flight	4	3	4	4	4	4												
AVS 266	Helicopter: CFII Flight	4	3	4	4	4	4												
AVS 267	Economics of Flight Operations	4	4	3	2	4	3												
AVS 275	Airplane: Professional Pilot	4	3	4	0	4	4												
	Total Count of Level 0	0	1	0	23	0	0												
	Level 1	3	1	0	4	0	0												
	Level 2	1	4	0	2	0	2												
	Level 3	19	24	2	1	4	4												
	Level 4	10	3	31	3	29	27												

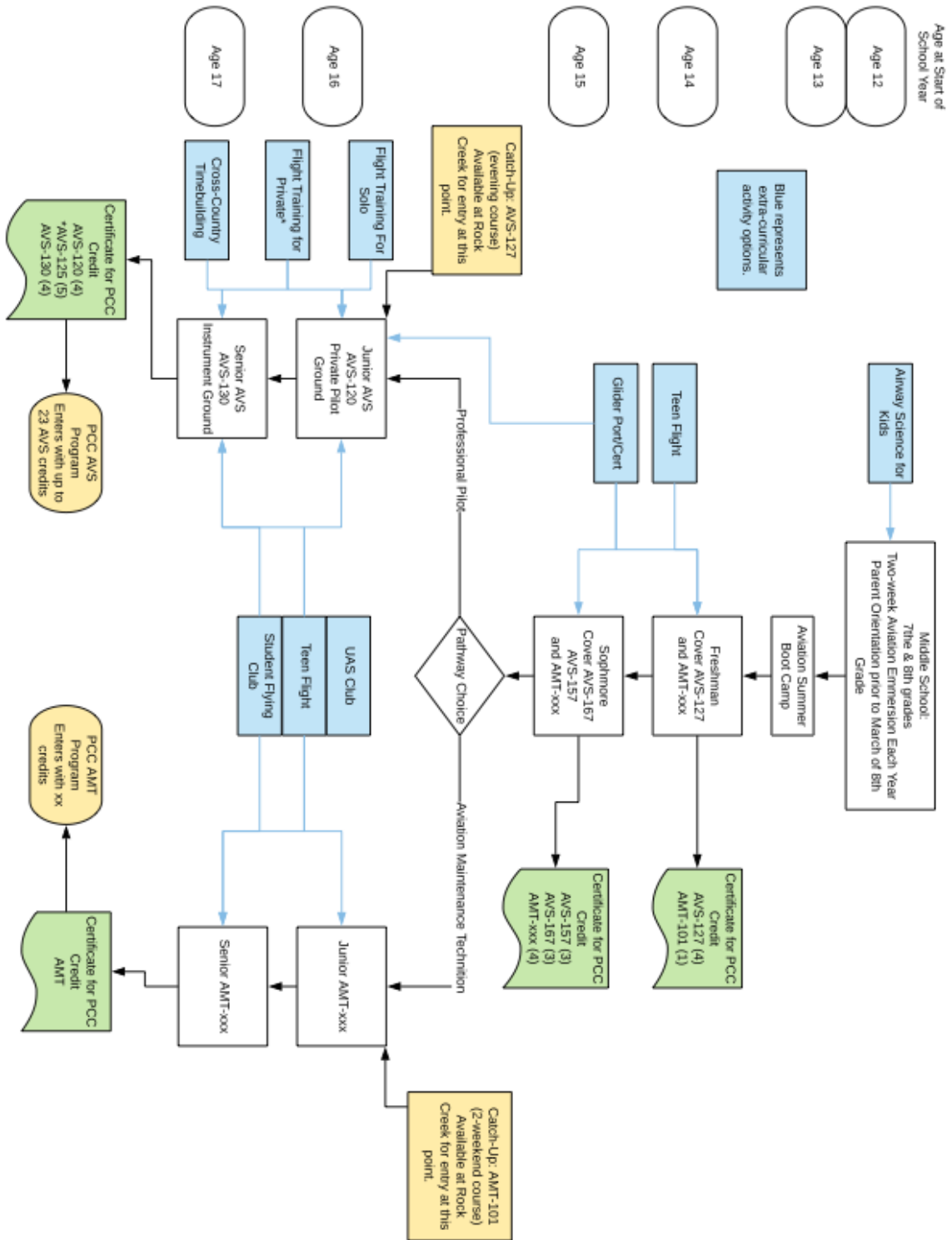
Appendix B: Graduate Survey

Below are a list of our desired degree outcomes. To begin, please check all that you feel were accomplished by the time you left PCC.

21 responses



Appendix C: Aviation Career Pathways Flowchart



Appendix D: Instructor Qualifications

Legend for FAA Certificate Abbreviations

- AGI: Advanced Ground Instructor Certificate
- IGI: Instrument Ground Instructor Certificate
- CFI: Certificated Flight Instructor
- CFII: Certificated Instrument Flight Instructor
- COMM: Commercial Pilot Certificate
- ATP: Airline Transport Pilot Certificate
- RW: Rotor-wing Helicopter
- FW: Fixed-wing Airplane

Full-Time Faculty candidates must meet the following minimum requirements

FAA Certificates:

- COMM or ATP Pilot Certificate
- CFI
- AGI
- IGI

At least 2 years aviation industry management experience.

Part 61 Initial CFI Minimums (24 months as CFI + 40 hours ground training or 100 hours ground training in an FAA 141-approved course).

Associate of Applied Science degree in aviation field of study -or- Bachelor's degree or higher in non-aviation field of study.

Individual Course Instructor Qualifications

AVS-107 Flight Lab: Level I

AVS-207 Flight Lab: Level II

- CFII -or- AGI and IGI

AVS-110 Helicopter Private Pilot Differences

- AGI + RW COMM or ATP, -or- CFI RW

AVS-120 Airplane: Private Pilot Ground

- AGI + COMM or ATP

AVS-130 Instrument Pilot Ground

- IGI

AVS-140 Airplane Commercial Ground

- AGI + COMM or ATP FW, -or- CFI FW

AVS-210 Helicopter Commercial Ground

- AGI + COMM or ATP RW, -or- CFI RW

AVS-230 Initial Flight Instructor Ground

- CFI + AGI + Part 61 Initial CFI Minimums (24 months + 40 hours ground training or 100 hours ground training in an FAA 141-approved course).

AVS-240 Instrument Instructor Ground

- CFII + AGI (prefer Part 61 minimums above)

AVS-127 Intro to Aviation

- COMM + at least 2 years aviation industry experience

AVS-137 Applied Aerodynamics

- CFI + AGI

AVS-157 Aircraft Systems Airframe

- CFI + AGI, -or- COMM + Airframe Mechanic certificate

AVS-167 Aircraft Systems Powerplant

- CFI + AGI, -or- COMM + Powerplant Mechanic certificate

AVS-177 Pilot Human Factors

- Part 61 Initial CFI Minimums (24 months + 40 hours ground training or 100 hours ground training in an FAA 141-approved course).

AVS-217 Aviation Weather Services

- AGI or IGI

AVS-227 Aviation Careers

- COMM + 2 years aviation industry experience

AVS-237 Aviation Laws and Regs

- Part 61 Initial CFI Minimums (24 months + 40 hours ground training or 100 hours ground training in an FAA 141-approved course)

AVS-267 Economics of Flight Ops

- 2 years aviation management experience

Revisions Approved: 12/14/2018

Appendix E Program Outcomes

I. AAS - Airplane Without Flight Instructor AAS Degree

Degree Outcomes	Core Outcomes
Exercise the privileges of the FAA certificates appropriate to the pilot career that they seek: Commercial Pilot certificate with airplane single- and multi-engine and instrument ratings.	<ul style="list-style-type: none"> Professional Competence
Use knowledge and understanding of pilot industry trends, positions and operations gained in the Aviation Science program to: Implement a career plan; make informed career decisions; pursue the position of their choice in the aviation industry; and identify additional opportunities for advancement including advanced degrees and training to remain competitive in the pilot industry.	<ul style="list-style-type: none"> Critical Thinking and Problem Solving Self-Reflection
Research, interpret and evaluate the following prior to each flight such that the safe, efficient and legal outcome of a flight is never in doubt: Pilot self-assessment of fitness, proficiency and ability. Aircraft airworthiness and capabilities. Environmental conditions.	<ul style="list-style-type: none"> Community and Environmental Responsibility Self-Reflection
Communicate clearly and concisely, both verbally and in writing, with fellow pilots, employers and the aviation community.	<ul style="list-style-type: none"> Communication Cultural Awareness
Accurately performs calculations as required for flight operations and company records.	<ul style="list-style-type: none"> Critical Thinking and Problem Solving Professional Competence
Operates aircraft consistent with an understanding of its impact on the environment, the community and the economic success of the company that employs them.	<ul style="list-style-type: none"> Community and Environmental Responsibility Professional Competence
Show respect for all individuals regardless of race, religion, cultural background, economic background or other differences.	<ul style="list-style-type: none"> Cultural Awareness

II. AAS - Airplane With Flight Instructor AAS Degree

Degree Outcomes	Core Outcomes
Exercise the privileges of the FAA certificates appropriate to the pilot career that they seek: Commercial Pilot certificate with airplane single- and multi-engine and instrument ratings.	<ul style="list-style-type: none"> • Professional Competence
Use knowledge and understanding of pilot industry trends, positions and operations gained in the Aviation Science program to: Implement a career plan; make informed career decisions; pursue the position of their choice in the aviation industry; and identify additional opportunities for advancement including advanced degrees and training to remain competitive in the pilot industry.	<ul style="list-style-type: none"> • Critical Thinking and Problem Solving • Self-Reflection
Research, interpret and evaluate the following prior to each flight such that the safe, efficient and legal outcome of a flight is never in doubt: Pilot self-assessment of fitness, proficiency and ability. Aircraft airworthiness and capabilities. Environmental conditions.	<ul style="list-style-type: none"> • Community and Environmental Responsibility • Self-Reflection
Communicate clearly and concisely, both verbally and in writing, with fellow pilots, employers and the aviation community.	<ul style="list-style-type: none"> • Communication • Cultural Awareness
Accurately performs calculations as required for flight operations and company records.	<ul style="list-style-type: none"> • Critical Thinking and Problem Solving • Professional Competence
Operates aircraft consistent with an understanding of its impact on the environment, the community and the economic success of the company that employs them.	<ul style="list-style-type: none"> • Community and Environmental Responsibility • Professional Competence
Show respect for all individuals regardless of race, religion, cultural background, economic background or other differences.	<ul style="list-style-type: none"> • Cultural Awareness

III. AAS - Helicopter AAS Degree

Degree Outcomes	Core Outcomes
<p>Exercise the privileges of the FAA certificates appropriate to the pilot career that they seek: Commercial Pilot Certificate with Rotorcraft Helicopter and optional Instrument Helicopter rating Flight Instructor Rating with Rotorcraft Helicopter rating.</p>	<ul style="list-style-type: none"> • Professional Competence
<p>Use knowledge and understanding of pilot industry trends, positions and operations gained in the Aviation Science program to: Implement a career plan; make informed career decisions; pursue the position of their choice in the aviation industry; and identify additional opportunities for advancement including advanced degrees and training to remain competitive in the pilot industry.</p>	<ul style="list-style-type: none"> • Critical Thinking and Problem Solving • Self-Reflection
<p>Research, interpret and evaluate the following prior to each flight such that the safe, efficient and legal outcome of a flight is never in doubt: Pilot self-assessment of fitness, proficiency and ability. Aircraft airworthiness and capabilities. Environmental conditions.</p>	<ul style="list-style-type: none"> • Community and Environmental Responsibility • Self-Reflection
<p>Communicate clearly and concisely, both verbally and in writing, with fellow pilots, employers and the aviation community.</p>	<ul style="list-style-type: none"> • Communication • Cultural Awareness
<p>Accurately performs calculations as required for flight operations and company records.</p>	<ul style="list-style-type: none"> • Critical Thinking and Problem Solving • Professional Competence
<p>Operates aircraft consistent with an understanding of its impact on the environment, the community and the economic success of the company that employs them.</p>	<ul style="list-style-type: none"> • Community and Environmental Responsibility • Professional Competence

PCC PAC Meeting | MINUTES

Meeting date | time | 12:24-2:24PM | Meeting location Hillsboro Aero Academy, HIO November 16, 2017

Meeting called by	PCC PAC Fall Meeting	Attendees: Jon Hay, Larry Altree, Sarah Wescott, Rob Linderman, Ted Parish, John Seavy, Rinor Goddis, Shasta Subsik, Phil Haupt, Carrie Williams, Nita Likes, Mike Bamberg, Brett Hart, Annette Murphy, Dan Doepker, David Morse, Irene Giustini, and Ed Collins
Type of meeting	Advisory and Community Input	
Chairperson	Sarah Wescott	
Note takers	Nita Likes, Lori Beghtol	
Timekeeper	Lori Beghtol	

Agenda topics

Agenda topic *Purpose of PAC Meeting* | Presenter *Larry Altree*

Discussion Conversation: Purpose of Pack Meeting

Action items	Person responsible
Both HAA and PCC are Dual Training Accredited	Larry Altree
Creating one meeting where community input happens makes more sense.	

Agenda topic *New Chairperson* | Presenter *Larry Altree*

Discussion Conversation: New Chairperson needed

Conclusion Closing: Sarah Wescott volunteered as Chairperson.

Agenda topic *PCC Updates* | Presenter *Larry Altree*

Discussion Conversation: VA Funding

Conclusion Closing: Still in Process, but a problem that is happening many other places

Action items	Person responsible	Deadline
Audit Occurred 1 ½ years ago	Larry Altree	

Action items	Person responsible	Deadline
Auditors asking for 58 items changed, 2-3 overall themes		
Mostly wording needs to be changed		
No longer waived from the 85/15%		
Smaller Open enrollment for Vets		Sprint Term 2018
3 types of programs, FW w/ Instructor, FW W/o Instructor, RW		
Use FW w/o Instructor to help balance percentages	Robert Lindermann	
Agenda topic PCC Future Expansion Presenter Larry Altree		
Discussion Conversation: How to get more non-VA Students		
Conclusion Closing: Ways to create incentives for Non-VA students to attend		

Action items	Person responsible	Deadline
Increase Marketing, working with Horizon for Traveling Road Show	Larry Altree	
Organizational shift where all management is now at Rock Creek Campus.		
Katie stepped down to be a PT instructor		
Reviewing Flight Training, finding ways to cost costs for instance adding more sims to PCC program, changing required hours in R-44		
Working to address UAS drone testing, either creating certificate or foundational program.		
Average 60% of Proctored Tests at HAA are UAS, and high failure rate. Customers do not know what to study for	Carrie Williams	
Agenda topic HAA Organizational Chart Changes Presenter Jon Hay		
Discussion Conversation: HAA organizational changes		

Conclusion Closing: Creating new structure as we continue to advance and grow

Action items	Person responsible	Deadline
FW Chief instructor at each campus, Dan Doepker is now Director of Ops (DOO) or “Chief of Chiefs” New Student Success Services department New structure for OPS department Maintenance Arm	Jon Hay	

Agenda topic HAA Expansion | Presenter Jon Hay

Discussion Conversation: HAA is expanding and growing

Conclusion Closing: How to provide best service to students and customers.

Action items	Person responsible	Deadline
Opened Redmond Campus. Anticipating 20,000 flight hours a year by years end. Chinese students will attend only. Per Lease agreement, RMD will be International students only. New Campus – “South of Oregon, North of Mexico.” Non-disclosure agreement, hope to speak next meeting.	Jon Hay	Date time April 2018

Agenda topic ATP Legislation Changes and CFI Trends | Presenter Jon Hay

Discussion Conversation: Legislation changes and CFI trends.

Conclusion Closing: Communicate these changes, and find ways to address them.

Action items	Person responsible	Deadline
Current hours required for ATP: 1,500 or 1,250 and 1,000 with 2 or 4-year aviation science degrees.	Jon Hay	
ATP change to lower hours possibly to 500 hours.		
Create situation where there were no instructors to train new students.		
Last summer 1:10 ratio of instructors to pilots at HAA.		
Not accepting any FW pilots until April 2018.		
Created salary based instruction		
HAA currently paying for CFII and MEI		
Possibly paying for CFI in the future in 2-3 week intense training.		
Full time CFI recruiter, averaging 5 new hires a month.		
Currently 75 instructors employed, could use another 75.		
Agenda topic Talon ETA Presenter Jon Hay		
Discussion Conversation: ETA will be the new flight software of HAA		
Conclusion Closing: How this will affect students.		

Action items	Person responsible	Deadline
ETA will cost HAA \$150,000 a year, but will do all aspects of programs currently used.	Jon Hay	
Will provide stronger student tracking and billing.		
There will be a technology fee for each student. \$300 total for each PCC student.		
iPad will be required for all new instructors and pilots.		January 1, 2018

Action items	Person responsible	Deadline
Will use Foreflight, able to push documentation and information to students through app.		
Foreflight subscription will be an additional fee.		
Agenda topic DA-42 Presenter Jon Hay		
Discussion Conversation: New Airplane Addition.		
Conclusion Closing: Continue to expand on this model and able to fly year round.		

Action items	Person responsible	Deadline
DA-42 uses Jet A fuel not low-grade lead.	Jon Hay	
Has a dragonfly look.		
Looking to purchase more, and move away from Seminole		
Uses ¼ - ½ the fuel of a Seminole and significantly quieter.		
Can fly when the Seminole cannot, has deicer built into the wings.		
Price is comparable to the Seminole.		
Agenda topic Industry Contribution Presenter Jon Hay		
Discussion Conversation: New or important information for individuals to know		
Conclusion Closing: Professionalism is an important aspect of the industry.		

Action items	Person responsible	Deadline
Horizon cancelled 700 flights (6%) due to lack of pilots	Ted Parish	
Alaska is requiring 2,000 total hours and no 4-year degree.		
Need for more professionalism from applicants.		
Skywest increased from 3200 to 3500 pilots.	Ed Collins	
Skywest bought a flight school in PHX.		

Action items	Person responsible	Deadline
LOSA Program and how to create professionalism.		

PHI hired 43 pilots, lost 80 to the airlines.

Observers Name

Resource persons Names

Special notes Type additional notes here

Portland Community College

Aviation Science Program Advisory Committee

Minutes for October 19, 2018

Meeting called to order at 12:19 pm by Larry Altree.

In Attendance: 11 attendees

Larry Altree Marshall Pryor Jon Hay

Kristina Guardino Rainer Gades David Bales

Ed Collins Stu Musacchia Dan Doepker

Lasse Brevik Chris Barber

Introductions:

Approval of the Minutes:

Motion to approve minutes, unanimous approval.

Adoption of the agenda:

Motion to approve agenda, unanimous approval.

Unfinished business:

None.

Reports:

Portland Community College:

After a year and a half the VA lifted the suspension of approval for Aviation Science a couple weeks ago.

Some schools in California and Arizona were also reinstated, but with all the new rules and regulations, are considering pulling out of the VA altogether.

There have been 12 separate revisions to the program.

Some of the new rules will be difficult to follow, especially for non-VA students. It's difficult when a student, who is paying with their own money, is forced to use the entire fee amount even though they are ready for the End of Course lesson and FAA checkride.

With all of the new VA rules, PCC has begun the hiring process for a Compliance Officer.

The VA issued over 1,000 findings for approximately 200 students during their audit, and has sent debt letters to PCC for the violations. The amount of the fines are huge and would be quite impactful for PCC.

PCC has disputed the findings and debt letters and has brought a legal team into the battle.

Hillsboro Aviation

-
-
-

Industry:

-
-
-

New business:

Changes to the Program:

- The Sim room is complete, and the process to integrate Sims into the training has begun and will dedicated **mostly** to solo student lesson prep.
- PCC used to offer ground school classes, but they were removed from the program several years ago.
- In order to cut costs, and attract more non-Vets to the program, we will be reintroducing ground school classes starting summer or fall 2019. This will decrease the cost of the airplane program by as much as \$20,000, and the helicopter program by as much as \$10,000.
- We are also considering switching back to SEL-first Commercial and CFI, reducing MEL time.
- We are looking at eliminating the R44 from the helicopter program. This would mean that the weight limit would be reduced to **approximately 180 pounds. There was some concern about this raised by the committee. Further review necessary.**

Hillsboro School District / Oregon International Airshow / Portland Community College Career Pathway Project

- Chris Barber discussed the development of the Aviation Career Pathways Project between PCC, the Oregon International Airshow, and Hillsboro School District (HSD).
- The Program will start at the Middle School level with a 2 week emersion Airway Science for Kids program, and an Aviation Summer Boot Camp.
- As high school freshmen, they will cover AVS-127 and AMT-101, as sophomores, they will cover AVS-157, AVS-167, and an AMT course (not yet determined), and then will branch off into either the Professional Pilot Pathway or Aviation Maintenance Pathway.
- The Project is set to launch spring 2019. **The committee was supportive of the concept and will help find faculty for HSD and contacts within their companies that might help us get support.**

Other:

-

Next Advisory Meeting:

- Will look at academic calendar for a date prior to the spring term PCC SAC in-service, and send out an e-mail with the date.
- The next Advisory will be hosted by Hillsboro Aero Academy

Meeting Adjourned at 2:03 pm

Appendix G: Flight Training Fees

Airplane flight fees			
	Effective Fall term 2018	PCC Flight/FTD Hours	PCC Fees
<i>Airplane with Flight Instructor degree</i>			
AVS-125	Airplane Private	57.0	\$15,383.00
AVS-135	Airplane Instrument	64.0	\$20,952.00
AVS-145	Airplane Intro to Comm	45.0	\$8,454.00
AVS-225	Airplane Commercial	47.0	\$21,867.00
AVS-236	Airplane MEI	25.0	\$14,549.00
AVS-243	Airplane Single-Engine CFI	25.0	\$7,362.00
AVS-244	Airplane CFII	19.0	\$6,706.00
Totals for CFI Degree		282.0	\$95,273.00
<i>Airplane without Flight Instructor degree</i>			
AVS-125	Airplane Private	57.0	\$15,383.00
AVS-135	Airplane Instrument	64.0	\$20,952.00
AVS-145	Airplane Intro to Comm	45.0	\$8,454.00
AVS-225	Airplane Commercial	47.0	\$21,867.00
AVS-275	Airplane Professional Pilot	50.0	\$15,525.00
Total for non-CFI Degree		263.0	\$82,181.00

Helicopter Flight Fees		
220 lb. weight limit		
	Effective Fall Term 2018	PCC Fees
AVS 115	Helicopter Private Flight	\$28,662.50
AVS 156	Helicopter Basic Comm/Instr	\$35,619.10
AVS 216	Helicopter Advanced Comm	\$28,199.90
AVS 265	Helicopter CFI	\$12,544.00
AVS 266	Helicopter CFII	\$10,707.50
		\$115,733.00
Current Rates		
	Robinson VFR R22 Aircraft Rental	\$277.00
	Robinson IFR R22 Aircraft Rental	\$289.00
	Robinson R44 Aircraft Rental	\$540.00
	Helicopter Flight Training Device (FTD) Rental	\$110.00
	CFI Flight, Ground and Pre/Post Training	\$55.00
	CFI Group Ground Training (3+ students)	\$35.00
	Admin Fee per PCC Credit Hour	\$120.00